A Situational Analysis of the Effects of Drouth as a Disaster on the Mobility of a Selected Rural-Farm Population.

Clarence Willard Ketch
Louisiana State University and Agricultural & Mechanical College

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A SITUATIONAL ANALYSIS OF THE EFFECTS OF DROUGHT AS A DISASTER
ON THE MOBILITY OF A SELECTED RURAL-FARM POPULATION

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in Partial fulfillment of the
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Doctor of Philosophy

in

The Department of Sociology and Rural Sociology

by

Clarence Willard Ketch
M.S., Agricultural and Mechanical College of Texas
January, 1961
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ABSTRACT

It has been commonly assumed that drought motivates farm operators to make certain changes, but little empirical basis exists for the assumption. The present study is an effort to understand the role of drought in the lives of farm operators and their household members and to determine the nature and extent of changes made. It centers on a drought-stricken rural-farm area, and the effects of drought are described in terms of behavioral changes made by the affected population.

The study is substantive in design and consists primarily of statistical material. A situational frame of reference is used in the analysis of the data collected. The situation is construed as the presence of general conditions of serious and prolonged drought.

Data for the study were obtained from personal interviews. The sample population consisted of all of the residents of each of three selected census precincts in Mills County, Texas. All migrants who could be located within a 60-mile radius of the study area and who had migrated from there between 1950 and 1958 were also
interviewed. Altogether, 879 persons were interviewed. The data were coded, verified, and tabulated using a machine process. Supplementary information was obtained from secondary sources such as the United States Census.

The important findings of the study are as follows:

Drought is not associated with migration to the extent commonly assumed. However, dry-land farmers move more frequently in times of drought than do ranchers. Persons moving because of drought do not find migration a satisfactory adjustment. Migrants from drought areas tend to have the same general characteristics of age, sex, and education as do migrants generally.

Drought is associated with many behavioral changes in rural places other than migration. In the study area, changes were made in farming practices, such as type of crops planted, amount of acreage planted, and kind of livestock raised. Drought also brought changes in such practices as off-farm work and in use made of farm agencies. Drought was also positively related to changes in the use of programs such as the Soil Bank Programs and the Federal Drought Relief Program. Most changes, other than migration, made for drought reasons were interpreted
as beneficial to the drought situation.

The over-all conclusion of the study is that empirical research is needed to establish whether or not drought represents a unique and crisis experience to the residents of a particular area. When drought is interpreted as a crisis, migration is likely to occur. However, when the situation is interpreted as an experience that is not unique and for which relatively temporary changes will suffice, migration does not occur. Temporary changes will generally involve reorganization of farming practices.
CHAPTER I

INTRODUCTION

Ellsworth Huntington has stated, "From the days of Montesquieu and Buckle, there have been men who believed that climate is the most important factor in determining the status of civilization."¹ The majority of people will not accept such an extreme position, but many people will subscribe to the notion that climate plays a very important role in the affairs of men.² This is especially true when particular climatic phenomena, such as drouth, are under consideration.

Drouth conditions are not new in the United States. There was less concern over drouth areas in earlier times

¹Civilization and Climate (New Haven: Yale University Press, 1951), p. 3.

because our nation still had an ample supply of land with adequate rainfall to meet its needs. A concern over drouth began to be manifest when large areas were evacuated, such as the "dust bowl" area of the 1930's and the general "southwest" region during the 1940's and 1950's. At the present time, there is increasing notice being taken of the implications which drouth areas have for the future of the nation. The number of persons engaged in agriculture dwindled from 50 per cent to the nation's total employed population in 1870 to 15 per cent in 1950, but

3The "dust bowl" was described as due to drouth conditions coming to land subjected to over-tillage instead of being left to grass, in the study by P. G. Beck and M. C. Forster, Six Rural Problem Areas, Research Monograph I (Washington: F. E. R. A. Division of Research, Statistics, and Finance, 1935).

4Richard D. Searles, The Drought in Southwestern United States as of October, 1951 (Washington, D. C.: United States Department of Interior, 1951). In this study an even more extensive area was included covering much of Texas, New Mexico, Arizona, southern California, southern Colorado, Oklahoma and Kansas.

5Harold A. Phelps and David Henderson, Population in its Human Aspects (New York: Appleton-Century-Crofts, Inc., 1958), p. 35. These figures are derived from the decennial census reports of the U. S. Census Bureau. On page 95 is given the total rural-farm population shift which shows even greater differences than those for the labor force. The shift was from 64.5 per cent in 1890 to 13.8 per cent in 1950. The authors recognize and briefly discuss the difference in the latter figures that is due to changing definitions
approximately the same amount of land is required to produce an adequate supply of agricultural products. This is still a generally valid statement, in spite of the fact that it is possible to make the daily headlines with such statements as: "The United States Has Too Many Farms." It is quite obvious that, unless some major innovations are effected reasonably soon in terms of synthetic foods or agricultural methods, we will reach a point where the further loss of agricultural lands, through drought or other causes, will be detrimental to the welfare of the nation. The accumulated food surpluses, which are called to our attention so regularly, are insignificant when related to the population growth of "rural" and the more recently devised category of rural-nonfarm as distinct from rural-farm. (See p. 82.)

6Ibid., pp. 422-23. Phelps and Henderson, in summarizing a number of works predicting future economic trends, even postulate a need of converting from one to two million acres to farm land each year in order to meet the increasing demands of the growing population.

7A front page article by Erwin D. Canham, president of the United States Chamber of Commerce and editor of the Christian Science Monitor, in which he decries the surplus of farm products and blames them on a surplus of farms. Springfield Daily News, Thursday, October 8, 1959, Springfield, Missouri.
of the nation. The prediction, for a population "approaching the point of stability in the not distant future," which was made following the 1940 census has proven to be erroneous. The latest population releases suggest anything but stability for the population of the United States either for the present or the future.

The major concern of this study is a phenomenon which is related to the losses of productive farm land. Specifically, it is proposed to investigate the role of drought-caused migration in depleting the nation's agricultural productivity. As migration affects the amount of land devoted to agriculture, it becomes increasingly important.

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8Ibid. "One Secret They Can Have," Editorial page, September 30. The editor, comparing Russian and United States agricultural programs on the eve of Khrushchev's departure, pointed out that our farm surplus is so vast that it is costing seven billion dollars annually to "store it, get rid of it, or pay farmers not to produce it."


10Associated Press news release from Washington, November 25, 1959. The "census clock" in the lobby of the Commerce Department was predicted to show an estimated population of 179 million during the early hours of November 28, 1959. The estimated population at the beginning of the year was 175,602,000. This makes an eleven month gain of 3,398,000 people.
that the reason for people's migrating from farm lands be known. The direction and extent of migration are well documented,11 but relatively little has been done to ascertain the motivations behind this migration. If the motivations for migration were better known, it is reasonable to assume that more effective programs for holding people on the land could be devised. "Economic" reasons and other "push" and "pull" factors are ascribed the major causality roles in migration.12 Drought-caused migration is, admittedly, a minor part of the rural-urban migration at the present time. However, unless all of the factors related to migration are investigated, it will be impossible to understand the over-all picture fully.


12Warren S. Thompson, Population Problems, Third Edition (New York: McGraw-Hill Book Company, Inc., 1952), pp. 373-74. Thompson presents "economic" motivation "as the most dominant factor at all times"; and Nelson, op. cit., Chapter VII. Nelson lists drouth and climatic changes as push factors in migration. He also includes natural population increase, depletion of natural resources, and social maladjustment within the same category.
I. THE NEED FOR THE STUDY

Studies of migration differentials are numerous. However, a careful perusal of the literature indicates a need for studies that are concerned with migration as a movement of individuals. Most students of migration, to date, have used the group approach. This approach is valid and necessary, but limited. The focal point in group studies is the "distribution of specific population groups such as nativity, age, sex, or racial groups." Routine census information is adequate for this type of study, for one can obtain from it the net migration or migration balance of a population.

Shortcomings of group studies may be listed as follows: First, in group studies one cannot secure the age of the migrant at the time of migration. One secures, instead, the difference between the age distribution of the in-migrants minus that of the out-migrants. Secondly, neither can the total migration be found by the group method. The findings are in terms of net migration--the difference between the in-migration and the out-migration.

Migration study which focuses on the individual is needed so that information can be obtained on the actual amount of migration and the age of the migrant at the time of migration. Other specific differentials can likewise be studied in more detail through interview of the migrants themselves.

A second need is for a study of migration under disaster or crisis conditions. To date, the emphasis on disaster studies has been placed on communication, responses to new and unforeseen stimuli, relationships not manifest in the normal society, and latent group conflicts, all within or emerging from the disaster situation. The long-range effects of disaster have also been the objects of study.

This study is not posed as the final answer to drouth-migration theory, but it can fill in the gaps.

14 Harry B. Williams, "Fewer Disasters Better Studied," Reprint from the Journal of Social Issues, X, No. 3, 1954, p. 10. This work is largely a summary of the scope and activities of the Committee on Disaster Studies appointed by the National Academy of Sciences--National Research Council.

15 While being no final answer, it is possible that the findings of this study might contribute to others in the processes of building middle-range theory. Merton proposes such use for several limited studies. Robert K. Merton, Social Theory and Social Structure, Revised Edition (Glencoe: The Free Press, 1957), pp. 280, 328.
II. OVER-ALL OBJECTIVES

The more general objective of this study is to determine the relationships which exist between drouth and migration. The more specific aims of the study are as follows:

1. To determine the characteristics of migrants (in terms of age, sex, education, and family life cycle stage) from a farm area that has been subjected to extended drouth conditions.

2. To compare and contrast the characteristics of migrants from a drouth area with the characteristics of migrants from areas not subjected to drouth.

3. To determine the extent to which conditions of drouth are related to migration from a rural area.

4. To study the nature of drouth as another particular form of disaster, one which is not cataclysmic in nature.

5. To note the changes, other than migration, made as attempts to adjust to the drouth situation--especially the changes deemed successful by those making them.

6. To contribute to the basic theory of migration.
III. SELECTION OF SAMPLE AREA

One of the first methodological problems in any study is the selection of the sample area. It was decided to use a county as a sample unit. This decision was prompted by the wish to stay within known census divisions for the sake of comparisons with 1950 census data.

All areas in the state of Texas declared by federal agencies to be suffering from "serious and prolonged general drought conditions (for relief purposes) were considered potential sample areas. Of the 254 counties in the state, 105 fell in this category. Roughly, the drought counties form a wide belt extending from the Red River on the north (excluding the Panhandle) to the Rio Grande on the south. The extreme western and Panhandle counties were classed as "intermediate" in seriousness of drought conditions. The eastern counties were the "less seriously" drought-affected counties in the state. The "serious and prolonged" drought area included the areas identified as North Central Plains.

16See Figure 1. The sample areas were selected in consultation with representatives of the following agencies cooperating in a larger study: Department of Agricultural Economics and Sociology Texas Agricultural Experiment Station; Farm Population and Rural Life Branch, Agricultural Economics Division, Agricultural Marketing Service, U. S. Department of Agriculture.
Figure 1  Drought Areas Delineated by United States Department of Agriculture, According to Degree of Seriousness, State of Texas, 1955-1957

The income of the population of this area is not limited to farming and/or ranching sources. There are numerous oil and mineral activities throughout most of these 105 counties, which serve as an off-farm source of income. In addition, incomes in excess of $1,000 per year for hunting leases are not unusual in Hill Country, Edwards Plateau, and portions of Coastal Plains. Counties, where farm and/or ranch incomes might be supplemented by such sources as these or by jobs in nearby cities or large towns, were eliminated as potential sample areas. The logic behind this decision was that outside sources of income would counterbalance economic pressures to migrate caused by drought conditions.

A careful study was made of the sources of income, population centers, and products of each county in the drought area. All but 12 counties were eliminated for the

above reasons. The 12 counties left were visited personally and additional information was obtained relative to the seriousness of drought conditions and sources of income. Interviews were held with County Agents, Soil Conservation Service Agents, 4-H Club Leaders, Home Demonstration Agents, and various other persons in the course of this process.

Mills County was finally selected as the one county which best fits the criteria set for the sample area. In the light of resources available, a decision was made to use three of six census precincts in the county for the sample area of the study. Census precincts 4, 5, and 6 were the ones selected to be used.

IV. DESCRIPTION OF MILLS COUNTY AND SAMPLE AREA

Mills County. This county is only a few miles east of the geographic center of Texas. It lies at the junction of Grand Prairie and Edwards Plateau. Edwards Plateau is southwest of Mills County and is characterized by rolling, rocky hills with progressively less annual rainfall as one moves southwest into it. Grand Prairie lies northeast of Mills County and is a semi-flat, sandy to loam area with

18See Figure 2.
Figure 2 Map of the Census Precincts of Mills County, Texas
many trees.

The census precincts chosen for sampling lie in two opposite corners of the county. Precinct 6 lies in the northeast corner, and precincts 4 and 5 occupy the southwest corner of the county. They are approximately 45 air miles apart at the extreme tips, but the highway connecting the two is 60 miles long because of its winding nature.

Mills county had a population of 5,999 in 1950. Of this number, 3,397, or 56.5 per cent, were classified rural-farm residents, living on 1,061 farms. The average size of farms was 407 acres. The remainder of the county's population was classified as rural-nonfarm. There were no Negroes in the county, and but one per cent of the people were Latin Americans.

The town of Goldthwaite, located near the center of the county, is the county seat. In 1950, it had a population of 1,566. Goldthwaite is a market and shipping point for cattle, lambs, wool, mohair, pecans, and cotton. There is no known oil or commercially valuable minerals in the county. The second largest population center is at Mullin, located nine miles northwest of Goldthwaite. Mullin had a population of 326 in 1950.

Neither of these two population centers was located
in the sample area. Neither town has what might be called an industry, which might offer employment to the surrounding rural-farm population. The nearest thing to an industry is the seasonal gathering of mistletoe for processing into wreaths and other Christmas decorations. The pay is not high, and the season is too short for the income to be important.

Precinct 6. The third largest population center, Priddy, is a community located 15 miles north by northeast of Goldthwaite in census precinct 6.\(^\text{19}\) It had a population of 180 in 1950. Priddy was the only population center in the sample area.

At the time of the survey in 1958, Priddy had 44 residences, several stores (including two grocery stores, both combined with filling stations, and a drug store with the post office in one corner of it), one cafe and hotel combination where persons lived, a bank, a lumberyard, a feed mill, an automobile repair garage, a general blacksmith shop, a telephone office, and several other buildings of a nondescript nature.

Eleven of the families residing in Priddy operated

\(^{19}\text{See Figure 2 and Figure 1, Appendix A.}\)
farms in the precinct surrounding it. The other residents were mostly retired persons or operators of the places of business mentioned above.

Priddy has a twelve-grade consolidated school which serves the whole of precinct 6 and portions of adjoining precincts. There are a Baptist church and a Lutheran church in Priddy, both of which have resident ministers and regular services. The Church of Christ denomination has two congregations in the precinct outside of the Priddy area, but has no resident minister.

At the time of the study, there were 132 residences in precinct 6 outside the Priddy area, and of the number, 119 were located on farms and/or ranches. The farms were principally devoted to the production of beef cattle, sheep, and poultry. Some cotton was raised but the bulk of the cultivated land was planted in small grains, corn, cane, and sorghums for hay. Most of the land of the precinct is in grazing pasture. Pecans grow abundantly as native trees on the creeks, and a few farms even have pecan orchards.

The 119 farms in precinct 6 have a median size of approximately 200 acres. Only five of them are as large as 1,000 acres. The soil is a dark loam or sandy and is rather fertile. It produces well if moisture and other weather
conditions are favorable. No irrigated farming is done in this precinct. It has no natural bodies of water within it, although several creeks flow through it periodically.

Precinct 5. There is no population center in precinct 5. It is located in the extreme southwest corner of the county. The terrain is more typical of Edwards Plateau. It is characterized by rolling hills and is rocky with fairly thin soil. It is generally more arid than the central and northeastern parts of the county. Precinct 5 has a fairly extensive growth of bushes and trees, most of which are stunted and scrubby. Cactus grows well in the area but is limited in extent. Native bunch grass grows throughout the precinct but is generally quite sparse with patches of bare ground showing between the grass clumps.

The population of precinct 5 is spread rather evenly over its entire area. At the time of the survey, the area had 59 households, 56 of whom were residing on farms and/or ranches. The latter had a median size of approximately 700 acres. One-fourth of these farms were dry land farms, and the remainder were ranches or else combined farming and

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20See Figure 2 and Figure 2, Appendix A.
PLATE 1

TYPICAL LANDSCAPE OF THE FARMING SECTION OF THE STUDY AREA
ranching. There was no irrigation in this precinct nor any bodies of water adequate for irrigation purposes, other than the Colorado River, which is the southern boundary of this precinct and of Mills county. The farms are devoted almost entirely to small grains, sorghums, and other hay crops. The ranching is mostly sheep and goats, with a few cattle. The trend has been to shift from cattle to sheep and goats, and this change has been accelerated during the drought years.

In 1950, precinct 5 had three active churches. At the time of the survey, all three buildings were standing, but all had been abandoned. The residents of precinct 5 who attended church generally went to Brownwood, the county seat of adjoining Brown county, for Catholic or Lutheran services and to Goldthwaite or Mullin for other services.

One grade school had operated in the precinct in 1950, but it, too, was abandoned prior to 1958. All school children were transported out of the district to schools at Mullin or Brownwood.

Precinct 4. This precinct is also located along the southern border in the southwest corner of the county.21

21See Figure 2 and Figure 3, Appendix A.
It has no population center. The residents were well
distributed throughout the precinct. At the time of the
survey, the population consisted of 48 family units, most
of whom resided on the 39 farms and/or ranches in the pre-
cinct. These farms had a median size of approximately 320
acres with 9 of them having 1,000 or more acres.

Some irrigation is done in precinct 4 by pumping
water from the Colorado River. Water was available from
the river during the entire duration of the drought. Since
the land in the county slopes toward the river, it would be
possible, but difficult, to irrigate land any distance from
the river itself. No such efforts had been made at the time
of the study.

One exceptionally large farm is located in precinct
4 near the Colorado River. It has 3,000 acres, about 600 of
which are irrigated. It is owned and operated by a chain
grocery company. It would be classed as a "large holding,"
according to Bertrand.²² Eight families live on the farm

²²Alvin Bertrand and associates, Rural Sociology (New
includes the definitions of the terms used by: Paul S.
Taylor and Tom Vasey, "Contemporary Background of Farm Labor,"
Rural Sociology, Vol. 1, p. 419, 1936, and T. Lynn Smith,
The Sociology of Rural Life, Third Edition (New York:
PLATE II

TYPICAL LANDSCAPE OF THE RANCHING SECTION OF THE STUDY AREA
and manage and operate it. Vegetables are its principal crops. There were no commercial activities, other than farming, in the precinct at the time of the survey. There had been both a grocery store and a greenhouse in 1950, but both had closed down during the drought years.

This precinct is less arid in appearance than precinct 5. It is characterized by some stunted growth, mostly scrub oak. There is very little cactus, but considerably more native bunch grass in the pasture areas than is found in precinct 5. The soil is thin and rocky in the western third of the precinct but becomes deeper, and it is sandy to loam in the eastern part.

The southern portion of precinct 4, along the Colorado River, is devoted to vegetable growing. The vegetables grown are sold primarily to the same grocery concern which operates the commercial farm described previously. Small grains, hay crops, and pasture lands are found in the remainder of the area. Sheep, goats, and cattle are raised rather extensively throughout the precinct.

In 1950, precinct 4 had a grade school, but, by 1959, all of the school children were being transported to the consolidated school in Goldthwaite. Three churches were holding services in 1950, however all were abandoned by 1958.
The church buildings were still standing at the time of the survey, but no use was being made of them.

V. DEVELOPMENT OF THE QUESTIONNAIRES

Questionnaires. Questionnaires were prepared for the purpose of interviewing major groups of people considered important from the standpoint of the study. All questionnaires were developed in consultation with representatives of the cooperating agencies. Questionnaire I was designed for farm operators currently operating a farm in the sample area at the time of the survey.\(^\text{23}\) Besides the usual information regarding the personal-social characteristics of family members, it was designed to secure among other things farm size, crops, income during 1958, and income during the operator's worst drought year since 1950. This questionnaire also was designed to determine family and individual moves, by years, from 1950 through 1957; changes made in type and/or extent of farming; and the role assigned to drought in the changes made.

Questionnaire II was designed for those households

\(^{23}\text{For Questionnaire I, see Appendix B.}\)
where the head of the household did not farm. The information obtained from this group was limited to age, sex, educational, and occupational characteristics. This group was interviewed for the basic purpose of securing a sample comparable to that of the 1950 census.

Questionnaire III was designed for those persons who, at the time of the survey, were no longer farming, but who had operated a farm in the study area between 1950 and 1958. The same basic information was secured from these individuals as was obtained from persons currently operating a farm in the study area. A major difference in the two questionnaires was that the latter was designed to determine the role assigned to drought in the decision to stop farming.

Questionnaire IV was prepared for individuals who had been members of a farm-operator household in the study area between 1950 and 1958, but who were no longer members at the time the survey was made. Again, reasons for leaving the farm, moves by years made, and the role assigned to drought in these moves, was stressed.

24 For Questionnaire II, see Appendix B.
25 For Questionnaire III, see Appendix B.
26 For Questionnaire IV, see Appendix B.
Questionnaire V was prepared for those individuals who had left the farm but could not be located for an interview. Most of the individuals who had not moved more than 60 miles distant from the study area were eventually located and interviewed. Resources did not permit the follow-up of persons who had moved further away. However, as much information as possible was secured from their acquaintances, family, and neighbors.

The total number of schedules taken was 313. Of these, 213 are of type I (for present operator households); 27 are type II (for non-operator households); 20 are type III (households where the head has left farming); 26 are type IV (individuals who have left the area but were contacted); and 27 are type V (individuals who had left the area and could not be contacted).

The first four questionnaires were pretested, and it was at this time that the need for questionnaire V was determined.

Field Procedure. Several weeks prior to the actual beginning of the interviews, four interviewers were selected,

27 For Questionnaire V, see Appendix B.
two of whom were from the study area. A series of study sessions was held to interpret the study and to familiarize the interviewers with the various schedules.

The plan of work was as follows. Each of the four interviewers worked as individuals during the day and reported, as a team, to the supervisor in the evenings. In four weeks' time, most of the interviews were completed. The few remaining interviews were completed by one of the local interviewers.

Before field work was begun, several news releases were given to county newspapers. In these releases it was indicated that the study was endorsed by the local editors, banker, county agent, and several other community leaders. News releases stressed that the study might serve to publicize the local conditions to state and federal administrators. The publicity program was considered successful, and many of the interviewees indicated they were expecting the interviewers. All but a few of the residents gave the requested information willingly. A few who did cooperate expressed antagonism over "government interference." They interpreted the study as the forerunner to a government program.

In the end, all but two of the individuals, who would not give information when first called upon, did go through
with an interview. The writer called upon these persons and did secure some data but not a complete interview. These data were verified and supplemented, to some extent, by information obtained from neighbors.

Tabular and Graphic Presentations. The information obtained was coded and punched into IBM cards.\(^{28}\) The majority of the tables and figures used in this study are from the tabulation made. The remainder of the data utilized is from such sources as the census.

Certain limitations were imposed on the securing of data due to the cooperative nature of the study. Since state and federal agencies were involved, it was not possible to secure information of a political or religious nature. Limitation of resources also precluded the use of intensive case studies.

\(^{28}\)The data for this study were obtained as part of a larger study (see p. 9 for the cooperating agencies). However, the analysis and interpretation of data in this report are solely those of the author.
CHAPTER II

DEFINITION OF TERMS

Certain terms are used in this study in a special sense; thus, there is need to define these terms as they will be used in the discussions which follow.

I. DROUGHT

The first term to be defined is drouth.¹ The meaning of the term, drouth, is difficult to convey in a short sentence. It reflects a combination of general lack of rainfall and hot weather to the extent that the growth of plants is affected.² Attempts have been made to relate drouth to a minimum number of inches of rainfall per year, but this is not only arbitrary but somewhat meaningless.

¹The word is spelled differently in different places, but the short spelling has been utilized in this study. Most of the early studies of drouth use the term spelled as “drought.” It may be noted that certain federal and other agencies still use the longer word. When quoting, the term will be used as it appears in the quoted source.

Rainfall must be both plentiful and timely to prevent drouth. Five inches of rain will make a corn crop if one could control its deliverance so that the exact quantity would fall at the time needed. On the other hand, 20 inches of rainfall per year can be too little for productivity, if it falls in the winter months.

Another approach that has been used in defining drouth is to relate it to farm productivity. If the average yield of, say, cotton drops to half that of a former year, and weather conditions rather than weevils or other damage is adjudged the culprit, then drouth conditions are adjudged to exist. One weakness of this approach to a definition is that while one crop, say, cotton fails, another crop, say, corn may have produced a bumper crop.

It can be seen from the above that drouth must be defined in terms of need at a given time for rainfall, and that this need varies with the type of crops grown, as well as the general weather conditions, the soil composition, and the farmer's methods of cultivation. In the light of all these variables, it was felt that the wisest approach for the present study was to let the farmer define his individual situation. Although this procedure by-passes a formal definition, it has the advantage of eliminating all
situations which were not defined as real by the individual actors. In other words, the individual farmer's behavior is largely conditioned by his definition of whether or not drought conditions existed, rather than whether or not they really existed according to some objective criteria.

II. RURAL-FARM POPULATION

Another term which should be classified is rural-farm population. The 1950 census definition of rural-farm population is followed in this study, so that it would be possible to make comparisons with the data collected. According to the Census of Agriculture, "places of 3 or more acres were counted as farms if the value of agricultural products in 1949, exclusive of home gardens, amounted to $150 or more. The agricultural products could have been either for home use or for sale. Places of less than 3 acres were counted as farms only if the value of sales of agricultural products in 1949 amounted to $150 or more. Places operated in 1949 for which the value of agricultural products in 1949 was less than these minima because of crop failure or other unusual situation, and places operated in 1950 for the first time were counted as farms if normally they could be
expected to produce these minimum quantities of farm products.\textsuperscript{3} Interviewees living on places which qualified as farms by this census definition were considered to be the rural-farm population.

III. MOBILITY

Mobility, as used here, is restricted to the concept of an individual or a family changing their place of residence for a permanent move—even though of short duration. This understanding excludes students who leave to go to school, family members taking a job that calls for them to be out of the community for short periods, and related movements where the present residence is still considered to be the home of the individual or family in question. Individuals entering the military services were considered as having moved. This interpretation was made in the light of the assumption that the majority of servicemen will not return. Previous studies have shown that the two to six year span of service time is of sufficient duration to be

considered a move of a permanent nature.

The above usage of the term mobility, is consistent with the "movement of domicile" classification devised by Lively. Lively classified movements of people into three categories: "(1) circulation from a fixed domicile; (2) movement of domicile; and (3) transience." He recognized that these three classes, or categories, of movements of people had a range of movement within each of them. In describing the movement of domicile category, he pointed out that "the significance of change of domicile is relative to the purpose of study, and that for any given investigation only change of domicile of certain sorts are likely to be significant."^5

Nelson also uses mobility in the same general sense. He defines migration as "fundamentally . . . a change of location of a person or group in physical space."^6 He eliminates such movements in physical space as trips from

^4 C. E. Lively, "Spatial and Occupational Changes of Particular Significance to the Student of Population Mobility," Social Forces, XV (1937), 351.

^5 Ibid., p. 352.

home to work of to town, vacations, and changes of domicile within the same community. After these eliminations, he continues:

On the other hand, migration does include the permanent change of residence from one country, state, community, or farm to another; or the seasonal movements of people in pursuit of occupation, such as the 'streams' of migratory agricultural workers in the United States.7

IV. DISASTER

Disaster is the final term to be defined. In ordinary usage, the term is used to connote a calamity of a catastrophic nature. The connotation is of a final act of a sudden nature which brings suffering, hurt, or some similar ill upon individuals or groups. See the works of Prince,8 Nauta,9 Carr,10 and others.

7Ibid., p. 352.


Moore defines the term as follows:

Disasters are commonly thought of as tragic situations over which persons, groups, or communities have no control—situations which are imposed by an outside force too great to resist.11

Except for the fact that the work "tragic" is a value-laden concept needing further clarification, this definition could be used as a working definition of disaster for this study. For the sake of clarity, it ought to be noted that some of Moore's later speculations on the nature of disaster are not accepted as valid for this study. The two primary speculations rejected are: (1) "Loss of life seems to be an essential element," and (2) "Non-predictability may be an essential characteristic of disaster."12 To insist upon these two criteria would be to so limit the concept of disaster that a plane crash involving fatalities in an isolated area might be seen as a disaster, while the inundation of a village or city by volcanic lava with no loss of life would not be seen as a disaster situation.

Carr's concepts of disaster are even closer than


12Ibid., p. 1.
those of Moore to the operational definition used in this study. To Carr, a situation becomes a disaster when "man becomes the victim of forces which he normally controls. The term disaster, in other words, refers to the social consequences of cultural forces to control natural forces."\(^{13}\)

As used in this study disaster is not necessarily cataclysmic in nature. As a calamity, it would be understood that it may approach and unfold slowly, not quickly like an unexpected explosion, a tornado, or a cyclone. A sudden unexpected explosion gives no warning. The tornado and cyclone strike suddenly even with the best radar devices in operation. A hurricane, in contrast, is frequently spotted days in advance, and its direction and intensity are known, although subject to modification. Its approach is noted in a time span, and it may take several hours for the storm to actually move past a particular point as it builds in intensity, the lull of the eye of the storm is reached, and then the reverse winds pass over. A hurricane becomes no less a disaster because it may have more advance warning or occur over a more extended period of time.

Drouth, as a disaster, shares a similar nature to that of a hurricane. Its advance warning, or prediction, and its unfolding as a disaster is even more distended timewise than a hurricane is, but its general nature is similar. The difference between a hurricane disaster and a more instantaneous one is a difference of degree, not of kind.

An analogy might be made to illustrate this point. The major difference between social change of a revolutionary nature and social change of an evolutionary nature is basically one of time. A particular social system undergoing a change from a *gemeinschaftlich*, primitive state to a *gesellschaftlich*, modern state in a decade would entail revolutionary change, while if the same change were made over a span of several centuries, it would be of an evolutionary nature. One would look for and expect to find some of the same social processes at work in both cases, in spite of the difference in time. The author views this as analogous to the difference between cataclysmic disaster and disaster which occurs over a lengthy time span.

**Types of disasters.** The above suggests that disasters might profitably be typed, using as criteria (1) their
predictability—that is whether or not the disaster is anticipated, and (2) the time element involved—that is whether or not the disaster is cataclysmic in nature.

Table I suggests several disasters under each of the following typologies: (1) Unanticipated--Cataclysmic; (2) Unanticipated--Extended; (3) Anticipated--Cataclysmic; and (4) Anticipated--Extended.¹⁴

Certain basic happenings can cause disasters of various types, depending upon the specific conditions involved at the time of occurrence. For example, a bombing that occurred in a militarily strategic area within a theatre of war would tend to be anticipated, not only as a possibility but as a probability, by any thoughtful person aware of the facts. Such a happening would be an Anticipated-Cataclysmic type of disaster. A similar bombing, by accident or by design, of an area far removed from a war theatre or during a time of peace would be of an

¹⁴This typology is similar to that of Carr, *Situational Analysis*, pp. 110-11. It is different in that Carr limited his types to those caused by external disturbances and used for criteria: (1) the time involved—whether instantaneous or progressive; and (2) the area involved—whether focalized or diffused. His four types are: (1) focalized--instantaneous; (2) diffused--instantaneous; (3) focalized--progressive; and (4) diffused--progressive. This study falls into the diffused--progressive type by Carr's usage.
<table>
<thead>
<tr>
<th>Predictability</th>
<th>Nature</th>
<th>Disaster</th>
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<tbody>
<tr>
<td><strong>Unanticipated</strong></td>
<td>Cataclysmic</td>
<td>Earthquake</td>
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<td></td>
<td>Explosion from unforeseen sources</td>
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<td></td>
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<td>Tornado--undetected by radar or other meteorological devices</td>
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<td></td>
<td>Extended</td>
<td>Epidemic</td>
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<td>Pestilence</td>
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<tr>
<td><strong>Anticipated</strong></td>
<td>Cataclysmic</td>
<td>Bombing of an area in a war theatre</td>
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<td></td>
<td></td>
<td>Flood--of a seasonal nature Revolution</td>
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<td></td>
<td>Extended</td>
<td>Hurricane</td>
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<td>Drought</td>
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<td>War</td>
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Unanticipated--Cataclysmic type of disaster. These two situations would be different, and one would expect to find some difference in the human behavior which occurred as a response to the respective bombings. However, both situations would have the general nature of disaster.

Floods and other disasters might vary by type in the same way as bombings vary. Drouth, also, might be the cause of a disaster of various types. But, in modern America with its present state of meteorological development, any drouth of sufficient severity and duration to warrant being termed a disaster, would be foreseen and predicted. It would thus be treated as an Anticipated--Extended disaster. This is done in the present study.
CHAPTER III

REVIEW OF LITERATURE

The literature relating to two types of research is pertinent to this study. First, the investigations of drought as a form of disaster, or crisis, is of importance. Second, the literature that relates drought to migration and its differentials is important.

I. DISASTER STUDIES

Very little study has been undertaken of any disasters that are of the Anticipated-Extended type.¹ Most disaster studies have been of the Unanticipated-Cataclysmic type of disaster, although, some attention has been focused on Anticipated-Cataclysmic disasters. One would expect attention to be given to these two types for they rank among the more conspicuous of human-related events. They are usually accompanied by sudden and radical disruption of the social system; frequently, violent death; human

¹See pages 36-39 of this study for a discussion of types of disasters. Also note Table I.
suffering in terms of loss of basic necessities of life and physical pain; and loss of property by destruction. The suddenness of the cataclysmic disaster gives the observer an "after" image of the situation while the "before" image of it is still fresh in his memory. Observing a vast discrepancy between the "before" and "after" images, one could hardly fail to pay attention to such visible phenomena. Even the objective social scientist is subjective to this extent.

Some attention has been focused on other types of disaster, but to a limited degree. Disasters that are extended timewise may, and often do, have the same characteristics as are listed above for cataclysmic type disasters. An intervening time-span makes indistinct the "before" image of the afflicted group, but intervening time makes no less real the suffering, property loss, change in behavior patterns, and frequently even the loss of life itself. Sorokin has dealt with both Unanticipated-Extended and Anticipated-Extended disasters.² Fogleman has contributed

to the study of the Anticipated-Extended type disaster with his hurricane study. 3

The importance of these studies for the present investigation is not so much their specific findings or methodology, but their recognition that disaster is not limited to the instantaneous events that disorder the lives of men. Both studies recognize as disasters those events which take place more slowly, as long as they are "situations which are imposed by an outside force too great to resist." 4 Recognition of this same position is made by Carr in his disaster typology. 5

This present study, insofar as the author has been able to determine, is the first attempt to apply the concept of disaster to drought. Recognition that droughts can

3Charles W. Fogleman, "Family and Community in Disaster: A Socio-Psychological Study of the Effects of a Major Disaster upon Individuals and Groups within the Impact Area" (unpublished Doctor's dissertation, Louisiana State University, Baton Rouge, 1958).


5Lowell J. Carr, "Disaster and the Sequence-Pattern Concept of Social Change," American Journal of Sociology, XXXVIII (September, 1932), 207-18. See Chapter I of this study for a brief presentation of Carr's typology.
be predicted, cover an extensive area, and develop slowly in an extended span of time is one of the more basic steps in such an application. Literature in this field, as sparse as it is, does provide this basic recognition.

II. MIGRATION STUDY DATA AND ITS PROBLEMS

Source of data. Before presenting the literature of drought-related migration studies, it is necessary that attention be given briefly to some features common to most demographic studies. The majority of studies of migration utilize census sources. Their findings are given in terms of "net migration" rather than migration for they contain both immigration and emigration, and each is an unknown. This is especially true of studies which focus on the group rather than on the individual. The source data for the study of group migration are the United States Decennial Census, the vital records system of states, and the flow of products from government and non-government agencies.

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Problems of data. Most of these sources have errors that are of such magnitude that they are rendered somewhat less than desirable for precise reporting. The census has "distortions" due to underregistration of certain data, misreporting of age, and incompleteness of the census. The birth records are frequently underreported, especially in the rural areas, while deaths are often reported at the place of occurrence rather than place of residence. This condition has prompted comment from several population students. Thornthwaite states that "quantitative data dealing specifically with the phenomena of internal migration

7For an appraisal of the accuracy of the census see: Morris H. Hansen, William W. Hurwitz, and Leon Pritzker, "The Accuracy of Census Results," American Sociological Review, XVIII (August, 1953), 416-23. A Post Enumerative Survey found 2.3 per cent of the population were omitted and .9 per cent were added that ought not have been included for a net omission rate of 1.4 per cent (or approximately 2,000,000 people). Actually the error is greater than this for only .1 per cent of those added should have been omitted, the balance were merely "out of pocket."


10Smith, op. cit., p. 148 ff.
are practically non-existent," and the sources available are "tantalizingly incomplete."11

Compensations for data errors. By using selected ages one can control the errors due to unregistered births, but there is no age where the death rate is not present. Thus, this variable is present in all studies of this type, and the errors of reporting are not fully known, leaving a bias of unknown dimension.

Some studies are made by applying the birth and death rates to a set of census figures, that are age-graded, in order to derive a projected population of the future. The differences between the projected and the enumerated populations are expressed as migration.

Other studies are made by applying survival rates, at various ages, to a first population and thus projecting a later population. Differences between the projected and the enumerated populations are claimed to be due to migration. This method is used where both birth and death data are unreliable, and it is the best technique to overcome errors in death registration.

III. DROUGHT-RELATED MIGRATION STUDIES

The remainder of this chapter is devoted to the review of specific studies relating migration to drouth. Numerous other migration studies have been made which have no reference to drouth. These studies are pertinent to this present study, but their findings are not included in this particular chapter. They will be presented in following chapters which are devoted to specific migration differentials.

A limited number of drouth migration field studies have been made. In most of these studies, migration can be seen as the movement of individuals rather than as a group phenomena. Studies of this type will be used more specifically as background for the present study. This course is followed with the author fully aware that many of the non-census data studies have methodological shortcomings such as small samples, sample bias, and the like. In spite of these shortcomings, they are felt to be the most valid, at least for the purpose in mind.

Hoyt studies. Few specific studies of drouth were
made in the United States prior to 1930. Hoyt\textsuperscript{12} studied the drouths of 1930, 1931, and 1934 as to cause, effect, damage, and relief. Only in the area of "damage" does Hoyt's study deal directly with a specific that affects population. This specific, health, is not included in the present study, so his findings are not directly comparable to the present study. His contributions to the study of drouth migration is in revealing the difficulty of defining drouth by climatic conditions such as rainfall. For example, he reports Oregon had an average rainfall per month of 1.0 inches during the summer of 1930 and a 110 per cent average crop yield. The following summer the same area had over double the rainfall (2.3 inches) while the crop yield dropped to 93 per cent (a 17 per cent loss).\textsuperscript{13}

\textbf{Hill study.} Hill studied the effects of drouth in a South Dakota county from 1930 to 1935.\textsuperscript{14} His aim was to


\textsuperscript{13}\textit{Ibid.}, p. 33.

\textsuperscript{14}\textit{George W. Hill, Rural Migration and Farm Abandonment} (Washington: U. S. Federal Emergency Relief Administration Preliminary, Research Summaries, Series II, No. 6, 1935).
find the direction of population movements and to seek the extent of need for "well-informed social planning" to relieve the present stress and to prevent further similar occurrence.\textsuperscript{15}

Prior to 1920 less than one per cent of the farms in the county were abandoned in any year. During the drouth period, 3 per cent were abandoned in 1933 and 8 per cent in 1934. Hill says, "Some of the best farmers left the area and moved to other states, indicating the possession of resources sufficient to enable them to establish themselves in new locations."\textsuperscript{16} Hill fails to give his criteria of "best" as used in this study. He foresaw that many remaining on farms would have to move eventually. He predicted,

Since their resources will be exhausted, they will be in no position to plan a rational move and, in all likelihood they will leave with little sense of direction and, when stranded, create relief problems.\textsuperscript{17}

Hill speculated that the earlier migrants were those in a position to make rational moves and establish themselves in other situations. This may be more conjecture than fact, for in his study he did not follow the migrants to their new

\textsuperscript{15}\textit{Ibid.}, p. 1. \hfill \textsuperscript{16}\textit{Ibid.}, p. 2. \hfill \textsuperscript{17}\textit{Ibid.}, p. 3.
locations and study the degree to which they were able to establish themselves.

Wakefield and Landis. Such a study was attempted by Wakefield and Landis in 1938,\textsuperscript{18} and a follow-up was made by Landis three years later.\textsuperscript{19} Their general findings were that the migrant was better off, comparatively speaking, in his new location than in the old one. However, even after three years in their new locations "measured by absolute standards of an average middle-class ideal of living, a large proportion of the entire group would be dubbed failures."\textsuperscript{20}

All of the 381 families had come from the area designated by the Federal Emergency Relief Administration as drouth states. Drouth and ensuing crop failure was given as a direct cause of their migration by 201, or 53 per cent, of the families studied. In spite of these features these

\textsuperscript{18} Richard Wakefield and Paul H. Landis, \textit{The Drought Farmer Adjusts to the West} (Pullman: Washington Agricultural Experiment Station Bulletin 378, July, 1938).

\textsuperscript{19} Paul H. Landis, \textit{After Three Years: A Restudy of the Social and Economic Adjustments of a Group of Drought Migrants} (Pullman: Washington Agricultural Experiment Station Bulletin 407, October, 1941).

\textsuperscript{20} Ibid., p. 27.
studies were not strictly intended as studies of drouth migration. Instead, the central focus of attention was on the social and economic adjustments made by the migrants in their new locations.

Taeuber and Taylor. The Works Progress Administration has published several drouth studies, one of which was done by Taeuber and Taylor. In their study, they delineated the drouth area of 1935 and gave a history of its development. They were only slightly concerned with migration, as such, and still less concerned with the problem of adjustment as change among those affected by the drouth. They did find "decreases in the farm population in some of the areas which suffered most from the drouth and increases in others which suffered less." Taeuber and Taylor also found that there had been more migration prior to 1930 into the areas that suffered drouth than there had been into areas unaffected by drouth. This phenomena was accounted for by them in terms of adjustment to natural resources.


22Ibid., p. 52.
They stated, "These facts only emphasize that the migration before 1930 was not always directed toward the best adjustment of natural resources and population." 23

**Lively and Taeuber.** Lively and Taeuber did a study of rural migration under Works Progress Administration auspices. 24 It was basically a group type, net migration study using the census and various estimated populations as source materials. One brief section of the study was devoted to the "Effect of Drought" on migration. 25 This section was a brief resumé of the works of several authors. 26 The authors recognized that census data and estimates of population are inadequate to "permit one to follow the


individual from point of origin to point of destination."^27

To compensate for this inadequacy of their data, the findings of a number of studies made on a state basis were incorporated into their study. These supplementary studies indicated the extent of migration from the great plains drouth area to the Pacific coast and also eastward into Minnesota, Iowa, Missouri, Arkansas, and Louisiana.

They concluded:

The States which were most severely affected by the drouth were States in which the population had for some time shown a high rate of turnover, and it appears that drouth and economic depression accentuated previously existing trends without radically altering the direction of movement which had prevailed during the 1920's.28

This finding is in keeping with that of the Taeuber and Taylor study.

Kifer and Stewart. Another study under the auspices of the Works Progress Administration was done by Kifer and Stewart.29 This study of farming hazards in the drouth

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^27Lively and Taeuber, op. cit., p. 30.

^28Ibid., pp. 30-31.

area was not specifically directed toward migration related to drought, but it did present a brief historical sketch of "population movements as affected by precipitation" for the Central Great Plains area. Following the settlement of the area in the 1880's when precipitation was more abundant than usual, they observed:

Soon the farmers found that precipitation was normally limited and variable, and that their homesteads were too small to make a living. Many of the farmers moved out of the area. The next period of ample rainfall, however, brought other farmers into the region, only to go through the same experience. Thus, the history of the occupation of the Central Great Plains is one of alternating advance and recession.

This study yielded another generalization of value to the present study. Beyond the actual conditions of drought as causal factors for the general conditions existing in the Great Plains area, the authors indicated another basic cause: "The failure or inability of Great Plain farmers to adjust their farming systems to natural conditions." In this particular study, no effort was made to establish whether the failure to adjust was due to inability, or failure, to identify correctly the situation

30 Ibid., pp. 53-54.  
31 Ibid., p. 54.  
32 Ibid., p. xvii.
or perhaps was an example of 'self fulfilling prophecy.'

Other less generalized findings were made, such as a high degree of correlation between farm tenure type and being on relief. These will be treated in following chapters on specific correlates to migration.

Edwards study. In 1939, Edwards made a study of a wheat-growing county in Kansas.33 His chief concern was to investigate the influence of both drought and depression. His approach was to relate them to levels of living. Since levels of living were not studied in the present study there is little direct comparison between the two studies treated in following chapters as specific correlates to migration.

Reid study. The problem of drought in Arkansas was studied by Reid in 1939.34 The central focus of this study was an explanation of the extent of drought in Arkansas.


34James W. Reid, Jr., The Problem of Drought, in Arkansas Agriculture (Nashville: George Peabody College for Teachers, 1939). This is an abstract of a doctoral dissertation published as No. 229 in Contributions to Education by George Peabody College for Teachers.
The bulk of the study is devoted to weather, crops, soils, and farming techniques. Reid sought in these factors for possible clues to future prevention of drouths. He did devote some of his attention to the population. An increase of families on relief, claiming drouth or crop failure as the basic cause, is the only direct reference to the effects of drouth on the populations in the study. Other indirect references might be found in his descriptions of crop and pasture failures in various specific years and areas. Reid takes for granted that these failures affect the human populations in these localities, but no specific effects are reported.

In his study Reid makes no attempt to define drouth. However, his description of its complexity and the many variables that constitute the condition tend to verify the position taken in this study--that drouth is best defined by those within the situation rather than by some measurable specific like rainfall.

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35Ibid., p. 3. Reid reports that "more than 90 per cent" of the relief clients in a drouth stricken area contributed their condition to drouth or crop failure whereas only 37 per cent from a non-drouth area in the state gave this reason.
Bell study. Another study was made of a drouth-stricken, wheat-producing area of Kansas by Bell. This area is one that has had a record of severe drouths over a period of time at intermittent intervals. Bell's chief concern was not migration per se, but that of seeking to find the role of drouth in causing farmers of the area to have a "shoot the works philosophy" in most of their actions.

Searles study. Since mid-century two other studies have been made of drouth, one of which was made by Searles. This was a broad regional study of the southwestern United States. Searles' basic concern was to delineate the drouth areas and to set dates for the onset of drouth in each area. His basic contributions, therefore, lie in drouth delineation, rather than in specifics of how the population is affected by drouth. He found drouths of the southwest were "chronic drouth conditions superimposed on an area where aridity is the rule," and that "there is no rule of


thumb that can be applied to separate drouth areas from non-drouth areas or to define the beginning or ending dates of drouth periods."^{38} He described drouth as a gradual process.

Floods, hurricanes, and tornadoes are visible, dynamic, natural phenomena. Drouths, lacking such dynamic physical manifestations, are insidious events which creep and develop unseen and often unrecognized until they emerge full grown.^{39}

**Bonnen and Ward.** The second study since mid-century was in 1955, made by Bonnen and Ward.^{40} They studied 162 ranches located in the Edwards Plateau region of Texas. This drouth is the same as covered in the present study. The region studied by Bonnen and Ward is about 200 miles southwest of Mills county, the site of the present study. Their primary focus was centered on economic and managerial changes and their relation to drouth. Their study contains information on feed purchases, changes in rates of stock replacement, changes in net worth, and the number of loans that were made through the Production Credit Association, Farmer's Home Administration, and commercial banks during a

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^{38}Ibid., p. 1.  
^{39}Ibid., p. 9.  
^{40}C. A. Bonnen and J. M. Ward, *Some Economic Effects of Drought on Ranch Resources* (College Station: Texas Agricultural Experiment Station Bulletin 801, March, 1955).
specific number of years of prolonged drought. Little of the material above was related directly to human behavior other than to note the frequency of occurrence in the study group.

**Summary.** The studies described above have shown that drought is a disturbing influence in the lives of men and that it effects changes in their situations. These changes are often sufficient in magnitude so that old pre-defininitions for behavior are no longer adequate. Thus a crisis is faced by the individuals and/or groups confronted by drought situations of a serious and prolonged nature.
CHAPTER IV

THEORETICAL AND ANALYTICAL APPROACH OF THE STUDY

Many conceptual models could be used in the analysis of data such as are included in this study. Some of the more applicable theoretical models are reviewed in the discussion which follows. At the same time, the theoretical frame of reference to be used in this study is described.

1. BRIEF REVIEW OF SELECTED THEORETICAL MODELS

One conceptual scheme that could be used in a study such as the present one is that of the rural social system. Loomis and Beegle have used the social system extensively in the analysis of social change.¹ In commenting on Loomis and Beegle's approach, Blumer writes, "They have developed a scheme of sociological analysis which will give the reader a sound and meaningful analysis."² These scholars


conceive social systems to be "made up of social interactions and the cultural factors which structure these inter-
actions." They state, "Social systems are organizations com-
posed of persons who interact more with members than with
non-members when operating to attain the system's objectivi-
ties." Social systems tend toward equilibrium which "is
considered a state in which, if a force is impressed upon a
system, resultant modifications are produced within the
system."

The social system concept as an analytical device is
not used extensively in this study. Full utilization of
this conceptual scheme was not possible because the resources
available for the study were too limited for the intense
study required.

Some form of disaster theory, such as a spatial
model could also be applied in the interpretation of the
data. Wallace has developed a model of this type in his

3Loomis and Beegle, Rural Social Systems, p. 45.
4Ibid., p. 33.
5Loomis and Beegle, Social Change, p. 8.
6Anthony F. C. Wallace, Tornado in Worcester: An
Exploratory Study of Individual and Community Behavior in
an Extreme Situation, Committee on Disaster Studies Report,
work with tornadoes as disasters. In Wallace's model the central area of greatest impact is delineated with a circle. Around this central area Wallace draws increasingly larger "concentric circles" to delineate areas of successively less impact. A similar spatial model has been used by Form. The major distinction between the two models is that Form uses rectangles, rather than circles, to subdivide the total affected area. These geometric figures are used by both Wallace and Form to delineate areas using "degree of impact" of the disaster as the criteria of delineation. However, these models were not considered as appropriate as others to be mentioned later. The greatest drawback to using spatial models is the lack of specificity of criteria to delineate drought areas by "degree of impact" of drought.

A more meaningful application could have been made of a disaster "time" or "sequence" model than of a "spatial" one. However, many of the sequence models are constructed


William H. Form et al., Community in Disaster (New York: Harper and Brothers, 1958). See page 73 for this model development.
for application only to cataclysmic disasters. The latter would require modification to fit a study like the present one, which is of a non-cataclysmic disaster. The broader "sequence model" proposed by Carr possibly could be used without revision required. Carr supports the thesis that all change, including catastrophic change, follows a definite sequence pattern of: (1) a precipitating event or condition, (2) adjustment—dislocation, and (3) individual interactive and cultural readjustment. Limited use is made of this model as a conceptual device to interpret the data of this study. This model is not used more extensively because another conceptual scheme seemed more appropriate to the writer.

The theoretical frame of reference judged the most applicable to the present study is that of the "situational"

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8For models of this type see: John W. Powell, Jeanette Raynor and Jacob E. Finesinger, "Response to Disaster in American Cultural Groups," Symposium on Stress (Washington: Army Medical Service Graduate School, 1953); Anthony F. C. Wallace, op. cit.; William H. Form et al., op. cit.


10Carr, op. cit., p. 214.
model. This model was selected as more appropriate for the following reasons: (1) the study was concerned with adjustments as a result of a change in situation; (2) because of the nature of drouth as a crisis situation; and (3) because the concept of "definition of the situation" allows for the analytical interpretation of the migrational aspects of behavior. This approach assumes that man acts on the basis of his interpretation of the situation rather than according to some predetermined patterns.  

II. SITUATIONAL THEORY: ITS BACKGROUND AND APPLICATION

It is appropriate to discuss the origin and background of situational theory, since it has been utilized in the present study. The basic background for the theory was laid by Cooley in 1902.  


and "the individual and society as two aspects of the same thing." Further development of this theory came when Thomas and Znaniecki published their work on the Polish peasant.\textsuperscript{13} This publication was recognized by Burgess as "the starting point for the sociological exploration of personality and culture."\textsuperscript{14}

In 1926, Thomas furthered the theory in a paper presented to the American Sociological Society. In this paper, he states, "Behavior traits and their totality are the outcome of a series of definitions of situations with the resulting reactions and their fixation in a body of attitudes or psychological sets."\textsuperscript{15} In his presidential address to the American Sociological Society in 1928, he made a clear distinction between different approaches to the study of


\textsuperscript{14}Ernest W. Burgess, "The Cultural Approach to the Study of Personality," Mental Hygiene, XIV (April, 1930), 310.

behavior as emphasizing "either the attitude, the value, or the situation." In a work published in 1928, he further distinguished between the "constitutional" and the "situational" approaches to personality. The situational approach he characterized as concerned with the stimuli to which the individual reacts.

Earlier Thomas had defined a situation as a "configuration" of factors which affect behavior. This concept of "situation" was refined by Sheffield. She recognized that all factors or stimuli in a situation are not necessarily taken into account by the individual. Sheffield pointed out that certain features or aspects in a situation might be emphasized whereas others could be minimized or completely neglected. In her words, "we must

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19 Ada E. Sheffield, "The 'Situation' as the Unit of Family Case Study," Social Forces, IX (June, 1931), 467.
differentiate between the 'total' situation and the more immediate 'functional' situation."20

Thomas' belief, that behavior cannot be understood apart from the situation in which it occurs and to which it is a potential adjustment, is summarized by Volkart in the quotation "every concrete activity is the solution of a situation."21 This view has received widespread support.22 Those using it, however, rather generally used situation as more or less synonymous with environment. Sheffield helped distinguish between the two concepts. She pointed out that family case work does not deal with a client, but with a dynamic field of experience in which the "individual or family figures within an aggregate of interactive and

20Ibid., p. 467.


interdependent factors of personality and circumstances."

Queen, too, has made a distinction between environment and the situation. He defined a situation as follows:

"A situation consists in relationships between persons viewed as a cross section of human experience, constantly changing in kaleidoscopic fashion, and affected both by material conditions and by relationships to other persons."

Thus he uses the term as a tool of analysis.

Mead has pointed out that environment includes all the factors to which the responding unit responds, and this includes both those external as well as internal to the organism. This inclusion of the internal factors in the concept of "environment" has helped to clarify the concept "situation" since only stimuli external to the organism are customarily included in the concept of "social situation."

It may be noted the situational concept is frequently utilized in recent scientific literature. Three general basic ideas seem to be included in the concept of the "social situation" as it is customarily used.

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23 Sheffield, op. cit., p. 465.

24 Stuart A. Queen, "Some Problems of the Situational Approach," Social Forces, IX (June, 1931), 481.


26 Bossard, op. cit., pp. 36-37.
the idea that only stimuli external to the organism are included. Second, is the idea that the stimuli operate upon, within, and in relation to each other. They do not just operate on the organism alone, but are reciprocal in their relation to each other and, thus, are organized and operate as a unit.

The third idea is that the situation is organized to or about some focal point or person. In other words, the situation is more than the mere sum of its parts, and thus the situation itself becomes an additional and effective factor.

Situation as it is used in this study more nearly approximates that described above—that is as a unit of external stimuli with a focal point. The external stimuli are the network of interrelated conditions reciprocally affecting one another, among which is included the general condition of drouth. The focal point, or the point of reference to which the situation is related, is the individual rural-farm resident of the drouth area. The meaningful situation is that which he perceives to be operative, regardless of what might really exist, and toward which he orients his behavior.

It is at this point that another dimension of
situational theory may be introduced. The "self-fulfilling prophecy" of Merton applies here. "If men define situations as real, they are real in their consequences," is another way of stating that man responds to the subjective as well as to the objective features of a situation. There is rather widespread acceptance among sociologists that an individual's behavior is determined by the meaning that he or she assigns to the situation.

As long as the situation is interpreted to be one for which the individual or group, through socialization, has been provided cultural norms or "pre-definitions," the individual or group responds with behavior that is routine and predictable. "When a new or unique situation comes up and there is no previous experience to draw upon in terms of established behavior patterns, the individual or group is faced with a 'crisis.'" If the crisis situation is of

27 Robert K. Merton, Social Structure and Social Theory (Glencoe: The Free Press, 1957), Chapter XI.

28 Ibid., p. 421. Merton is here giving credit to W. I. Thomas for calling attention to a theorem that had been repeatedly set forth by disciplined and observant minds long before Thomas.

29 Alvin L. Bertrand and Harold W. Osborne, Rural Industrialization in a Louisiana Community (Baton Rouge: Louisiana State University and Agricultural and Mechanical College Agricultural Experiment Station Bulletin No. 524, 1959), p. 13.
sufficient violence and duration, changes of a permanent nature, in behavior, are brought about, for the old patterns are prevented from being restored.

If the residents of a rural community who had experienced a number of years of reasonably prosperous farming were subjected to rather severe and prolonged drouth conditions, the drouth might be viewed as a new situation or crisis. The impact of the drouth could be understood in terms of agricultural and other change ascribed to the drouth by the individuals and groups involved. Theoretically, the acceptance of the drouth as a crisis of sufficient violence and duration may bring about radical changes of a permanent nature in individual and community life organization. If the drouth is accepted as a crisis situation of less violence, it may cause a minimum of disruption to present patterns or a disruption of a temporary nature with a return to the old patterns when the drouth is past.
CHAPTER V
THE AGE STATUS OF MIGRANTS

Age is a biological fact. It does have a great deal of social importance attached to it, however. Age groupings are found in all societies and certain statuses are assigned to individuals using the criteria of age. Specific roles, or behavior patterns, are expected from individuals when they are assigned an age status by their society. Although individual social behavior frequently fails to conform strictly to the expectations of the group, there is generally some relationship between the age and the social behavior of individuals; numerous studies have been made to explore this relationship.¹ The immediate concern of this chapter will be the investigation of studies in which age status has been correlated to migration, and to the presentation of the pertinent findings of the present study.

I. STUDIES CORRELATING AGE STATUS TO MIGRATION

Students of population movements have found that there is generally an excess of adolescents and young adults among short-distance migrants and especially among those moving from rural to urban areas. This holds true even when different definitions of migrants are used. It has also held true from one time to another and from one place to another.

A typical statement of demographers is made by Landis and Hatt. They note that "the movement from farms to cities is beyond question markedly selective as regards age, taking primarily youth."\(^2\)

In a study made by Hamilton in Texas in 1936, it was found that more young women left home at the age of 13 than at any other age, while the greater number of young men

left home at age 21.\(^3\) For both sexes the rate of departure increased for the next two years beyond the ages at which the maximum number left home and then began to decline gradually.

The same finding was reported by Kolb and Brunner, who included both urban and rural in their generalization concerning age mobility. "In city and country alike," they report, "it is those in the early years of their productive life who are more likely to migrate than others."\(^4\) This observation is based on migration on a national basis rather than on specific studies. They noted that in 1948-1949, "nationally about one-fifth of those eighteen to twenty-four moved, at least to another county. With the males, however, a considerably larger proportion of the twenty to twenty-four year olds than of those eighteen and nineteen migrated."\(^5\) They found that between 1920 and 1930, 2,000,000 persons between the ages of 15 and 24 moved

\(^3\)C. Horace Hamilton, "The Annual Rate of Departure of Rural Youths from Their Parental Homes," Rural Sociology, I (June, 1936), 164-79.


\(^5\)Ibid., p. 31.
from farms to cities. This age group represented "one-third of the total net migration, though in 1930 this age group made up slightly less than one-fifth of the total rural population."\(^6\) These authors recognize regional variations of patterns of migration related to age, but find the same general pattern prevails in all regions of the United States.

Lively and Taeuber reported the same general finding using slightly different percentages. They reported, "almost 45 per cent of the net rural migrants from 1920 to 1930 were 10-19 years of age in 1920. More than 75 per cent of the migrants were persons who were less than 25 years of age in 1920."\(^7\)

Bernert reported similar findings in a study covering approximately the same time span as the Lively and Taeuber study.\(^8\) In her words,

\[^{6}\text{Ibid.}, \text{p. 43.}\]

\[^{7}\text{C. E. Lively and Conrad Taeuber, } \text{Rural Migration in the United States} \text{ (Washington: Works Progress Administration, Division of Research, Research Monograph XIX, 1939)}, \text{ p. 15.}\]

\[^{8}\text{Eleanor H. Bernert, } \text{Volume and Composition of Net Migration from the Rural-Farm Population, 1930-1940, for the United States, Major Geographical Divisions and States}, \text{ Mimeographed (Washington: Bureau of Agricultural Economics, 1944).}\]
Though the net migration from the rural-farm population between 1920 and 1930 was 54 per cent greater than in the 1930-1940 decade, the age pattern of net migration was similar for both periods. In each period the greatest proportion of net migration from the rural-farm population occurred in the age group 15-19 at the beginning of the decade.9

Numerous other studies could be cited to reinforce the proposition that rural to urban migration is highly selective for youth.10 Most studies would vary in the specific ages selected during which migration is greatest and the degree or per cent to which the youth migrate, but they would still tend to verify one another. The studies are so consistent that Price has noted,

Only two facts regarding the selectivity of this migration have been more or less definitely established. These are (1) that the rural-urban migration is selective of young people and (2) that it is selective of females. The persons who leave the farm and move to the city are, for the most part, young people in their late teens

9Ibid., p. 2.

or early twenties. 11

II. AGE STATUS FINDINGS OF THE PRESENT STUDY

The total sample of this study consists of 879 individuals, as has been noted previously. Of this number 662 were still in the study area at the time of the survey, and were operating farms and/or ranches, or were members of farm-operator households. An additional 90 were in the area and were a part of the farm population, but were not operating farms. Twenty households, composed of 74 individuals, were located who had left the farm-operator population of the study area between 1950 and 1958. Eight of these households had left the farm population by ceasing to farm. The other 12 households had left the farm population by migration. These represent only those households who moved close enough to be located and interviewed, that is, within an approximate 60 mile radius from the study area. Other households left the study area but moved too far to be located and interviewed. The balance of the study sample was composed of 53 individuals who left the

study area as individuals, between 1950 and 1958, and who could either be located for an interview or whose families could give the desired information.

It seems logical that individuals and households who derive their basic livelihood from producing agricultural products would be directly affected by climatic conditions which affect plant growth. It also seems logical that those who are not dependent upon producing agricultural products for their livelihood would be less directly affected by such climatic conditions. These assumptions would seem to hold true even when both those dependent upon agricultural production and those dependent on other occupations lived in the same area. Thus, the analysis of data for this study will largely ignore those 90 of the farm population who did not operate a farm and/or ranch during the period covered by the study. They are included in the sample for the purpose of making a general comparison of the 1950 study area population with that of the state for a check on the possibility of an atypical sample.

In 1950, the farm population of the study area was quite similar in age structure to the farm population of the state of Texas. The study area had fewer persons under 15 years of age, 25-34 years of age, and over 55 years of
age. The study area had more persons between 20-24 years of age and in the productive ages (35-44 years of age). The same relative number of persons in the 15-19 years of age group was found in the sample population as in the state population (see Figure 3). Because of the small differences in percentages, it may be assumed that the age distribution of the sample area was not atypical of the state of Texas in 1950.

Greater differences in age distribution existed between the separate census precincts composing the sample area than between the total sample area and the state of Texas. Two precincts adjacent to one another, precincts 4 and 5, were quite similar in age distribution, and will be treated as a single entity in much of the analysis which follows. Census precinct 6, however, was enough different from precincts 4 and 5 that it is treated as a separate entity in a portion of the analysis which follows. Figure 4 is designed to show the differences in age structure between precincts 4 and 5 and precinct 6 in 1950.

More persons were under 35 years of age and fewer persons were 65 years of age and over in precinct 6 than in precincts 4 and 5. Fifty-six per cent of the people in precinct 6 were under 35 years of age, while 51 per cent
Figure 3 Age Distribution of Farm Operators and Household Members, Texas and Selected Census Precincts, Mills County, Texas, 1950 and 1958

*Unpublished Census Data
of the people in precincts 4 and 5 were in this age group. The greatest difference between the two areas was in those persons 65 years of age and over. In precincts 4 and 5, this age group comprised 9.5 per cent of the population, while it comprised only 5.8 per cent of the population in precinct 6, a difference of 3.7 per cent. The excess of older persons in precincts 4 and 5 might be explained by the agricultural patterns of the two areas. Precinct 6 is devoted largely to dry land farming with some ranching activities. Precincts 4 and 5 are basically devoted to ranching. Sheep and goats are the animals most frequently raised, followed in importance by cattle. The raising of these animals is less strenuous labor than dry land farming, in that it requires less physical strength and stamina. Individual operators could, from the general health point of view, continue to operate a ranch in precincts 4 and 5 at an older age than they could operate a farm in precinct 6.

By 1958, the age differences between precincts 4 and 5 and precinct 6 had grown even greater than they had been recorded in 1950 (Table II). In precinct 6, 50 per cent of the population was under 35 years of age in 1958, while only 36.7 per cent of the people in precincts 4 and
## TABLE II

**AGE DISTRIBUTION OF FARM OPERATORS AND HOUSEHOLD MEMBERS, BY TYPES OF MIGRATION, SELECTED CENSUS PRECINCTS, MILLS COUNTY, TEXAS, 1950-1958**

<table>
<thead>
<tr>
<th>Years of Age</th>
<th>Precincts 4 &amp; 5</th>
<th></th>
<th>Precinct 6</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Internal</td>
<td>Per</td>
<td>External</td>
<td>Per</td>
<td>Internal</td>
<td>Per</td>
</tr>
<tr>
<td>Under 15</td>
<td>1</td>
<td>1.0</td>
<td>18</td>
<td>18.4</td>
<td>25</td>
<td>3.9</td>
</tr>
<tr>
<td>15 - 19</td>
<td>0</td>
<td>0.0</td>
<td>10</td>
<td>10.0</td>
<td>5</td>
<td>1.8</td>
</tr>
<tr>
<td>20 - 24</td>
<td>1</td>
<td>1.0</td>
<td>14</td>
<td>14.1</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>25 - 34</td>
<td>1</td>
<td>1.0</td>
<td>19</td>
<td>19.4</td>
<td>7</td>
<td>2.5</td>
</tr>
<tr>
<td>35 - 44</td>
<td>0</td>
<td>0.0</td>
<td>10</td>
<td>10.0</td>
<td>11</td>
<td>3.9</td>
</tr>
<tr>
<td>45 - 54</td>
<td>4</td>
<td>4.0</td>
<td>15</td>
<td>15.1</td>
<td>13</td>
<td>4.7</td>
</tr>
<tr>
<td>55 - 64</td>
<td>2</td>
<td>2.0</td>
<td>4</td>
<td>4.0</td>
<td>4</td>
<td>1.4</td>
</tr>
<tr>
<td>65 &amp; over</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Totals</td>
<td>9</td>
<td>9.0</td>
<td>90</td>
<td>91.0</td>
<td>67</td>
<td>23.9</td>
</tr>
</tbody>
</table>
5 were under 35 years of age. Both areas had gained in number of persons 65 years of age and over. However, precincts 4 and 5 had gained more rapidly than had precinct 6. Precincts 4 and 5 had 4.3 per cent more of its people in this age group than precinct 6 in 1958, as compared with 3.7 per cent more in 1950.

The sample population contained 233 households who had operated farms and/or ranches in the study area at some time between 1950 and 1958. Twenty of these households had ceased to operate a farm and/or ranch within the study area by the time of the survey in 1958. The remaining 213 households were still in the study area and operating farms and/or ranches.

Eight of the 20 households no longer operating farms in the study area had not migrated from their former residence. The remaining 12 households had moved away. In the analysis which follows the latter will be included along with other migrants. They have the distinguishing characteristic that their moves represent external migrations, from farm residence to non-farm residence.

One hundred and two of the 233 households of the sample either operated or had operated farms and/or ranches in precincts 4 and 5. Seven of these were former operator
households and the remaining 95 were still operating in these precincts at the time of the survey. These 95 households contained 266 household members. The remaining 131 households of the 233 in the sample were located in precinct 6. Thirteen of these 131 households were former farm-operators in this precinct. The other 113 were operating farms and/or ranches in the precinct at the time of the survey. They contained 396 household members.

**Internal migration, precincts 4 and 5.** Individuals and households who moved, but remained within the farm-operator population of the precincts, are treated as having made internal moves. Those either leaving or entering the farm-operator population or the census precincts are treated as external migrants. These limited definitions are justified by the nature of the relationship between operating a farm and drought. Some of the population did cease to operate a farm and remained in their former residence, making no move. Such individuals and households are not treated as migrants, but their motivations for leaving the occupation of operating a farm are reported.

Nine persons, comprising four of the 95 households in precincts 4 and 5, made internal moves between 1950 and 1953.
One of these heads of household was under 35 years of age at migration, two were between 45 and 54 years of age, and the other was 55 years of age. All four of the heads of households were married to spouses whose average age was slightly less than that of the heads of the households. The ninth migrant was a child one year of age. The average age at migration of the nine migrants was 41.0 years of age. The heads of households and their spouses migrated at the average of 46.8 and 45.3 years of age respectively.

The four migrating households were currently members of the farm-operator population of these precincts at the time of the survey. None of the seven households that had formerly been in the farm-operator population of these precincts had made internal moves prior to having migrated from the area. No individuals related to precincts 4 and 5 had made internal moves independent of their households.

Internal migration, precinct 6. Sixty-seven persons, comprising 17 households and five individuals, made internal moves within precinct 6 during the period covered by the study. One of the 17 households had migrated from the study area by the time of the survey. The remaining 16 households were still operating farms and/or ranches in the precinct at the time of the survey. Five individuals had
moved independently of their households. Four of the latter were currently in the farm-operator population at the time of the survey. The other person had migrated from the study area.

The average age at migration of the 67 migrants was 27.2 years of age. This is considerably younger than the average age of the internal migrants of precincts 4 and 5, whose average age at migration was 41.0 years of age. The average age at migration of these persons who migrated as members of households was 27.6 years of age. The heads of households migrated at the average of 43.5 years of age, which is still somewhat younger than the average of 46.8 years of age for household heads in precincts 4 and 5. Individual migrants averaged 21.6 years of age at the time of their migration.

Sixteen of the 17 heads of households were married to spouses of approximately their own ages. The remaining individual was a widow 31 years of age. Two of the 17 heads of households were between 25 and 34 years of age when they migrated, six were between 35 and 44 years of age, and eight were between 45 and 54 years of age at the time they migrated. The oldest household head was 62 years of age at the time of his migration.
The remaining households included twenty-eight children and one female 64 years of age. Twenty-five of the children were under 15 years of age, and three were between 15 and 19 years of age at the time of migrating.

All five of the individuals who migrated independent of their households were under 25 years of age at migration. Two of the five were between 15 and 19 years of age and the other three were between 20 and 24 years of age.

External migration by households, precincts 4 and 5. Seventy-three migrants moved into or out of the farm-operator population of precincts 4 and 5 between 1950 and 1958. These migrants were members of 24 different households. The members of 21 on these households were still residing in the study area at the time of the survey. The members of the other three households had migrated out of these precincts. The people included in these three households did not constitute the total population loss to the farm-operator population. Several migrants had moved as individuals, independent of their households. In addition, five household groups left the farm-operator population by ceasing to operate a farm and/or ranch, but did not migrate from this area.

The average age, at the time of migration of the 73
external migrants, was 29.4 years of age. These were considerable younger than those making internal migrations of precinct 6. The average age of the 24 heads of households, making external moves, was 40.7 years of age.

Two of the heads of households migrated while between 20 and 24 years of age. Eight migrated while between 25 and 34 years of age, and four more moved while between 35 and 44 years of age. The remaining ten migrated while between 45 and 64 years of age. Over one-half, 14 of 24, of these heads of households had migrated before reaching 44 years of age (Table III).

The average age, of those heads of households who migrated into the area and started farming during the drouth, was 39.6 years of age at migration. Those who made external moves from farm residence to nonfarm residence averaged 40.3 years of age, and those who migrated from one farm to another averaged 46.1 years of age. Heads of households who ceased operating a farm and/or ranch but did not migrate were older, on the average, than any of the migrant groups. They averaged 66.0 years of age.

External migration by households, precinct 6. One hundred and seventy-three individuals made external moves into or out of precinct 6 during the period covered by the
### TABLE III

AGE DISTRIBUTION OF HEADS OF FARM-OPERATOR HOUSEHOLDS, BY TYPE OF MIGRATION, SELECTED CENSUS PRECINCTS, MILLS COUNTY, TEXAS, 1950-1958

<table>
<thead>
<tr>
<th>Years of Age</th>
<th>Precincts 4 &amp; 5</th>
<th>Precinct 6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Internal</td>
<td>External</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>15 - 19</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>20 - 24</td>
<td>0</td>
<td>2</td>
<td>2.3</td>
</tr>
<tr>
<td>25 - 34</td>
<td>1</td>
<td>8</td>
<td>10.5</td>
</tr>
<tr>
<td>35 - 44</td>
<td>0</td>
<td>4</td>
<td>4.6</td>
</tr>
<tr>
<td>45 - 54</td>
<td>2</td>
<td>7</td>
<td>10.5</td>
</tr>
<tr>
<td>55 - 64</td>
<td>1</td>
<td>3</td>
<td>4.7</td>
</tr>
<tr>
<td>65 &amp; over</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>24</td>
<td>32.6</td>
</tr>
</tbody>
</table>
study. These 173 individuals comprised 41 households, 29 of which were still residing in the precinct at the time of the survey. The remaining 12 households had migrated from the study areas. These 12 households did not constitute all of the farm-operator loss of precinct 6, however. A number of migrants had moved as individuals independent of their households. These are treated separately below. Three household groups had ceased to operate a farm and/or ranch, but did not migrate.

The average age, at the time of migration, of the 173 external migrants of this area was 27.2 years of age. This is the same as the average age of the internal migrants from this precinct, but it is younger than the average age of the external migrants from precincts 4 and 5.

Two of the heads of households in precinct 6 migrated while under 20 years of age. Five migrated while between 20 and 24 years of age. Five migrated while between 25 and 34 years of age. The largest number, 12, migrated while between 35 and 45 years of age. Altogether over one-half, 25 of 41, of the heads of households migrated while under 45 years of age.

The average age of the heads of households who migrated into the area and started framing during the drouth
was 38.8 years of age at migration, as compared with an average age of 39.6 years of age in precincts 4 and 5.

Those persons who made external moves from farm to nonfarm places averaged 49.5 years of age at migration, as compared to an average of 40.3 years of age in precincts 4 and 5.

Those heads of households, who migrated from farm to farm, migrated at an average age of 36.2 years of age, as compared with an average age of 46.1 years of age in precincts 4 and 5. Those who ceased operating a farm and/or ranch but remained on their places, ceased to farm at an older average age (59.7 years) than that attained by any of the migrants at the time of their migration.

**External migration by individuals, precincts 4 and 5.** Seventeen individuals migrated out of precincts 4 and 5 independent of their households during the period covered by the study. Five of these moves were made by individuals under 20 years of age. Seven persons migrated while between 20 and 24 years of age, and the remaining five migrated while between 25 and 34 years of age. Over two-thirds, 12 of 17, of the migrants were under 25 years of age at the time they migrated.

The average age of individual migrants was 22.1
years of age at migration. More migrants moved at age 18 than at any other age.

External migration by individuals, precinct 6. Thirty-eight external migrations were made by individuals from precinct 6 during the period covered by the study. Sixteen of the migrants were under 20 years of age at the time they migrated. Seventeen migrated while between 20 and 24 years of age. Four migrated while between 25 and 34 years of age, and the remaining person migrated at age 40. Nearly seven-eighths (33 of 38) of the individual migrants making external moves were under 25 years of age at migration.

The largest number of migrants moved at ages 18 and 19. Age 21 was the age at which the next largest number of migrants moved. The average age at migration was 21.2 years of age.

Summary and conclusions of the chapter. The findings of this chapter can be summarized as follows. A total of 377 moves were made by 273 migrants during the period covered by the study. These moves represent the equivalent of 47.7 per cent of the total sample having migrated during the eight-year span covered by the study. One-fifth (20.1
per cent) of the moves were internal and four-fifths (79.9 per cent) of the moves were classified as external migration. The rate of migration for those of different ages varied, from a low of 11 moves per each 100 persons in the sample population 65 years of age and older, to a high of 88 moves per each 100 persons between 15 and 34 years of age.

Several conclusions may be drawn from the findings, most of which support the findings of previous studies. The rate of migration tended to be in inverse proportion to the age of the individuals of the study area. The younger person moved relatively more frequently than did the older person. The younger migrant more frequently made a move of an external nature, and also moved from a nonfarm residence to a farm residence more frequently than did the older migrant (see Figure 5). The young migrant was from precinct 6 relatively more frequently than from precincts 4 and 5.

These findings might be explained by the general trend toward conservativeness of older persons. As individuals age, they tend to develop more resistance to change, especially to change of a more drastic nature. They would tend to migrate less frequently, for migration is a rather
Figure 5  Age Distribution of Migrants, by Type of Migration and Non-Migrants, Selected Census Precincts, Mills County, Texas, 1950-1956
drastic change. When they did migrate, they would tend to remain within the same larger community rather than move to a completely different one. Relatively more young migrants were from precinct 6 than from precincts 4 and 5, because in precinct 6, drouth was apparently defined as a more serious crisis calling for more drastic changes in behavior in order to cope with the situation successfully.
CHAPTER VI

THE SEX STATUS OF MIGRANTS

The social importance attached to sex as a determinant of human behavior is pointed out in many sociological works. Biological and psychological differences between the sexes do exist, but the social differences overshadow them.\(^1\) Possibly the significance of sex as a criteria for differentiating human behavior is due to its dichotomous nature. It is thus more readily determined than age, because the exact ages dividing age categories are nebulous and relative, and differ with cultural orientation.

All societies assign statuses and roles on the basis of sex. These statuses and roles are among the most permanent ones an individual acquires. They change somewhat with age, but never to the extent that the sex status is lost. Sex status is meaningful in terms of migration and

for this reason has pertinence for this study.

The sex ratio, the number of males per 100 females, has become a standardized measure to indicate the sex composition of a population. Sex ratio as used in this study is the same as that called "Tertiary Masculinity Ratio" by Landis and Hatt. In the findings of the present study, refinements of the sex ratio will be made by restricting it to specific age groupings within the sample instead of always applying it to the entire sample. The discussions which follow are designed to show previous findings of the sex selectivity of migration and to present the findings of the present study.

I. STUDIES CORRELATING SEX STATUS TO MIGRATION

One of the "laws" of migration of Ravenstein is that "females are more migratory than males." In his studies

\[ 2 \text{Paul H. Landis and Paul K. Hatt, Population Problems, Second Edition (New York: American Book Company, 1954), p. xxxiv. These authors distinguish between three sex ratios. The "Primary Masculinity Ratio" refers to the intra-uterine ratio of male to female embryos. The "Secondary Masculinity Ratio" refers to the ratio of male to female births. The "Tertiary Masculinity Ratio" refers to the number of males in a given area in a given year per 100 females in that area and year.} \]

\[ 3 \text{E. G. Ravenstein, "The Laws of Migration," Journal of the Royal Statistical Society, 48 (June, 1885), 199.} \]
he found this to be especially valid for the short-journey migrants not born in large towns. Ravenstein's "law" has found rather wide acceptance, although it has not been without criticism. Thomas states, "Both the law and the more tentative generalization have been widely accepted, but without systematic proof."\(^4\)

The typical methods of sex status study are: (1) to compare the sex ratios of areas that have gained by migration with those that have lost by migration; (2) to compare sex ratios of populations that have been subdivided into place of residence and place of birth; or (3) to compare sex ratios of migrating groups at the time of migration.

Both of the first methods have shortcomings. They are used with the assumption that the sex ratio of a population is a single factor. In reality, however, the sex ratio of a population is a complex composed of four sex ratios. The sex ratio of births, the sex ratio of deaths, the sex ratio of external migration, and the sex ratio of internal migration all affect the sex ratio of a population. Studies

using these methods are more valid, however, when age is held as a constant, rather than as a variable. Several studies have been made using these methods and with age held to a relative constant. The following studies are more or less typical of the sex status literature.

In 1934, Hamilton reported on a study he had made using census data of interstate migration in North Carolina between 1920 and 1930.® His findings were reported in terms of age, color, residence and sex. By using age classes he kept age at a constant and used sex as a variable. He found the sex ratio to be under 95 for those between 15 and 34 years of age and for those 60 years of age and older, and found it to exceed 105 for those between 10 and 24 years of age and between 50 and 79 years of age. He found that the sex selectivity of migration from farms to cities holds even across racial lines, except in a few notable cases. The most notable exception is that of the movement of Negroes northward. His interpretation of this exception is that it “merely emphasizes the fact that the northward

migration of Negroes is more than a rural-urban movement and possesses many of the characteristics of an emigration."\(^6\) Similar findings had been reported almost a decade and a half earlier by Woofter.\(^7\) Woofter had limited his study to the Negro race, but his findings in terms of the sex selectivity of farm to city migration were supported by Hamilton's findings.

Dorn reported findings somewhat similar to Hamilton's as a by-product of a death rate study.\(^3\) Dorn was not concerned with migration per se, but he did report the sex ratios of migrants since he found them to have a bearing on the death rate, which was his primary concern. His study was centered in Ohio and was based on the 1930 population. He found a low sex ratio to exist in the 15 to 24 years of age groups with a "sudden rise" following age 24 and a continuing gradual increase between the ages 35 and 75.


\(^7\)T. J. Woofter, Jr., *Negro Migration* (New York: W. D. Gray, Publisher, 1920).

In 1926 Truesdell made a rather comprehensive study of the population of the United States. His concern was to delineate the farm population, the village population, and the urban population of the United States. His findings are reported in terms of sex ratios for each of these three segments of the total population, rather than sex ratios reported by age groups within each segment. He found the highest sex ratio to be among the farm population and reasoned that farming is done by men while many of the urban occupations are followed largely by women. He concluded, "Hence the farmer's daughter is more likely to leave the farm and to go to the city than is the farmer's son."10

Gee and Runk made a study of 273 migrants from Albermarle County, Virginia. They reported that the "cities tend to attract a higher proportion of possible female migrants than males, and to attract from the rural areas in largest numbers the best of their populations."12

10Ibid., p. 62.
12Ibid., p. 264.
Brunner perused "more than 150 studies in which at least a chapter was devoted wholly to this topic"\textsuperscript{13} of the flow of rural people to towns. His summarized findings in the areas of age and sex are: (1) that females leave rural areas, especially farms, in disproportionately larger numbers than males; (2) that the bulk of rural-urban migration begins at age 16 and is over by age 30; and (3) that rates of migration tend to vary with economic conditions.\textsuperscript{14}

Numerous studies touch on the sex aspects of migration, but since agreement is so universal it seems appropriate to present a summary of findings, rather than to continue to enumerate them.\textsuperscript{15} Kolb and Brunner summarize


\textsuperscript{14}Ibid., pp. 54-55.

sex differences between the various population segments without regard to age. They report using the 1935-1939 data, "the ratio of males to females among all farm migrants was 109.8 to 100, but among those who migrated to the city, there were only 92.5 males to 100 females."\textsuperscript{16} The sex ratio increased to 112 when the farm migrants moved to rural nonfarm areas. It rose still further, to 118, when the farm migrants migrated to other farms. The authors found these conditions to hold nationally with relatively slight variation from region to region.

Lowry Nelson has presented similar findings synthesized from various studies.\textsuperscript{17} The general consensus of students of population accounting for sex ratio differences in the various segments of the population can be presented in Nelson's words: "The growing disparity in sex ratios of rural farm and non-farm population is the result of the excessive migration of women from the farms."\textsuperscript{18}


\textsuperscript{18}Ibid., p. 119.
II. FINDINGS OF THE PRESENT STUDY

The farm-population of the sample, census precincts 4, 5, and 6 of Mills County, Texas, had the same sex ratio in 1950 as did the farm-population of the state of Texas (110.8 and 110.7 respectively). In this respect the sample was thus typical of the larger farm-population of the state. However, the sex ratios of the sample population were higher in the sample area than in the state for age groups under 15 years, 20 to 34 years, and 45 to 54 years. In all other age groupings, the sex ratio of the sample population was lower than that of the state farm population. Variations such as these are always found in component elements of a population. The greatest difference between the sex ratios of the two populations was in the 55-64 year age group. For this age group the state farm-population sex ratio was 120.5 and the sample farm-population sex ratio was 91.1, a difference of 29.4 points. The next largest difference was found in the ages between 15 and 19 years. Here the state sex ratio was 123.4 and the sex ratio of the sample group was 107.0, a difference of 16.4 points. The third largest difference was found in the 20-24 year age group, which was one in which the sample
population had a higher sex ratio than the state population, 148.0 and 123.3 respectively. The sex ratio was nearly the same for the 35-44 year age group, 102.6 and 104.4 respectively.

Much greater differences existed in 1950 between the sex ratios of the combined population of precincts 4 and 5 and of precinct 6, than existed between the farm-population of the total sample and of the state. Precincts 4 and 5 had a sex ratio of 110.4 in 1950, as compared with 111.3 in precinct 6. Precinct 6 had the higher sex ratios among persons under 15 years of age, between 20 and 44 years of age, and 65 years of age and older. Precincts 4 and 5 had the higher sex ratios in all the remaining age groupings (Table IV).

The greatest difference found in 1950 between the sex ratios of precincts 4 and 5 and precinct 6 was in the 15-19 year age group, and were 145.0 and 73.9 respectively. By 1958 these sex ratios had changed to 54.6 and 72.7 respectively. The greatest difference found in 1958 between the sex ratios of precincts 4 and 5 and precinct 6 was in the 20-24 year age group, and were 110.0 and 171.4 respectively. (See Table V for other specific differences.)
### TABLE IV

SEX RATIO OF FARM OPERATORS AND HOUSEHOLD MEMBERS, 
BY AGE, TEXAS AND SELECTED CENSUS PRECINCTS, 
MILLS COUNTY, TEXAS, 1950

<table>
<thead>
<tr>
<th>Years of Age</th>
<th>Sex Ratio</th>
<th>Differences in Points</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Texas*</td>
<td>Census Precincts 4, 5, &amp; 6</td>
</tr>
<tr>
<td>Under 15</td>
<td>106.1</td>
<td>111.7</td>
</tr>
<tr>
<td>15 - 19</td>
<td>123.4</td>
<td>107.0</td>
</tr>
<tr>
<td>20 - 24</td>
<td>123.3</td>
<td>148.0</td>
</tr>
<tr>
<td>25 - 34</td>
<td>99.8</td>
<td>102.1</td>
</tr>
<tr>
<td>35 - 44</td>
<td>104.4</td>
<td>102.6</td>
</tr>
<tr>
<td>45 - 54</td>
<td>109.3</td>
<td>122.2</td>
</tr>
<tr>
<td>55 - 64</td>
<td>120.5</td>
<td>91.1</td>
</tr>
<tr>
<td>65 &amp; over</td>
<td>127.1</td>
<td>120.0</td>
</tr>
<tr>
<td>Total</td>
<td>110.7</td>
<td>110.8</td>
</tr>
</tbody>
</table>

TABLE V

SEX RATIOS OF FARM OPERATORS AND HOUSEHOLD MEMBERS, BY AGE, SELECTED CENSUS PRECINCTS, MILLS COUNTY TEXAS, 1950 AND 1958*

<table>
<thead>
<tr>
<th>Years of Age</th>
<th>Precincts 4 &amp; 5</th>
<th></th>
<th>Precinct 6</th>
<th></th>
<th>Total</th>
<th></th>
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<td>109.6</td>
<td>103.7</td>
<td>114.1</td>
<td>121.1</td>
<td>111.7</td>
<td>115.5</td>
</tr>
<tr>
<td>15 - 19</td>
<td>145.0</td>
<td>54.6</td>
<td>73.9</td>
<td>72.7</td>
<td>107.0</td>
<td>67.4</td>
</tr>
<tr>
<td>20 - 24</td>
<td>140.0</td>
<td>110.0</td>
<td>153.3</td>
<td>171.4</td>
<td>148.0</td>
<td>145.8</td>
</tr>
<tr>
<td>25 - 34</td>
<td>84.0</td>
<td>140.0</td>
<td>122.7</td>
<td>135.3</td>
<td>102.1</td>
<td>106.5</td>
</tr>
<tr>
<td>35 - 44</td>
<td>89.1</td>
<td>78.9</td>
<td>122.6</td>
<td>113.8</td>
<td>102.6</td>
<td>100.0</td>
</tr>
<tr>
<td>45 - 54</td>
<td>131.3</td>
<td>103.1</td>
<td>112.9</td>
<td>96.8</td>
<td>122.2</td>
<td>94.3</td>
</tr>
<tr>
<td>55 - 64</td>
<td>104.8</td>
<td>120.0</td>
<td>79.0</td>
<td>137.5</td>
<td>91.1</td>
<td>129.5</td>
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<td>65 &amp; over</td>
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<td>100.0</td>
<td>125.0</td>
<td>105.0</td>
<td>120.0</td>
<td>102.7</td>
</tr>
<tr>
<td>Totals</td>
<td>110.4</td>
<td>95.4</td>
<td>111.3</td>
<td>112.1</td>
<td>110.8</td>
<td>105.5</td>
</tr>
</tbody>
</table>

Internal migration, precincts 4 and 5. Of the nine individuals (in four households) who made internal moves within these precincts, five were females. The four males were heads of the four households. Four of the five females were spouses of the heads of households. The remaining female was a household member one year old. The sex ratio of these migrants was 80.0.

Internal migration, precinct 6. Sixty-seven instances of internal migration were recorded in precinct 6 during the period covered by the study. Five persons moved as individuals independent of their households. Four of these five were females between 15 and 34 years of age. The other person was a male 24 years of age. The remaining 62 of the 67 migrants migrated as members of households. Thirty-three of this group were females.

The sex ratio of the total group of 67 migrants was 81.1 (Table VI). If the individual migrants are omitted, the sex ratio is raised to 87.9. This finding is what one would expect because of the sex selectivity of such migration.

External migration by households, precincts 4 and 5. Twenty-four household group migrations were reported in these precincts during the period covered by the study.
TABLE VI

SEX RATIOS OF FARM OPERATORS AND HOUSEHOLD MEMBERS, BY AGE AND TYPE OF MIGRATION, SELECTED CENSUS PRECINCTS, MILLS COUNTY, TEXAS, 1950-1958

<table>
<thead>
<tr>
<th>Years of Age</th>
<th>Precincts 4 &amp; 5</th>
<th>Precinct 6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Internal</td>
<td>External</td>
<td>Internal</td>
</tr>
<tr>
<td>Under 15</td>
<td>*</td>
<td>260.0</td>
<td>78.6</td>
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<tr>
<td>15 - 19</td>
<td>*</td>
<td>42.9</td>
<td>66.7</td>
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<tr>
<td>20 - 24</td>
<td>*</td>
<td>55.6</td>
<td>100.0</td>
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<tr>
<td>25 - 34</td>
<td>*</td>
<td>72.7</td>
<td>40.0</td>
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<td>35 - 44</td>
<td>*</td>
<td>66.7</td>
<td>83.3</td>
</tr>
<tr>
<td>45 - 54</td>
<td>100.0</td>
<td>87.5</td>
<td>160.0</td>
</tr>
<tr>
<td>55 - 64</td>
<td>100.0</td>
<td>100.0</td>
<td>33.3</td>
</tr>
<tr>
<td>65 &amp; over</td>
<td>*</td>
<td>*</td>
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</tr>
<tr>
<td>Totals</td>
<td>80.0</td>
<td>87.5</td>
<td>81.1</td>
</tr>
</tbody>
</table>

*Denotes no migrants for at least one of the sexes.
Seventy-three individuals were involved, 33 of whom were females. The sex ratio of migrants was 121.2. The sex ratios vary considerably from one age group to another. (Table VII.) The sex ratios ranged from a high of 260.0 for the under 15 year age group to a low of 66.7 for the 35-44 year age group. During the years where migration is more female sex selective, that is from 15 through 34 years of age, the sex ratio was 116.8. This discrepancy is more apparent than real. It must be remembered that the bulk of the migrants who would migrate at these ages migrate independent of their households and are not included in these migrants.

The sex ratio of migrants under 35 years of age was 158.8, and of migrants 35 years of age and older it was 81.3.

External migration by households, precinct 6. Forty-one household group migrations of the external type were made in precinct 6 between 1950 and 1958. Involved were 173 individual moves, of which 80 were made by females. The sex ratio of the 173 external migrants was 116.3. This is less than the sex ratio of the external migrants from precincts 4 and 5.
TABLE VII

SEX RATIOS OF MIGRANTS MOVING AS MEMBERS OF FARM-OPERATOR HOUSEHOLDS, BY AGE AND TYPE OF MIGRATION, SELECTED CENSUS PRECINCTS, MILLS COUNTY, TEXAS, 1950-1958

<table>
<thead>
<tr>
<th>Years of Age</th>
<th>Precincts 4 &amp; 5</th>
<th></th>
<th>Precinct 6</th>
<th></th>
<th>Total</th>
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</thead>
<tbody>
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<td>Internal</td>
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<tr>
<td>Under 15</td>
<td>*</td>
<td>260.0</td>
<td>78.6</td>
<td>106.5</td>
<td>73.3</td>
<td>127.7</td>
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<tr>
<td>15 - 19</td>
<td>*</td>
<td>150.0</td>
<td>200.0</td>
<td>109.1</td>
<td>200.0</td>
<td>115.4</td>
</tr>
<tr>
<td>20 - 24</td>
<td>*</td>
<td>75.0</td>
<td>*</td>
<td>466.6</td>
<td>*</td>
<td>242.9</td>
</tr>
<tr>
<td>25 - 34</td>
<td>*</td>
<td>133.3</td>
<td>50.0</td>
<td>77.7</td>
<td>75.0</td>
<td>100.0</td>
</tr>
<tr>
<td>35 - 44</td>
<td>*</td>
<td>66.7</td>
<td>83.3</td>
<td>109.1</td>
<td>83.3</td>
<td>94.1</td>
</tr>
<tr>
<td>45 - 54</td>
<td>100.0</td>
<td>87.5</td>
<td>160.0</td>
<td>116.6</td>
<td>142.9</td>
<td>100.0</td>
</tr>
<tr>
<td>55 - 64</td>
<td>100.0</td>
<td>100.0</td>
<td>33.3</td>
<td>80.0</td>
<td>50.0</td>
<td>85.7</td>
</tr>
<tr>
<td>65 &amp; over</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>100.0</td>
<td>*</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>80.0</td>
<td>121.2</td>
<td>87.9</td>
<td>116.3</td>
<td>86.8</td>
<td>117.7</td>
</tr>
</tbody>
</table>

*Denotes no migration for at least one of the sexes.
Variations were found in the sex ratios of the various age groupings of migrants. These differences were greater than those found in precincts 4 and 5. The sex ratios ranged from a high of 466.6 for the 20-24 year age group to a low of 77.7 for the 25-34 year age group. During the years where migration is more female sex selective, between 15 and 34 years of age, the sex ratio was 143.5, which is higher than in precincts 4 and 5. The sex ratio of migrants under 35 years of age was 122.2, and of migrants 35 years of age and older it was 103.8.

External migration of individuals, precincts 4 and 5. Seventeen individuals from precincts 4 and 5 moved independent of their households. Only two of the 17 were males. Both of the two males were 21 years of age at the time they migrated. The females were equally divided with one-third in each of the age groups 15-19 years of age, 20-24 years of age, and 25-34 years of age. The average age of the females at migration was 21.5 years, and the average age of the males was 21.0 years. This finding is not in harmony with the findings of previous studies since females migrated at an average age of one-half year older than did the males. It may be that the females remained on the farms to help their households during the drought and thus migrated
at older ages than females customarily migrate.

The sex ratio of the 17 external migrants from precincts 4 and 5 was 13.3, which is the lowest sex ratio of any of the migrating groups. This low sex ratio is not accounted for by the sex ratio of the potential migrants of these ages (15-34 years of age) in the precincts. The sex ratio of persons between 15 and 34 years of age, who might be considered as potential individual migrants, was 75.5. Even this low figure does not account for the low sex ratio of the migrants.

**External migration of individuals, precinct 6.** In precinct 6, 38 external moves were made by individuals independent of their households. Over one-half, 20 of 38, of these moves were made by males. The largest percentage of male migrants moved while between 20 and 24 years of age. Over one-half, 12 of 20, of them migrated while between these ages. Five migrated at younger ages and three at older ages. The 17 females generally migrated at younger ages than did the males. Only six of 17 females migrated while between 20 and 24 years of age. The bulk of the females (11 of 17) migrated at ages between 15 and 19 years. The average age of the females at migration was 20.6 years,
or some 2.7 years younger than the average male. This finding, the reverse of that found in precincts 4 and 5, is in harmony with the findings of other studies.

The sex ratio of the 38 individual external migrants from this precinct was 111.1. This is not out of line with the sex ratio of 111.3 for the potential migrants of this precinct.

Summary and conclusions. The findings of the chapter may be summarized as follows. The sex ratio of migrants from the study area was 100.5, which is not out of line with the sex ratio of 105.5 of the sample. Females migrated at the rate of 46.4 per 100 and males migrated at the rate of 46.9 per 100. Internal migration accounted for 20.1 per cent of all of the moves and had a sex ratio of 81.0. External migration accounted for 79.9 per cent of the migration and had a sex ratio of 106.2. Household groups accounted for 84.1 per cent of the total movement and had a sex ratio of 109.3. The remaining 15.9 per cent of the movement was made by individuals characterized by a sex ratio of 62.2.

The conclusions which follow are derived from the above findings. The total migration of the sample area was
not sex selective, which does not support the findings of previous studies. The lack of sex selectivity of migration in this study may be explained as due to the influence of drought or it may be that the present findings represent new trends in American migration. A second conclusion lends support to the former of the two explanations. Precinct 6 migration was male sex selective and migration in precincts 4 and 5 were female sex selective. This conclusion could be a consequence of the residents of precinct 6 having defined the drought as a crisis of a more serious nature and thus calling for more drastic action than did the residents of precincts 4 and 5. Since males are more involved in the procuring of a living from agricultural sources than are females this may account for males making a drastic adjustment such as migration more frequently than females in precinct 6.

The internal migration was female sex selective and the external migration was male sex selective, both of which are in keeping with findings of previous studies.
CHAPTER VII

Ross asked, "Is it 'milk' or 'cream' that the cities with their constant suction abstract from the rural population?"¹ His answer was that it was the "cream" that was being siphoned from the rural areas by the urban places. From the time of his writing (1920) to the present, it has frequently been asserted that the quality of migrants from rural areas is superior to the quality of persons who remain behind. Various criteria of quality have been used, such as physical or mental health, income, intelligence, and education. These criteria, with the exception of intelligence, are measurable and can be, more or less, readily studied.

It is generally accepted that educational attainment will not surpass the ceiling of learning level imposed by one's intelligence. It does not follow, however, that one's level of educational attainment reflects the maximum of one's intelligence. Therefore, no attempt will be made to interpret educational level attained as a measure of the

intelligence of either migrants or of non-migrants. It will be accepted strictly for what it represents—that is the successful completion of a certain number of years of formal classroom work in the American educational system.

It is recognized that while education is not to be equated with intelligence, nor is it a mark of the quality of a person in and of itself, it does have a bearing on human behavior and accomplishment. Education has been correlated with high status, larger income, and even with social class.\(^2\) Logically, one might expect those with more education to be the ones more apt to desire to move, have the greater self-assurance that they could move successfully, and be the ones better prepared to make the adjustments required in a new social setting.

I. STUDIES CORRELATING EDUCATIONAL STATUS TO MIGRATION

A number of studies have been made of education as a migration differential. The following were selected as typical of these studies and their findings.

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Farm families in certain areas of Virginia were studied by Gee and Corson.\(^3\) Educational selection was one aspect of the study. They reported their findings in terms of the whole sample without any effort to hold age, sex, or other variables constant. They found that the migrants included 54.6 per cent of those who had a college education, 45.6 per cent of those completing high school, and 42.2 per cent of those completing elementary school. From these findings they concluded that "this tends to strengthen the belief that the migrating class is made up of the most energetic and the best educated of the farm population."\(^4\)

Leybourne made a study of migrants from the Appalachian Plateaus into Cincinnati in 1937.\(^5\) It is not directly comparable to the Gee and Corson study, but does hint at a reverse finding. The migrants were found to have less education than did the control group who were city

\(^3\)W. Gee and J. J. Corson, Rural Depopulation in Certain Tidewater and Piedmont Areas of Virginia (University of Virginia: Institute for Research in the Social Sciences Monograph No. 3, 1929).

\(^4\)Ibid., pp. 73-74.

born and reared. Leybourne reported 77.0 per cent of the migrants had gone no further than elementary school, while only 57.7 per cent of the control group had this limited education. Leybourne maintained that the migrant individuals had a poorer education than the non-migrants, even when they had completed the same number of years or grades. She estimated that it would take five years to accomplish the same learning in a rural school that would be accomplished in four years in the Cincinnati schools, because of the low quality of rural schools and teachers, as well as the less frequent attendance of the rural student. "On almost every score," she found, "the migrants compared unfavorably in education with their neighbors in the Cincinnati group."6 The differences were not depicted as in any way due to innate or hereditary factors. In time, the differences would lessen between the migrants and non-migrants. Time and the superior educational facilities of the city would tend to even them out, according to the author of the study.

Sorokin, Zimmerman and Galpin analyzed a number of studies relating educational achievement to migration

6Ibid., p. 246.
selectivity. The primary studies examined included those by Smick and Yoder, Gee and Corson, and Frey among others. The authors point out the greater accessibility of higher education in urban places and the greater demand for education to insure occupational success as distortive factors in most studies. They conclude, "It is clear that one ought not give much credit to the studies that use education as a qualitative measure of migrants and find 'dysgenic' selection." The authors do not, however, reject the educational selectivity of migration, but do reject a qualitative interpretation of such selectivity.

The findings expressed by these authors are in


8A. A. Smick, and F. R. Yoder, A Study of Farm Migration in Selected Communities in the State of Washington (Pullman: Washington Agricultural Experiment Station Bulletin 233, June, 1929).

9Gee and Corson, op. cit., pp. 70 ff.


harmony with those reported a few years earlier by Sorokin and Zimmerman in an even more extensive analysis of "more than thirty of the best studies in the field." 12

Thomas summarized a number of migration studies a few years later than Sorokin, Zimmerman, and Galpin. 13 Her report included education as one facet of the whole of qualitative selectivity in migration. She found the results of the several studies to be somewhat puzzling and quite inconclusive, and discovered four main hypotheses in the literature as follows: (1) Cityward migrants are selected from superior elements of the parent population; (2) cityward migrants are selected from the inferior elements; (3) cityward migrants are elected from the extremes, i.e., both the superior and the inferior elements; and (4) cityward migrants represent a random selection of the parent population.

These four positions are contradictory. On examination, however, Thomas found some supporting evidence for all


four. As a consequence she concluded that migration, at times, is selective of the better, the worse, and both better and worse elements of a population. At other times it is unselective. She stated,

It is not improbable that selection does operate positively, negatively, and randomly, at different times, depending on a variety of factors that, up to the present, have not been adequately investigated.\(^{14}\)

Many individual studies have found differences to exist between the educational attainments of rural and of urban populations. Some studies have shown some of this difference to be due to differences in the educational attainments of rural-urban migrants. Synthesizers of these individual studies have tended to systematically reject these findings as indicative of innate differences in the quality of either the populations or of the migrants. The fact remains, that differences do exist and it remains to be studied to what extent these differences are prompted by migration and to what extent the differences prompt migration. A portion of the findings reported in the remainder of this chapter is directed at indicating the extent to which educational attainment correlates to

\(^{14}\)Ibid., p. 407.
migation in the study area. Education will be treated as an independent variable and migration will be treated as a dependent one.

II. FINDINGS OF THE PRESENT STUDY

The educational attainments of those individuals under 15 years of age at the time of the survey are ignored in this analysis. It is assumed that there is little, if any, logical relationship between the education level of children of these ages and the migration, or lack of migration, of their households. This assumption tends to be verified by the fact that no individual migrated independent of his household while under 15 years of age. The educational attainments of persons 15 years of age and older were secured as number of years of school completed. For those who migrated, the years of school completed are reported as of the time of their migration. For the non-migrants, the years of school completed are reported as of the time of the survey in January of 1958. (Table VII)

A total of 608 of the 789 farm-operator population covered by the study were 15 years of age and older. The median number of years of education, completed by these
TABLE VIII
MEDIAN YEARS OF SCHOOL COMPLETED BY MIGRANT FARM OPERATORS
AND HOUSEHOLD MEMBERS 15 YEARS OF AGE AND OLDER,
BY AGE, SELECTED CENSUS PRECINCTS,
MILLS COUNTY, TEXAS, 1950-1958

<table>
<thead>
<tr>
<th>Years of Age</th>
<th>Precincts 4 &amp; 5 Sample Migrants</th>
<th>Precinct 6 Sample Migrants</th>
<th>Total Sample Migrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>11.5</td>
<td>11.5</td>
<td>11.5</td>
</tr>
<tr>
<td>20-24</td>
<td>13+*</td>
<td>12.4</td>
<td>11.7</td>
</tr>
<tr>
<td>25-34</td>
<td>12.1</td>
<td>12.5</td>
<td>11.4</td>
</tr>
<tr>
<td>35-44</td>
<td>11.7</td>
<td>11.2</td>
<td>10.8</td>
</tr>
<tr>
<td>45-54</td>
<td>9.8</td>
<td>8.1</td>
<td>8.2</td>
</tr>
<tr>
<td>55-64</td>
<td>9.4</td>
<td>7.8</td>
<td>7.0</td>
</tr>
<tr>
<td>65 &amp; over</td>
<td>8.2</td>
<td>**</td>
<td>-7.0*</td>
</tr>
<tr>
<td>Totals</td>
<td>10.8</td>
<td>10.9</td>
<td>9.9</td>
</tr>
</tbody>
</table>

*These medians fell in an open end category and cannot be calculated precisely.

**No migration occurred in this age group.
608 individuals, was 10.2 years. This is somewhat higher than the 9.6 median years of schooling reported for those 14 years of age and older for the farm population of Mills County in the 1950 census. This difference in median number of years of schooling is not sufficient to suggest that the educational attainments of the sample population were atypical of that of the county.

Two hundred and sixty-nine moves (44.2 per cent) were made by individuals in the study area who were 15 years of age or older at the time they migrated.

**Educational status, precincts 4 and 5.** Two hundred and forty-two individuals resided in precincts 4 and 5, who were 15 years of age and older. They included 117 males and 125 females. The median number of years of school completed by the males at the time they migrated was slightly lower than that of the females, 10.3 and 11.2 years respectively.

Thirty-three (29.1 per cent) of the males migrated and 47

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15 It is a rather common practice, when using class intervals, to assume that the items in a class are uniformly distributed throughout the class, and to calculate a point within the class where a median point would fall. This procedure is open to question as to its statistical soundness. It is used in this case, however, to make the data of this study comparable to that of census reports.
(37.9 per cent) of the females migrated. Females moved more erratically by educational status than did males (see Figure 7). Female migrants had completed a median of 11.0 years of school at the time of migration. The males in the same group had completed a median of 10.5 years, and the females had completed 11.4 years. A difference was also found between the median years of school completed by the migrants as opposed to the non-migrants. The non-migrants had completed a median 10.4 years of school and the migrants had 10.6 years, a difference of .2 years.

A greater difference in median number of years of school completed was found when those who migrated as individuals were separated from those who migrated as families. The median years of school completed by those who migrated as families was 10.9 years at the time of migration. Those migrating as individuals had completed a median of 11.8 years of school, which is 0.9 years more than was completed by the family migrants.

The greatest difference in median years of school completed existed between those making internal migrations and those making external migrations. Eight individuals, 15 years of age or older, migrated internally in these two precincts. They had completed a median of 8.0 years of
Figure 6 Farm Operators and Household members Migrating, by Years of School Completed, Selected Census Precincts, Mills County, Texas, 1950-1958
school at the time of their migration. Their educational attainment was lower by 3.5 years than that of the 73 external migrants, whose median educational attainment was 11.5 years. No internal migrant had gone to school beyond high school and only two of the eight had completed more than nine years of school. Sixteen of the external migrants had gone beyond high school and an additional 16 had completed 10 or more years of school.

**Education status, precinct 6.** Three hundred and sixty-six individuals resided in precinct 6 who were 15 years of age and older. Included were 191 males and 175 females. This group had completed a median of 9.9 years of school. The males and females had completed approximately the same median number of years of school (9.8 and 10.0 respectively). The males and females of precincts 4 and 5 had higher educational attainments than did their counterparts in precinct 6. The median school years completed by the latter exceeded by .5 and 1.2 years respectively the attainments of males and females in precinct 6.

One hundred and eighty-nine of the 366 individuals in this precinct who were 15 years of age or older migrated. The migrations were the equivalent of 51.6 per cent of the
population, 15 years of age and older, having migrated during the period covered by the study. The male and female migrants had completed approximately the same median number of years of education (10.4 and 10.5 years respectively), by the time they migrated. The non-migrants of this precinct had completed fewer years of school than were completed by the migrants. The male non-migrants had completed a median of 9.8 years and the female non-migrants had completed 10.2 years. These are respectively .6 and .3 years less than the median number of years completed by the migrants. The 146 family migrants had completed a median of 9.7 years of school and the 43 individual migrants had completed 11.7 years of school, a difference of 2.0 years. Family group migrants in this precinct have the distinction of having the only instance where males had completed a higher median number of years of school than females. The males had completed 10.0 years and the females had completed 9.6 years at the time they migrated. The females had completed more years of school than the males in all other groups, including the individual migrants in precinct 6 and all migrants in precincts 4 and 5.

The greatest difference in median years of school completed in this precinct was found between the internal
and external migrants. (See Figure 7.) The 42 internal migrants had completed a median of 8.8 years and the 147 external migrants had completed 2.1 years more, for a total of 10.9 years. Ten of the 42 internal migrants had completed less than seven years of school and none of them had attended college. Sixteen of the 147 external migrants had college experience.

**Summary and conclusions.** The same general relationships between education and migration were found in precincts 4 and 5 and precinct 6. The highest median number of years of school was completed by those who migrated while between 20 and 24 years of age. Each succeeding age group older had completed fewer median number of years of school. A seeming paradox is revealed when comparisons are made between the median years of school completed by the migrants and non-migrants, by age groupings. In each category, without exception, the median years of school completed by non-migrants is higher than was completed by migrants. The paradox is that when the migrants of all ages are treated together they completed more median years of school than the non-migrants. It is explained by the more extensive migrating having occurred among those who
Figure 7. Migrating Farm Operators and Household Members Migrating, by Years of School Completed and Type of Migration, Selected Census Precincts, Mills County, Texas, 1950-1958
were younger and who had completed the greater median number of years of school.

The females in the sample had completed more median years of school than the males, and the females who migrated had also made higher educational attainments than the male migrants. These data do not give evidence that this particular drouth migration was selective in terms of educational status. Evidence of such selectivity does appear, however, when one examines the migration patterns of those who completed various numbers of years of school. The higher proportion of males migrated from the group having completed 7 to 9 years of school, while the higher proportion of females migrated from the group having completed 10-12 years of school.

Internal migrants consistently reported fewer median years of school completed than did external migrants.
CHAPTER VIII

FAMILY LIFE CYCLE AND MIGRATION

Age, sex, and education have traditionally been used as variables in demographic studies. They are relatively simple to measure and are rather uniformly accepted, although their use is not beyond occasional criticism. One objection is that they are frequently used "in a mechanical way, without theory to guide in the selection of the variables appropriate to the study of the dependent variable under consideration, and without theory to guide the definition of the variables themselves."¹ It might be pointed out, for example, that changes of status due to marriage, the birth of a son or daughter, the loss of a family member, or other similar events may be more influential on individual behavior than the mere passing of another birthday. The stage of family life cycle in which one is found at the moment can in fact be a very realistic factor in understanding one's behavioral response to an immediate

situation. The present chapter reports on the findings of this study along these lines.

I. FAMILY LIFE CYCLE LITERATURE AND THEORY

Most of the studies in which family life cycles have been used have had three focal points. One has been to delineate the stages of the cycle. A second has been to find the ages of individuals when the family enters each of the various stages of the cycle. A third has been to determine the number or proportion of families in each of the various stages of the family life cycle within a given population.

Various studies. A summary of family cycle studies made by Loomis in 1935 documented the changes in the life cycle of the American family which have occurred during the last fifty years. These changes were largely conditioned by such factors as earlier age at marriage, smaller families, and lengthened life expectancy.

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2C. P. Loomis, "The Study of the Life Cycle of Families," Rural Sociology, 1 (1936), 180-99. This paper was originally prepared for the Twelfth International Congress of Sociology held in Brussels.

Differences have also been found to exist between the family cycle of urban, rural-nonfarm, and rural-farm families of the United States. It has also been recognized that occupation and other factors, such as the region in which the family resides, effect the age at which individuals enter the various cycle stages.

At various cycle stages the family appears with varying numbers of family members, and thus has varying patterns of activity and needs. Cavan has noted that "with each stage changes occur in the family membership and consequently in family organization, roles, and interpersonal relationships." Loomis and Beegle have recognized differences "in consumption and production patterns of families in various stages of life cycle." These authors also noted that little use is made of such findings. For example, they noted that few programs in rural areas are designed for older people, even

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though it is known that our farm population is aging and fewer families are in the early stages of the life cycle.

The same observation was confirmed by Blackwell in 1942. He found that farm families with many young children felt the "pinch of hard times more than families in other stages of the life cycle but received relatively little assistance from relief agencies."

Loomis found that farm families in North Carolina changed their acreage as they moved from one cycle stage to another. He also found total cash income and net wealth varied with the cycle stage. Net cash income per consumption unit, economic insecurity, and vulnerability to economic crisis all were found to vary from cycle stage to cycle stage. These findings have been verified by Kirkpatrick.  

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9E. L. Kirkpatrick et al., *The Life Cycle of the Farm Family in Relation to Its Standards of Living* (Madison: University of Wisconsin Agricultural Experiment Station Research Bulletin 121, September, 1934).
Martin, and others.

The cycle of families has a "direct bearing on their whole internal social relationships." Family relationships are affected by the number of family members which, according to Bossard, increase by simple, whole numbers, while the number of personal interrelationships would increase in the order of triangular numbers.

In most instances where the concept of family life cycle has been used, the emphasis has been placed on ascertaining some quality or quantity of the cycle. In a few instances it has been used as an independent variable to explain variations in other variables. It has been used in this latter sense by Lansing and Morgan to explain consumer


finances.\textsuperscript{13} Blackwell applied family life cycle as a tool to explain some of the economic aspects of relief.\textsuperscript{14} In a similar fashion it was applied to mental disorder with the resultant proposal that some mental disorders of old age may be due less to biological old age than to life cycle roles within our social system.\textsuperscript{15}

Theory of family life cycles. Some theory has been advanced concerning family life cycles. A family is a social system, and social systems pass through life cycles the same as individuals. The family life span varies according to the type of family system followed. The consanguine type family has a much longer life span than does the conjugal family. Most of the theory in this area has developed from studies of the conjugal family type. In the conjugal family the life cycle is inevitable, because it is associated directly with the biological factor of aging of


\textsuperscript{15}Ivan Belknap and Hiram J. Friedsam, "Age and Sex Categories as Sociological Variables in the Mental Disorders of Later Maturity," \textit{American Sociological Review}, XIV (June, 1949), 367-76.
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the human organism and ends when the organism dies.

The conjugal family begins its life cycle with the marriage of a couple.\(^{16}\) It proceeds with an orderly progression through several life cycle stages, making possible the division of the cycle into phases or stages. Actually, of course, the family life cycle is a continuum that can be divided into a series of stages or cycles by the use of various criteria. On this point, there is general agreement among most students of family life cycles.

Divergence comes when the stages or phases of family cycle are delineated, since a number of criteria can be, and are, used to determine the divisions. All of the following criteria have been used by various authors: the presence or absence of children in the family; the age of the family members, especially the dependent ones; school grades of family members; whether family members are dependent or capable of self-support; the number in the family; whether

\(^{16}\)It should be noted, however, that all students of family do not agree on this point. Ruth Cavan, for example, places three of her seven family cycle stages in the pre-marital years of individuals. Cavan's position is not logically acceptable for it counts children and youth as component parts of their family of procreation and at the same time as families in their own right. For further detailed presentation see: Cavan, *op. cit.*, Chapter 11, pp. 261-98.
the family is growing, remaining the same size, or shrinking; and various combinations of these criteria. Table IX contains several of the more frequently used family cycle stages or phases, including the one devised for and used in the present study.

Families that do not have children omit some of the middle phases of the cycle, but do have beginnings and ends, just as do those which include children. They still follow the general theory of family cycles, lasting approximately the same number of years, but being simplified in stage or phase division.

"As it waxes and wanes, the family must make many adjustments."17 It is this inevitability of the family having to make adjustments to life that gives family life cycle theory its greatest validity. Family cycle stage affects the economic orientation of the family. The community relations of the family will also fluctuate with its cycle in many ways. For example, the orientation of the family to such institutions as school and church is affected by family cycle stage.

<table>
<thead>
<tr>
<th>Family Cycle Stage</th>
<th>Present Study</th>
<th>Loomis*</th>
<th>Kirkpatrick*</th>
<th>Duncan*</th>
<th>Sorokin, Galpin, Zimmerman*</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Married under 35 years of age and childless</td>
<td>Childless couples of childbearing</td>
<td>Children under 6 years of age</td>
<td>Married couple no children</td>
<td>Young married couple no children</td>
</tr>
<tr>
<td>II</td>
<td>Oldest child preschool age</td>
<td>Oldest child not over 14 years of age</td>
<td>Children 6 to 13 years of age</td>
<td>Constant increase in number of children at home</td>
<td>Couple with one or more children</td>
</tr>
<tr>
<td>III</td>
<td>Oldest child in grade school</td>
<td>Oldest child over 14 but not over 35—omit broken</td>
<td>Children 14 to 18 years of age</td>
<td>Children leaving home (a) as fast as births, (b) faster than births</td>
<td>Couple with one or more adult self-supporting children</td>
</tr>
<tr>
<td>IV</td>
<td>Children in both grade and high schools</td>
<td>Families having the first birth over 35 years ago, broken families with living husband over 50 &amp; wife over 40</td>
<td>All adult: children 19 years old and over</td>
<td>Begins when no children are still at home &amp; ends with dissolution of family</td>
<td>Family becoming old; some children marry, start new family (Stage I)</td>
</tr>
<tr>
<td>V</td>
<td>Youngest child in high school</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI</td>
<td>Youngest child finished high school plus those over 25, married and childless</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The remainder of this chapter will be devoted to a
description of the relationship of family life cycle and
mobility in the study area. (See Figure 8.) Family life
cycle will be treated as the independent variable and
mobility as the dependent one.

II. FINDINGS OF THE PRESENT STUDY

Each of the families in the sample group fit into one
or another of the six family life cycle stages determined
for this study. Each family could be placed in only one of
the stages used, since the stages are mutually exclusive and
between them cover all possible family life cycle stages
from the beginning to the dissolution of a family. The
family life cycle stage was determined at the time of migra-
tion for those families that migrated. The family life
cycle stage was determined at the time of the survey, in
1958, for those families that did not migrate during the
period covered by the study.

The family life cycle stages of the families in the
sample could not be checked for typicality with those of the
state, since no comparable data exists for the area. Differ-
ences were found to exist, however, between families in
census precincts 4 and 5, and those in precinct 6.
Figure 8  Families Migrating by Family Life Cycle Stage, Selected Census Precincts, Mills County, Texas, 1950-1958
Precincts 4 and 5 findings. As mentioned earlier, 102 of the 233 families included in the sample either were residing in or had resided in precincts 4 and 5 during the period covered by the study. Twenty-eight family moves were made by these 102 families. (Table X)

Three families consisted of adults under 35 years of age, married and childless, and they were classified in family life cycle Stage I. One of these three migrated and the remaining two did not migrate. The highest rate of migration in these precincts was found among families in family life cycle Stage II. These are the families whose oldest child is a pre-school child. Seven families were in this category and between them made nine moves. Five of the seven families made one move each and the remaining two families made two moves each.

Stage III families are those whose oldest child is in grade school. Five of the 12 families in this stage migrated. Stage IV families (those families having both grade school and high school children) migrated at approximately one-half the rate of the families in Stage III. Only slightly over two-tenths (2 of 9) of the families in this family life cycle stage migrated. Those in the remaining two stage categories migrated at approximately the same
TABLE X

FAMILY LIFE CYCLE STAGES OF MIGRANT FARM OPERATORS AND HOUSEHOLD MEMBERS,
SELECTED CENSUS PRECINCTS, MILLS COUNTY, TEXAS, 1950-1958

<table>
<thead>
<tr>
<th>Family Life Cycle Stage</th>
<th>Precincts 4 &amp; 5</th>
<th>Precinct 6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Precincts 4 &amp; 5</td>
<td>Precinct 6</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>No. in Population</td>
<td>Migrating Per Cent</td>
<td>No. in Population</td>
</tr>
<tr>
<td>I</td>
<td>3</td>
<td>1</td>
<td>33.3</td>
</tr>
<tr>
<td>II</td>
<td>7</td>
<td>9</td>
<td>128.6</td>
</tr>
<tr>
<td>III</td>
<td>12</td>
<td>5</td>
<td>41.7</td>
</tr>
<tr>
<td>IV</td>
<td>9</td>
<td>2</td>
<td>22.2</td>
</tr>
<tr>
<td>V</td>
<td>11</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>VI</td>
<td>60</td>
<td>9</td>
<td>15.0</td>
</tr>
<tr>
<td>Totals</td>
<td>102</td>
<td>28</td>
<td>27.5</td>
</tr>
</tbody>
</table>
rate. Eleven families were in cycle Stage V (those whose youngest child is in high school). Only 2 of these 11 migrated. Stage VI contained the largest number of families (60 of 102) of any cycle stage in these precincts. These families were those whose youngest child was beyond high school, and those in which the adults were past 35 years of age and childless. Approximately one-sixth (9 of 60) of the families in this stage migrated during the period covered by the study.

Precinct 6 findings. One hundred and thirty-one of the 233 families in the study resided in precinct 6 at the time of the survey, or had resided there at some time during the period covered by the study. Fifty-eight family moves were made by these 131 families.

Three families were classified as being in Stage I and two of these families migrated. Nine families were classified as being in Stage II, of which five moved once. This is less than one-half of the rate of movement of those families in this same family life cycle stage in precincts 4 and 5.

In the remaining four stages, the rate of migration for precinct 6 was higher than that for precincts 4 and 5.
Cycle Stage III contained 24 families, two-thirds of whom migrated. Stage IV also contained 24 families, one-half of whom migrated. Five of the 13 families in Stage V migrated. This precinct, like the others, had the greater proportion of its families in family cycle Stage VI. Fifty-eight (44.3 per cent) of the 131 families in the precinct were in this family life cycle stage. Their rate of migration was somewhat less than for families in cycle Stage V. Eighteen of the 58 families in cycle Stage VI migrated during the period covered by the study.

**Internal and external migration.** The internal and external migration by families at various family life cycle stages is reported for the whole sample, rather than by precincts, because of the small numbers involved for each family life cycle stage.

Eighty-six families in the sample population migrated during the period covered by the study. Over three-fourths (65 of 86) of these families made external moves. All three families in Stage I, who migrated, moved externally. Thirteen of the 14 migrating families in Stage II made external moves. Twenty-one families in Stage III migrated. Four of these 21 families moved internally and the remaining
moved externally. Families in Stage IV and Stage V migrated internally and externally at the same rates. Fourteen Stage IV families migrated, and 10 of them made external moves. Seven Stage V families migrated, and five of them made external moves.

The highest rate of internal movement was found among the families in Stage VI. Over one-third (10 of 27) of the families in this stage that migrated made internal moves.

Summary and conclusions of the chapter. The rate of internal migration of families in the study population varied directly with the progression of the family life cycle stages. The pattern of external migration was the reverse of that of the internal migration. The families in the earlier life cycle stages migrated proportionately more externally than internally when they migrated.

The proportion of the total of those migrating from each particular family life cycle stage did not make quite as clear and consistent a pattern as that made by the internal and external migrants. However, the families' rate of migration decreased progressively from the first stage of the family cycle to the last one, with the single exception of Stage I (that of adults under 35 years of age and
childless). This exception was found in all precincts.

There seems to be a logical explanation for the families in cycle Stage I being an exception to the general pattern of migration found among the other family life cycle stages. One would logically expect families in this cycle stage to be the most mobile of all families because their responsibilities in terms of children would be less in this stage than in all other cycle stages except VI, and because their occupational stability and friendship ties would tend to be less well established than those in the other family life cycle stages. The lower mobility rate may be largely accounted for by the fact that most of the young people who married between 1950 and 1958 migrated at the time of marriage, and would therefore be treated in this study as migrating individuals, not as migrating families. They were counted as such for they actually assumed their marital status and thus began their family life cycle at their new place of residence, rather than prior to their move. If these individuals were treated as families in cycle Stage I, the pattern would be consistent and complete.

The families of precinct 6 made proportionately more moves than the families of precincts 4 and 5 in all family life cycle stages except Stage II. It may well be that the
Stage I families in precincts 4 and 5 would have followed the same pattern of Stage II families of those precincts, if the young persons who migrated at the time of marriage were treated as migrating families rather than as migrating individuals. The greater mobility in precincts 4 and 5 of the less stable families (those in the earliest cycle stages) might be explained by the fact that it is easier to leave ranching and dispose of cattle, sheep, and goats at any time during the year that one might become discouraged than it is to leave dry-land farming and dispose of planted but immature or unharvested crops. The families in the stages of greater stability (the middle and later cycle stages) were more able to adjust to drouth without resorting to migration when they pursued ranching than when they pursued dry-land farming.
CHAPTER IX

DROUGHT AS A MOTIVATING FACTOR IN MIGRATION

Drought is a mover of men in that when drought conditions prevail those dependent on the soil for a livelihood tend to migrate.\(^1\) When extreme drought conditions prevailed in the "dust bowl" during the 1930's, the farm population of the area was virtually decimated. Few droughts, fortunately, even approximate the area involved, the severity, or the duration of the "dust bowl." Many droughts have existed in the United States, however, and some exist at the present that are declared "serious and prolonged" by the Federal Emergency Relief Agency. People do migrate from these areas. At times the migration is rather extensive.

Studies have frequently been made to ascertain the extent and direction of the migration. Rarely have studies been made that were directed toward exploring the causal relationships between drought and migration. The present

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\(^1\)This generalized conclusion is supported by the specific migration studies related to drought which are reported earlier in Chapter III of this study.
study was directed toward exploring such relationships.

The problem of assigning motivation to particular human actions is a complex one. In this study the respondent who migrated was asked to assign his own motive or motives for migration and, admittedly, some may have given rationalized reasons rather than real ones for such actions. This may be especially true if the real reason were such that it reflected unfavorably on the respondent. Also, some may have given reasons they felt would make the researcher most happy, rather than the real reason. In spite of these tendencies, it would seem that the individual is the only person capable of giving a reasonably valid reason for an action like migration.

Findings are reported in this chapter for persons who migrated as individuals independent of their households, and for persons who migrated as heads of households. It is logically assumed that migrants in these two categories would have reasons for migrating that would be related to their personal interpretation of their respective situation. The mobility of the remainder of the migrants is not reported in this chapter, since all other migrants are assumed to have migrated because the head of the household migrated, rather than from private motivation.
Role of drouth in internal migration, precincts 4 and 5. Only four of the 102 heads of households of these precincts reported internal migrations in the period under study. Each of the four offered reasons for having migrated. They had moved to secure larger and/or better places to operate. Not one of the four, however, indicated that they considered drouth to be in any way responsible for their having moved. No internal moves were made in these precincts by individual migrants moving independently of their households. (Table XI)

Role of drouth in external migration, precincts 4 and 5. Twenty-four migrations were made by household groups that moved either into or out of these two precincts during the period covered by the study. The heads of these households offered reasons for having migrated as follows. Twenty-one of the 24 moves were made by households which were in the study area at the time of the survey. Each had either migrated into these precincts, or had migrated out of and back into the precincts, between 1950 and 1958. Not one of the 21 heads of households attributed their movement to drouth. The majority professed to have rented or bought larger and/or better places to operate. The
TABLE XI

NUMBER OF MOVES OF FARM OPERATORS AND HOUSEHOLD MEMBERS WHO MIGRATED INDEPENDENTLY OF THEIR HOUSEHOLDS, BY TYPE OF MIGRATION, SELECTED CENSUS PRECINCTS, MILLS COUNTY, TEXAS, 1950-1958

<table>
<thead>
<tr>
<th></th>
<th>Precincts 4 &amp; 5</th>
<th>Precinct 6</th>
<th>Precincts 4, 5, &amp; 6</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>Dr</td>
<td>E</td>
<td>Dr</td>
</tr>
<tr>
<td>Heads of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households</td>
<td>4</td>
<td>0</td>
<td>24</td>
<td>0</td>
</tr>
<tr>
<td>Individuals</td>
<td>0</td>
<td>0</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>0</td>
<td>41</td>
<td>0</td>
</tr>
</tbody>
</table>

I - Internal Migration
E - External Migration
Dr - Migrated for drought reasons
remaining three of the 24 moves were made by two households that had left the study area, but had not migrated too far to be located and interviewed. One of the latter heads of households had retired at age 62. The other (30 years of age) had made two moves, one into precincts 4 and 5 and the second one back out of this area two years later. He and his household tried to return to farming in 1945 and found that after two years they were not "making a go of it." He did not claim drought per se as the cause of his failure, but indicated that "conditions in general at the present time" were what had prompted him to move. By "conditions in general" he referred to the high cost of initiating farming and the rather low and irregular return from this endeavor, rather than the particular climatic conditions which prevailed at the time.

Seventeen moves of an external nature were made by individuals who were or who had been residents of these precincts at some time during the period covered by the study. Only one of these individuals professed to have moved because of the drought. Nine of these individual migrants claimed marriage as the reason for their migration. Three migrated to attend college, another to "make more money," and a fifth because he "didn't like farming." The
remaining two individuals were unable or unwilling to offer a reason for migrating from the farm-operator population to these two precincts. Both of the latter individuals were under 35 years of age and it is doubtful that they were moving from habit or from some inexplicable desire to move. It would be unjustified, however, to assume that they migrated because of the drouth.

Summary of the role of drouth, precincts 4 and 5. A total of 28 households and 17 individuals migrated in these two precincts. None of the household moves and only one of the individual moves were indicated as having been motivated by drouth. The fact that drouth played a relatively unimportant role in motivating the migrants of this area can be explained in terms of the type of operation to which the farms of these precincts were devoted.

The farm-operator population of these precincts were primarily engaged in sheep and goat ranching. They also raised some cattle and supplemented their ranching activities with small grain farming. The heads of households and independent individuals of these precincts were largely successful in their efforts to adapt their basically ranching economy to serious and prolonged drouth conditions. The
adaptation was made through making adjustments of a less drastic nature than that of migrating from the area. The chapter following is devoted to the adjustments, other than migration, that were made by the population in the study area as they attempted to adjust to the drouth situation.

Role of drouth in internal migration, precinct 6.

One hundred and eighteen households were in this precinct at the time of the survey, and 13 households were located that had been in the precinct at some time during the period covered by the study. These 131 households made 17 moves of an internal nature. Four of these 17 heads of households professed to have moved to locate on a bigger and/or better place they had rented. Three more indicated their move was necessitated by their having purchased a different place than the one they were formerly operating. Seven of the remaining heads of households were unwilling or unable to give any specific motive for their migration. It may well be that some of them were like Nelson's Mr. Higginbottom. "Doing well or ill in a place did not seem to have as much to do with Mr. Higginbottom's movement from one place to another . . . as did an inexplicable desire to
move for the sake of moving."^2

The remaining three heads of households offered drouth as causal to their migration. One had interpreted drouth as only one of a complex of factors involved. The other two moves were attributed directly to drouth conditions. Both of these moves were made by the same household. The first move might be seen as an unsuccessful attempt by the head of the household to adjust to drouth by moving to a different place. The head of the household was 48 years of age at the time of the first move. The following year he again attempted to adjust to drouth by moving. The success of this move is unknown since it was made shortly before the survey was taken and not enough time had lapsed since the move to determine whether adjustments to the situation would be more adequate than at the two previous places.

Five individuals made internal migrations in this precinct. Four of the five were females. Each of these females had migrated at the time of her marriage. The fifth was a male who migrated as a consequence of having married and having begun operating a farm in the precinct.

Drouth had no recognizable influence in any of these five migrations.

Role of drouth in external migration, precinct 6.

Forty-one household moves of an external nature were made by the households of this precinct. Twenty-nine of these 41 moves were made by households that were in the precinct at the time of the survey. The remaining 12 moves were made by 10 households that had been a part of the farm-operator population at some time between 1950 and 1958, but had migrated from the area by the time of the survey. The expressed motivation for the migration of these 41 households was varied.

Nine households had moved into the sample population from nonfarm residences outside the study area. It is highly illogical to expect moves of this nature to be related to drouth. In spite of the logic of the relationships, one head of a household professed to have migrated from a nonfarm residence to a farm residence as a consequence of the drouth. He envisioned the drouth as a good time to secure a place to operate, and he foresaw the drouth ending in the near future. This household consisted of the head of the household and his spouse who entered the study area in
1953. This same household made a second move three years later. The drouth lasted longer than they had expected, and they moved from the farm. Both moves were credited as being motivated by drouth. The remaining heads of households who migrated from nonfarm to farm, offered various reasons for moving but none of them included drouth as even partially responsible.

Ten household groups migrated from farms outside the precinct to farms within the precinct. The heads of these households, for the most part, professed to have migrated in order to operate bigger and/or better places they had rented. Some of these migrants were from within surrounding Mills County generally declared to be suffering from "serious and prolonged" drouth. None of these households, however, indicated drouth was in any way responsible for their migration.

Ten other household migrations were made by five households. Each of these households migrated out of this precinct sometime after 1950 and back into it before the survey in 1958. Nine of these 10 household moves were indicated as having been made because of the drouth conditions which prevailed. Consistent failure of crops and the resultant low income were interpreted as undesirable to
the extent of motivating migration. Four of the five household groups had made two external moves and claimed drouth to be the reason for these moves. The members of the fifth household had made two moves, only one of which was related to drouth. Each of these five household groups first migrated from precinct 6 and later returned to it. These first moves can be interpreted as attempts by the heads of the respective households to adjust to the drouth situation by moving to a new situation. They were unsuccessful attempts, however, since each household made a second migration within a few years. The failure of the households to adjust to the new situation to which they moved is readily explained. Drouth conditions were not confined to precinct 6 or even to Mills County, but were widespread over much of the state. None of these five households' short-range migrations carried them out of the larger drouth area. Two of these five household groups had also made one internal move prior to their first external move. These internal moves might also be seen as unsuccessful attempts to escape the drouth situation, especially since one of the groups had made three of its moves in a period of four years and the other household had made three moves in a period of five years.
Twelve household groups left the precinct during the period covered by the study and did not return. Three of these household groups migrated because of the advanced age and/or poor health of the heads of the households. The remaining nine household migrations were made because of the drouth conditions which prevailed in the precinct. Seven of these groups made only one move, at which time the head of the household ceased all farm work and turned to nonfarm work for a livelihood. One head of one household required two moves to make this same transition. Once again, the first move might be seen as an unsuccessful attempt of the household to adjust to the drouth situation.

Thirty-eight moves were made by individuals migrating independent of their households. Marriage was the most frequently given reason for moves by single persons. Twenty-six of the 38 individual moves were for this reason. One individual had left to attend college and two others had migrated in order to "make more money." The remaining nine individuals leaving claimed drouth as the reason for their migration.

The farm-operator population of precinct 6 also suffered some population losses due to households ceasing to operate a farm and/or ranch during the period covered by
the study. These households, five in number, did not migrate from the area, however, but continued to reside on the same places they had formerly operated. None of the five heads of households indicated that drought had played a role in their ceasing to operate a farm and/or ranch.

**Summary of the role of drought in precinct 6.** A total of 58 households and 43 individuals from precinct 6 made moves. Twenty-three heads of households and nine individuals reported drought as the reason for migrating. Thus, drought accounted for nearly one-third (32 of 101) of the migration reported by the sample populations. Over one-half of the household migrations (14 of 23) were made by only seven households. From this the conclusion might be drawn that those households that were unable to adjust to the drought situation with less drastic adjustments than migration were largely unsuccessful in adjusting through migration.

Drought played a decidedly greater role in this precinct than it did in precincts 4 and 5 in terms of being causal to migration. Drought conditions seemed to be more disruptive of the farming practices in precincts 4 and 5 than of the ranching practices in precinct 6.
Role of drought in migration, by family cycle. The role of drought in affecting the families at various family life cycle stages is perhaps even more important than is the number of households affected. It might be logically assumed that drought would tend to exert greater pressures on those families that have the weakest ties to the community. This would suggest that the younger families with no children would probably be the ones to migrate when drought prevailed. The families in the family cycle stage next most likely to migrate would be the younger families with children who have not made community ties through attending school.

The findings did not verify the hypothesis. Three families migrated while in cycle Stage I. At this stage—young families with no children—the expectation would be for drought to play a dominant role. None of these three, however, indicated drought as motivational, even to a minor degree, to their movement. (See Figure 9.) Fourteen families in cycle Stage II (with pre-school children as their oldest) migrated. Again, contrary to expectations, drought played a minor role. Only two of the 14 (one-seventh) of these families indicated drought as a reason for migrating. The same proportion, 3 of 21, of families in
In both high school and age, tears of age and childless.

**Figure 9** Reasons for Migration of Families, by Family Life Cycle Stage, Mills County, Texas, 1950-1958
cycle Stage III, those whose oldest child was in grade school, claimed drouth as a motive for migrating. Of the cycle Stage IV families (both grade and high school children) one-half, 7 of 14, claimed drouth as at least partially responsible for their movement. In cycle Stage V, families with high school children as their youngest, the proportion giving drouth as a motive was slightly higher--four out of seven. Those families with the adults past 35 years of age and childless and those families whose youngest child was beyond high school reported one-fourth, 7 of 27, of their movement was due to drouth.

**Summary and conclusions of the chapter.** Farm-operators dependent upon dry-land farming supplemented by ranching migrated because of the drouth proportionately more frequently than did farm-operators dependent upon ranching supplemented by farming. This finding holds true both for households and for individuals who migrated independent of their households. Migration, when resorted to, seemed to be an adequate adjustment to the drouth situation for the individual migrants, since no migrant made more than one move during the period covered by the study. Migration did not prove to be a very successful means of adjusting to the
drought situation, however, for household groups. Two-thirds of the household groups migrating because of the drought made more than one move.

Contrary to family life cycle migration theory, the families that were expected to be most resistant to migration were the very families that migrated most frequently. The groups in the two stages including high school children made the greatest proportional drought-motivated moves. This finding might be explained in terms of the social and economic needs of families in these cycle stages. The greater needs of families with children in high school may be seen as sufficient to overcome the typical stability of families in these cycles. The drought situation with its lowered farm income could readily prove to be sufficient stimulus for families in these cycles to migrate in search of economic gain.
CHAPTER X

CHANGES OTHER THAN MIGRATION WHICH WERE MADE
AS ADJUSTMENTS TO THE DROUTH SITUATION

One of the basic concepts in situational theory is that the meaningful situation is the one that an individual perceives to be operative and toward which he orients his behavior. The meaningful situation is not always the real situation as it exists. If a situation is defined as real, it becomes real in its consequences, for man responds to the subjective as well as to the objective aspects of a situation. An individual or group responds with routine and predictable behavior to a situation, as long as the situation is interpreted as one for which the individual or group has been provided predetermined behavior through socialization. When situations arise for which established behavior patterns are not provided, because of their newness or uniqueness, they become "crisis situations" to the individual or group which they confront. Changes in behavior of a permanent nature are brought about when a crisis situation is of sufficient violence and duration. A minimum of
disruption in behavior patterns or disruption of a temporary nature is brought about when the crisis is less violent and of a short duration.\textsuperscript{1}

Drouth is hypothesized as a crisis situation in this study. Numerous changes were effected by the farm-operators in the study area who interpreted the drouth as a crisis situation. The most drastic of these changes was that of migration. The individual or household, being unable to adjust to the drouth in other ways, migrated from the area. Less drastic changes than migration were also effected by those interpreting the drouth as a crisis situation.

The sample population included 213 heads of farm-operator households and all of these heads defined the drouth situation as one of crisis; however, in spite of the drouth the majority of them continued to operate farms and/or ranches in the area. Many of their changes in behavioral practices were intended as adjustments to the drouth situation. Limitations imposed on the study prevented an exhaustive survey of all changes, but comprehensive data were secured for certain selected behavior patterns. This

\textsuperscript{1}See Chapter IV of this study for a more detailed development of these concepts.
chapter is devoted to the presentation of these changes.

Changes in off-farm work of heads of households.

The majority of the 213 heads of households in the study sample did not do off-farm work during the eight years covered by the study. Eighty-eight (41.3 per cent) of the heads of households in the study area did engage in off-farm work at some time during the period covered by the study. (See Figure 10.) The number engaged in off-farm work varied from year to year. The lowest number of heads of households doing off-farm work in any given year was 65 in 1950. This number increased to the maximum of 85 in 1953, and by 1958 at the time of the survey, it had decreased to 68.

Seventy-one of the 83 heads of households, who engaged in off-farm work during the period covered by the study, increased the amount of off-farm work that they did during the drought. Increasing the amount of off-farm work was looked upon as a temporary adjustment to the drought situation by a large majority of those heads of households doing off-farm work.

Income obtained from off-farm work was frequently interpreted as vital to the household. Three-fourths, 66
Figure 10 Changes Made by Farm Operators, Selected Census Precincts, Mills County, Texas, 1950-1956
of 88, of the heads of households indicated that the income from off-farm work had played the vital role of keeping them on their farms. The remaining one-fourth of the heads of households felt they could have managed to remain on their places and operate them successfully in spite of the drouth, even if they had not had off-farm income.

Drouth was depicted as the reason for most of the heads of households either taking off-farm work or increasing their off-farm work. (See Figure 11.) Almost seven-eighths (76 of 83) of the heads of households engaged in off-farm work claimed drouth was the reason they either began or increased their off-farm work during the period covered by the study. The remainder felt they would have done off-farm work even if no drouth conditions had prevailed.

Twenty-three of the 88 heads of households engaged in off-farm work commenced doing such work after the onset of the drouth, and 20 of them had already ceased by the time of the survey. Thus, it might be interpreted that doing off-farm work was an unsuccessful adjustment to the drouth for those not already engaged in such work prior to the onset of the drouth. It may well be that there was too little off-farm work available for those who would have
Figure 11: Role of Drought in Changes Made by Farm Operators, Selected Census Precincts, Mills County, Texas, 1950-1958
liked to have tried it. It is to be recalled that this particular study area was chosen partially because there was little non-agricultural industry to contribute sources of off-farm income to the farm-operator population. What available off-farm work there was would tend to be that which was less desirable in terms of hours and wages. The more desirable positions would have been already taken by the heads of households who were holding off-farm jobs prior to the drought. Whatever the reason, doing off-farm work did not serve as a permanent adjustment for those who had not been engaged in it prior to the onset of the drought.

Differences were found between the off-farm work patterns of the heads of households of precincts 4 and 5, who were primarily devoted to ranching, and the heads of households of precinct 6, who were primarily devoted to dry-land farming. Forty-four heads of households (37.3 per cent) did off-farm work in precinct 6, and 44 heads of households (46.3 per cent) did off-farm work in precincts 4 and 5. Almost all, 43 of 44, of the heads of households in precinct 6 increased their off-farm work during the period covered by the study. Less than three-fourths, 30 of 44, of the heads of households doing off-farm work in precincts 4 and 5 increased their off-farm work during this
same period. The income earned by off-farm work was more instrumental in keeping the households on their places of operation during the drought in precinct 6, than it was in precincts 4 and 5. In precinct 6, 39 of 44 heads of households who engaged in off-farm work claimed the off-farm income played an important role in keeping them on the farm, while only 27 of the 44 heads of households similarly engaged in precincts 4 and 5 made this claim.

Heads of households in precinct 6, who began or increased their off-farm work during the period covered by the study, claimed drought as a reason for the change proportionately more frequently than did their counterparts in precincts 4 and 5, and proportionately more of the heads of households, who indicated they would continue doing off-farm work when the drought should end, were in precinct 6 than were in precincts 4 and 5.

**Off-farm work of household members.** A second area, in which changes were made in response to the drought situation, was in the increase of the amount of off-farm work done by household members other than the heads of households. Forty-seven households in the study area had members other than the head of the household who did off-farm work during the period covered by the study. The
members of 39 of these 47 households increased the amount of off-farm work that they did during the period covered by the study. The heads of 35 of the 47 households with members engaged in off-farm work claimed the income earned by the household members from their off-farm work played an important role in keeping the households on their places during the drought. Slightly more than two-fifths, 20 of 47, of the households with members engaged in off-farm work indicated that the household members would continue to do off-farm work after the drought should be ended. The differences between the findings in the two study areas are too small to justify separate analysis.

Changes in labor used by households. A third area, in which changes were made in response to the drought situation, was in the amount of farm labor used by the households to operate their places during the period covered by the study. Changes were made in three types of farm labor. The change most frequently made was in the use of family labor. Changes were made less frequently in the use of seasonal labor and of regular labor. A total of 80 households, comprising 37.6 per cent of the households in the sample area at the time of the survey, had made changes in one or
more of the three types of labor used to operate their places. The 80 household groups made a total of 99 changes in the amount of labor used during the period covered by the study. The principle direction of the changes was a reduction of seasonal and regular farm labor and an increase in the use of family labor as a means of conserving cash income.

Thirty-six household groups made changes in the amount of family labor used to operate the farm and/or ranch operated by the household. Slightly over six-tenths of these households were in precinct 6 and the remainder in precincts 4 and 5. The members of thirty-two households had also made changes in the amount of seasonal farm labor used to help operate their places. Just over one-half, 17 of 32, of these household groups were in precinct 6 and the remainder in precincts 4 and 5. The remaining changes were made by 31 household groups that changed the amount of regular farm labor used to operate their places. Slightly less than one-half, 15 of 31, of these households were in precinct 6 and the remainder in precincts 4 and 5.

Over three-fourths, 63 of 80, of the household groups making farm labor changes indicated drought as the reason for the changes. The households in precinct 6 made proportionately about the same number of changes in farm labor as did
the households in precincts 4 and 5, however, drouth was
given proportionately more frequently by households in
precinct 6 as the reason for having made the changes.
Almost three-fourths of the changes made in farm labor by
household groups in precinct 6 were indicated as motivated
by drouth. This finding is consistent with findings pre-
viously reported for precinct 6. Farm-operators of pre-
cinct 6 consistently made more adjustments to the drouth
and also made adjustments of a more permanent nature than
did the farm-operators in precincts 4 and 5.

Changes in acreage controlled. A fourth area, in
which changes were made in response to the drouth situation,
was in the acreage controlled. A number of household groups
bought and/or sold acreage and a number of them changed the
acreage they rented or leased during the period covered by
the study. Changes in the acreage controlled had been made
during the period studied by 76 (35.7 per cent) of the
households. Proportionately more of these changes were
made in precinct 6 than in precincts 4 and 5.

A greater proportion of the changes in acreage con-
trolled were related to drouth by informants in precincts 4
and 5 than by informants in precinct 6. This finding is
contrary to the other findings of the study. It is explained by the use to which the acreage was put in the respective precincts. The major portion of the acreage in precincts 4 and 5 was devoted to pasture land for sheep and goats. The drouth was of such severity that it affected the grazing produced by the pasture land, but never became so severe that the pastures were devoid of vegetation. Ranchers could meet the situation by decreasing the number of animals grazing on a particular acreage, or they could increase the acreage and graze the same number of animals as before. Many of the farm-operator households in precincts 4 and 5 chose the latter solution, rather than the former one. The dry-land farming of precinct 6 was less amenable to these solutions. When the crops are insufficient in quality and/or quantity to be profitable, a change in acreage offers little or no solution to the situation.

One-fifth of the changes in acreage controlled in precincts 4 and 5 and one-third of the changes in precinct 6 were made because of the drouth.

Changes in acreage operated. A fifth area, in which changes were made in response to the drouth situation, was
in the quantity of land actually operated by the farm-
operator households. These changes are reported separately
from changes in acreage controlled since there was other
profitable usage to which controlled land could be put
besides being planted in crops or used for pasture. Changes
in the number of acres operated had been made during the
period covered by the study by 70 of the 213 households in
the study area at the time of the survey. Thirty-six of
the households making changes in acreage operated were in
precinct 6 and the remaining 34 were in precincts 4 and 5.

The greater proportion of changes of acreage operated
were made in precincts 4 and 5, but the informants in pre-
cinct 6 who made changes in acreage operated reported more
frequently than drouth was the reason for having made the
change. Drouth was indicated as the motivation for changes
in acreage operated in precinct 6 by almost three-fourths,
26 of 36 of the households making such changes. Less than
three-fifths of the changes in acreage operated in precincts
4 and 5 were reported as due to the drouth. These findings
are consistent with the findings of change in acreage con-
trolled.
Changes in crops. A sixth area, in which changes were made in response to the drought situation, was in the quantity and/or type of crops raised. Sixty-three farm-operator households in the study area made changes in either the type and/or quantity of crops they raised during the period covered by the study. These 63 households constituted 29.6 per cent of the 213 households in the area at the time of the survey. Twenty-eight of these 63 households were in precinct 6, and the remaining 35 were in precincts 4 and 5.

Some of the changes made in crops in the study area were changes in type of crops planted. Cotton was grown on 105 farms in 1950 at the beginning of the study period, but only on 62 at the time of the survey, a loss of 41.0 per cent. The acreage planted in cotton had decreased even more than is suggested by the decrease in number of farms that grew cotton during the period covered by the study. The acreage planted in cotton in 1958 was 33.4 per cent of that planted in cotton in 1950. Peanuts were also planted less extensively and by fewer households in 1958 than in 1950. These two crops were primary to the study area and are both quite susceptible to drought damage. The acreage no longer devoted to cotton and peanuts after the drought
began was largely planted in hardier crops, such as the small grains and sorghums. These changes were accompanied by more or less companion changes in livestock. The permanency of the crop changes was not determined at the time of the survey, but since they were accompanied by related changes in livestock, they might logically be assumed to be adjustments that would tend to persist beyond the duration of the drought.

Drouth was indicated as responsible for more than five-sixths of these changes.

Changes in cattle. A seventh area, in which changes were made in response to the drought situation, was in the number of cattle raised on farms in the study area. Changes of this nature were more extensive than any changes presented to this point. They were reported by 133, 62.4 per cent, of the 213 households in the sample population. The rate of change was approximately the same in precincts 4 and 5 and in precinct 6 (64.2 and 61.3 per cent respectively).

Drouth was reported as the motive for making changes in 89.5 per cent of the cases where changes occurred in the number of cattle raised. The role of drouth as a motivator of change in cattle raising did not vary by precinct.
Eighty-two farms completely abandoned the raising of cattle between 1950 and 1958. The number of cattle raised in the study area dropped one-fifth, from 6,316 in 1950 to 5,066 in 1958. The change in cattle raising was more of a substitution than just a decline in number of cattle raised, for sheep and goats were substituted for cattle. Sheep increased from 21,985 in 1950 to 32,198 in 1958, an increase of 46.7 per cent. During the same period goats increased from 9,121 to 36,448, an increase of 299.6 per cent. These changes were made as attempts to adjust to the drouth situation. Sheep and goats can graze on a more sparse vegetation than cattle. The sheep and goats have proven so successful in the study area that there is little evidence they will be replaced by cattle at the termination of the drouth.

Changes in the use of local, state, and federal programs. Several local, state, and federal programs were available to farm-operators in the study area. Changes in the extent of use of such programs constituted an eighth type of change related to the drouth situation.

One source of such programs was found in farmer's and rancher's organizations such as the Farm Bureau, local
co-operatives, and other related community organizations. Changes in the degree to which heads of households were active in these organizations might logically be accepted as attempts to adjust to the drought situation, especially if the changes in degree of participation were motivated by drought. Sixteen heads of households, comprising 7.5 per cent of the 213 in the sample area, did make such changes. Ten of the 16 heads of households increased their activity in organizations in the area, and the remaining six heads of households decreased their activity in the organizations. Drought was offered as the reason for the changes made in 15 of the 16 cases.

A second change occurred in the frequency of the use of the services of the County Agent and the Home Demonstration Agent. Twenty-two, 10.3 per cent, of the 213 households in the study area at the time of the survey reported a change in the frequency of consulting the County Agent and/or the Home Demonstration Agent. Twelve of the 22 households reported more frequent consultation of these agents, and the remaining 10 households reported less frequent consultation of them. Drought was offered as the motive for changing the frequency of consultation of these agents by 18 of the 22 households involved in the change.
A third source of change was in the use of the Soil Bank Programs. Two of these programs existed in the survey area. One was the Soil Bank Acreage Reserve, which is an attempt to remove productive land from production by payments to farmers for such land to be left idle and non-productive. The second program was the Soil Bank Conservation Reserve. The basic purpose of this program was to remove land from productive use in order to build it up in productive quality, rather than merely to keep it from producing. Both programs were instituted in the study area in 1956. Changes made in the use of these two programs were therefore limited to the last two years covered by the study rather than the entire eight-year span included in the study.

The reserve program was used by 39 households in the study area. Ten of these households were in precincts 4 and 5 and the remaining 29 were in precinct 6. The two programs account for changes being made by 44 households, or 20.7 percent of the households in the study area, and over one-half of the heads of households claimed the income from the programs was important in keeping them on the farm during the drought.

A fourth program was the Federal Drought Relief Program. This program was instituted in the area when the Federal
Emergency Relief Agency declared the area to be suffering from serious and prolonged drought. The actual contribution of the program consisted of a lower price for feed shipped into the area. No direct cash payments were made to any households in the area. This program was most apt to be used by households that possessed some livestock (cattle, sheep, or goats) and did not possess adequate grazing or locally grown feed to provide for them "year round."

Participation in this program was more extensive than in any other farm or ranching program in the study area. One hundred and seventy-seven, 83.1 per cent, of the farm operators interviewed used this program. In precinct 6, 85.6 per cent of the households used the drought program and in precincts 4 and 5, the proportion was 80.0 per cent.

The Federal Drought Relief Program was named as helpful to their attempts to adjust to drought conditions by 94.9 per cent of the 177 household heads making use of the program. A few heads of households were critical of the program, pointing out that the most aid was given to the bigger operators who really needed it less than the small operators. Some heads of households indicated resentment over the program, especially those who did not own cattle.
The program as it was set up and administered offered no aid to the dry-land farmer without livestock.

The Federal Drouth Relief Program was interpreted by the farm-operator population as the most helpful and best adjustment to the drouth situation that was available to them.

Changes in various household plans. A number of changes were made in the plans of interviewee households that may be interpreted as adjustments to the drouth situation. It was anticipated that many of the sons and daughters of operators wanting to stay on the farm would have to leave; that many of the young people would have to abandon plans to go to college; and that planned purchases of new automobiles and appliances, major repairs to homes and the like, would have to be sacrificed in order to keep the household on the farm.

Actually, few changes were found in household plans of this nature. The heads of households reported only seven young people left the farm who wanted to stay on the farm and who had planned to stay there. Most of the young people who left the farm had planned to leave it irrespective of the drouth. The same findings held true for college
attendance. Most of the young people actually completed their plans since the majority of them did not plan to attend college. Only eight of those who planned to attend college during the period covered by the study had changed their plans because of drought.

Sixty-six heads of household groups reported making changes in plans to make major expenditures for items such as automobiles, farm machinery, home appliances, and so forth. Over two-thirds (46 of 66) of the operators making such changes claimed drought as the reason for the change.

**Summary and conclusions.** The farm-operator population of the study area made a number of changes, as attempts to adjust to drought, other than migration. These included off-farm work, cotton and peanuts being replaced by small grains, cattle being replaced by sheep and goats, and the shift from using seasonal and regular farm labor to using family labor.

Other widely accepted changes were the use of the Federal Drought Relief Program and the Federal Land Bank programs. These were the most widespread changes made for drought reasons. They were the ones most frequently claimed as helpful to the drought situation. These changes are
largely temporary and will cease when the area is declared to be no longer a disaster area suffering from "serious and prolonged" drouth.
CHAPTER XI

SUMMARY AND CONCLUSIONS

This study was conducted to determine the extent and the selectivity of migration in an area suffering from the non-cataclysmic disaster of drouth. Changes made by the farm-operator household groups in the study area as adjustments to the drouth situation were also studied. Information for the study was secured by personal interviews with operator and former operator household groups of farms and/or ranches in three carefully selected census precincts in an area suffering from serious and prolonged drouth. Additional data were secured for the selected precincts from the United States Bureau of the Census for comparative purposes.

Situational theory was used to interpret the findings, since it was assumed that persons affected by drouth would act on the basis of their interpretation of the drouth situation rather than act according to predetermined or customary behavioral patterns. The following summary of
the findings is presented in the same sequence as reported in the study.

I. SUMMARY

The first objective of the study was to determine the characteristics of migrants, in terms of age, sex, education, and the family life cycle stage, from a farm area that had been subjected to extended drought conditions and to compare these characteristics with those of migrants from areas not subjected to drought.

The age patterns of migrants were consistent with the general finding of other studies in which drought was not a factor. It was found that the older the individual the less apt he was to be a migrant, except for children too young to migrate independently of their families. The youth who migrated independently of their households migrated most frequently when 18 years of age, and over three-fourths of them migrated while between 18 and 24 years of age.

External migration from the drought areas studied was highly selective of males and internal migration was highly selective of females with the effect that total migration was not sex selective in the study area. This finding is in contrast to findings that migration from farm areas not
affected by drought tends to be sex selective for females. If one views internal migration as short-range migration and external migration as long-range migration, these findings are consistent with Ravenstein's laws and other more recent studies concerning the sex selectivity of migration.

The females studied had completed more years of school than had the males and this finding held true for those who migrated as well as those who did not. The older the migrant, the fewer the years of school he had completed at the time of migration. The younger the migrant, the greater the number of years of school he had completed, with the exception of those young enough to be still attending school or those too young to attend school. These findings support the growing body of data concerning the relationship between age, educational attainment, and migration. The findings of the study indicate that non-migrants had more formal education on the average than did migrants. This finding is contrary to the usual pattern found. However, the lower educational attainments might be explained by the fact that persons with more years of schooling had an advantage in making adjustments to drought other than migration. Internal migrants had completed fewer years of
school than had external migrants. It may well be that those persons with more education rationalized that if they must resort to such drastic change as migration to meet the drought situation, to move within the same area would be more futile than to move outside the area.

The rate of migration of families varied inversely with their family life cycle stages, with the exception of cycle Stage I (adults under 35 years of age, married, and childless). As families passed from the earlier life cycle stages, they were less apt to migrate, but for those who did migrate there was a greater tendency to make an internal move and less tendency to make a move of an external nature. This phenomenon might be explained by the fact that internal moves made within the census precincts of the study area meant, basically, living in the same community. Moves of an external nature were moves into different communities for the most part. The older, more stable families logically would be expected to be more reluctant to make the more drastic move of leaving the community.

A second objective was to determine the extent to which conditions of drought were related to migration in the study area. Migration was conceived as the most drastic change that individuals, household groups, or families
might make in response to the drouth crisis. Relatively few migrants moved for drouth reasons although numerous migrations were made by the residents of the drouth area. Drouth appeared to be more directly related to migration in the following situations: when farm-operators were engaged in dry-land farming, rather than ranching; when families were in the later family life cycle stages, rather than the earlier ones; and when migrants engaged in external migration, rather than internal migration. Migration was not a successful adjustment to the drouth for most household groups that moved for drouth reasons, but did appear to be successful for those persons who migrated as individuals.

The majority of the sample population responded to the drouth situation with less drastic changes than migration. From the above findings, it is obvious that drouth did not prove to be as effective a "mover of men" as is commonly supposed.

The third major objective was to investigate changes other than migration which were made as attempts to adjust to the drouth situation. Some of the most interesting findings of the study concern these changes. Numerous changes could be and were made by individuals or household
groups in their adjustment to the drought situation. Changes in the size of acreage controlled, the size of acreage operated, the type of crops planted, substituting sheep and goats for cattle, substituting family labor for regular and seasonal farm labor, and increasing off-farm work appeared to be rather successful adjustments to the drought for the majority of those who attempted them.

The most extensive changes were made in participation in the Federal Drought Relief Program and the Soil Bank programs available in the study area. These programs, although receiving some criticism, were regarded as important and successful means of adjusting to the drought. This finding is the more interesting because these programs contributed insignificant monetary aid to those who participated in them. The real contribution of these programs seems to lie in their subjective aspects.

Drought did not play the same role consistently in making these changes throughout the study area. In areas devoted to dry-land farming supplemented by ranching, the residents reported changes made for drought reasons more frequently than did residents of ranching areas. The farmers of the study area gave up plans to spend money, to send sons and/or daughters to college, and to keep sons
and/or daughters on the farms proportionately more frequently because of the drouth than did ranchers. Farmers also tried off-farm work more frequently than did ranchers. Farmers changed their acreage operated, changed the crops planted, and participated in the Federal Drouth Relief Program more extensively because of drouth than did ranchers.

From the above it is clear, drouth was a crisis that affected the dry-land farmer more frequently and more drastically than it did the ranchers.

II. CONCLUSIONS

Findings of the study leave little doubt that serious and prolonged drouth is a disaster, non-cataclysmic in nature, which presents a crisis situation to individuals and household groups within an involved farm-operator population. This phenomenon is explained in terms of situational theory. The majority of the residents of a drouth area define the situation as one requiring more or less drastic behavioral changes on their part. Where the effects of drouth are not more extreme than those in the present study the majority of the residents are able to adjust successfully to the drouth
situation by making changes less drastic than migration.

Education plays a role in this process in that the better educated are more capable of making successful adjustments to the crisis situation without migrating. Once the changes are made, they are generally interpreted as beneficial to the situation irrespective of whether or not they produce substantial material improvement and whether or not they are permanent in nature. Household groups that define the situation as one to which they cannot adjust through changes less drastic than migration tend to fulfill their own prophecy by repeated migrations.

It is evident from the above findings that prior judgments regarding the effect of drouth on the migration of farm operators and their household members are hazardous. Whether or not a particular drouth situation represents a unique experience to a particular community can only be established by empirical research. If the drouth situation is defined as a new situation by the people in the agricultural community affected, change can be expected. The more unique the situation the more radical the change which will be made by individuals and household groups. The ultimate change is, of course, migration. On the other
hand, if drought is interpreted as only a slight situational change because of previous drought experiences, social patterns will be disrupted only minimally and/or temporarily.
BIBLIOGRAPHY

BOOKS


PERIODICALS


Belknap, Ivan, and Hiram J. Friedsam, "Age and Sex Categories as Sociological Variables in the Mental Disorders of Later Maturity," American Sociological Review, XIV (June, 1949), 367-76.


Burgess, Ernest W. "The Cultural Approach to the Study of Personality," Mental Hygiene, XIV (April, 1930), 310.


Queen, Stuart A. "Some Problems of the Situational Approach," Social Forces, IX (June, 1931), 480-81.


Sheffield, Ada E. "The 'Situation' as the Unit of Family Case Study," Social Forces, IX (June, 1931), 465-74.


Thomas, Dorothy S. "Selective Migration," The Milbank Memorial Fund Quarterly, XVI (1938), 403-407.


MONOGRAPHY-BULLETINS-ARTICLES


Anderson, W. A. Mobility of Rural Families. Ithaca: Cornell Agricultural Experiment Station, June, 1934.


_______, and Harold W. Osborne, Rural Industrialization in a Louisiana Community. Baton Rouge: Louisiana State University and Agricultural and Mechanical College Agricultural Experiment Station Bulletin, No. 524, 1959.


Gessner, Amy A. Selective Factors in Migration from a New York Rural Community. Ithaca: Cornell Agricultural Experiment Station Bulletin 736, 1940.


_________. *After Three Years: A Restudy of the Social and Economic Adjustments of a Group of Drought Migrants.* Pullman: Washington Agricultural Experiment Station, October, 1941.


Loomis, Charles P. *The Growth of the Farm Family in Relation to its Activities.* Raleigh: North Carolina Agricultural Experiment Station, June, 1934.


Williams, B. O. Occupational Mobility Among Farmers, Part I--Mobility Patterns. Clemson College: South Carolina Agricultural Station Bulletin 296, June, 1934.


NEWSPAPERS-UNPUBLISHED MATERIALS


APPENDIX A

FIGURES AND TABLES
Figure 1  Map of Census Precinct 6, Mills County, Texas
Based on 1950 Census

One inch equals 2.5 miles

Figure 2  Map of Census Precinct 5, Mills County, Texas
Figure 3  Map of Census Precinct 4, Mills County, Texas
Figure 4  Age Distribution of Farm Operators and Household Members, Selected Census Precincts, Mills County, Texas, 1956
### TABLE I

**AGE DISTRIBUTION OF FARM OPERATORS AND HOUSEHOLD MEMBERS, BY TYPE OF MIGRATION, SELECTED CENSUS PRECINCTS, MILLS COUNTY, TEXAS, 1950-1958**

<table>
<thead>
<tr>
<th>Years of Age</th>
<th>No. in Sample</th>
<th>Internal No.</th>
<th>Internal Per Cent</th>
<th>External No.</th>
<th>External Per Cent</th>
<th>Total No.</th>
<th>Total Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 15</td>
<td>181</td>
<td>26</td>
<td>14.4</td>
<td>82</td>
<td>45.3</td>
<td>108</td>
<td>59.7</td>
</tr>
<tr>
<td>15-19</td>
<td>77</td>
<td>5</td>
<td>6.5</td>
<td>49</td>
<td>63.6</td>
<td>54</td>
<td>70.1</td>
</tr>
<tr>
<td>20-24</td>
<td>59</td>
<td>3</td>
<td>5.1</td>
<td>49</td>
<td>83.1</td>
<td>52</td>
<td>88.2</td>
</tr>
<tr>
<td>25-34</td>
<td>64</td>
<td>8</td>
<td>12.5</td>
<td>38</td>
<td>59.4</td>
<td>46</td>
<td>71.9</td>
</tr>
<tr>
<td>35-44</td>
<td>96</td>
<td>11</td>
<td>11.5</td>
<td>34</td>
<td>35.4</td>
<td>45</td>
<td>46.9</td>
</tr>
<tr>
<td>45-54</td>
<td>136</td>
<td>17</td>
<td>12.5</td>
<td>28</td>
<td>20.7</td>
<td>45</td>
<td>33.2</td>
</tr>
<tr>
<td>55-64</td>
<td>101</td>
<td>6</td>
<td>5.9</td>
<td>13</td>
<td>12.9</td>
<td>19</td>
<td>18.8</td>
</tr>
<tr>
<td>65 &amp; over</td>
<td>75</td>
<td>0</td>
<td>0.0</td>
<td>8</td>
<td>10.7</td>
<td>8</td>
<td>10.7</td>
</tr>
<tr>
<td>Totals</td>
<td>789</td>
<td>76</td>
<td>9.6</td>
<td>301</td>
<td>38.1</td>
<td>377</td>
<td>47.7</td>
</tr>
</tbody>
</table>
TABLE II

MIGRANTS MOVING INDEPENDENTLY OF THEIR HOUSEHOLDS, BY AGE AND SEX,
SELECTED CENSUS PRECINCTS, MILLS COUNTY, TEXAS, 1950-1958

<table>
<thead>
<tr>
<th>Years of Age</th>
<th>Precincts 4 &amp; 5</th>
<th>Precinct 6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male Female Total</td>
<td>Male Female Total</td>
<td>Male Female Total</td>
</tr>
<tr>
<td>15 - 19</td>
<td>0 5 5</td>
<td>5 13 18</td>
<td>5 18 23</td>
</tr>
<tr>
<td>20 - 24</td>
<td>0 5 7</td>
<td>13 6 19</td>
<td>15 11 26</td>
</tr>
<tr>
<td>25 - 34</td>
<td>0 5 5</td>
<td>2 3 5</td>
<td>2 8 10</td>
</tr>
<tr>
<td>35 - 44</td>
<td>0 0 0</td>
<td>1 0 1</td>
<td>1 0 1</td>
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<tr>
<td>Totals</td>
<td>2 15 17</td>
<td>21 22 43</td>
<td>23 37 60</td>
</tr>
</tbody>
</table>
### TABLE III

**NUMBER OF YEARS OF SCHOOL COMPLETED BY FARM OPERATORS AND HOUSEHOLD MEMBERS 15 YEARS OF AGE AND OLDER, BY SELECTED CENSUS PRECINCTS AND SEX, MILLS COUNTY, TEXAS, 1958**

<table>
<thead>
<tr>
<th>Years of School Completed</th>
<th>Precincts 4 &amp; 5</th>
<th></th>
<th>Precinct 6</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Per Cent</td>
<td>Male</td>
</tr>
<tr>
<td>Under 7</td>
<td>19</td>
<td>14</td>
<td>33</td>
<td>5.4</td>
<td>46</td>
</tr>
<tr>
<td>7 and 8</td>
<td>24</td>
<td>21</td>
<td>45</td>
<td>7.4</td>
<td>35</td>
</tr>
<tr>
<td>9</td>
<td>11</td>
<td>10</td>
<td>21</td>
<td>3.4</td>
<td>18</td>
</tr>
<tr>
<td>10 - High School</td>
<td>43</td>
<td>43</td>
<td>86</td>
<td>14.2</td>
<td>76</td>
</tr>
<tr>
<td>Beyond High School</td>
<td>20</td>
<td>37</td>
<td>57</td>
<td>9.4</td>
<td>16</td>
</tr>
<tr>
<td>Totals</td>
<td>117</td>
<td>124</td>
<td>242</td>
<td>39.3</td>
<td>191</td>
</tr>
</tbody>
</table>
TABLE IV

NUMBER OF YEARS OF SCHOOL COMPLETED BY FARM OPERATORS AND HOUSEHOLD MEMBERS
15 YEARS OF AGE AND OLDER, SELECTED CENSUS PRECINCTS,
MILLS COUNTY, TEXAS, 1958

<table>
<thead>
<tr>
<th>Years of School Completed</th>
<th>Precincts 4 &amp; 5</th>
<th>Precinct 6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>No.</td>
</tr>
<tr>
<td>Under 7</td>
<td>19</td>
<td>14</td>
<td>33</td>
</tr>
<tr>
<td>7 and 8</td>
<td>24</td>
<td>21</td>
<td>45</td>
</tr>
<tr>
<td>9</td>
<td>11</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>10-High school</td>
<td>43</td>
<td>43</td>
<td>86</td>
</tr>
<tr>
<td>Beyond High School</td>
<td>20</td>
<td>37</td>
<td>57</td>
</tr>
<tr>
<td>Totals</td>
<td>117</td>
<td>125</td>
<td>242</td>
</tr>
</tbody>
</table>
APPENDIX B

QUESTIONNAIRES
Precinct No. ____________
County _________________
Schedule I No. __________

TEXAS DROUTH AND MIGRATION STUDY

SCHEDULE I

Department of Agricultural Economics and Sociology
Texas Agricultural Experiment Station
in cooperation with
Farm Population and Rural Life Branch
Agricultural Economics Division
Agricultural Marketing Service
U. S. Department of Agriculture

FARM OPERATORS CURRENTLY OPERATING IN SAMPLE PRECINCT

Date ___________ Name of Interviewer ___________

Respondent's Name: (Last) (First) (Middle Initial)

Head of Household: (Last) (First) (Middle Initial)

Mailing Address: _______________________________________

1. Does respondent live in sample precinct? 1.____ yes
2.____ no

I. First of all, could you tell me a few things about your farming operations in 1957?

2.____ How many acres did you own?

3.____ How many acres did you rent or lease from others?

4.____ How many acres did you rent or lease to others?

5.____ Total acres operated (2 plus 3 minus 4)

6. Tenure status in 1957 (check one)

1.____ full owner 2.____ part owner
3. ___ share tenant  4. ___ cash tenant
5. ___ share-cash tenant  6. ___ other (explain)
7. ___ no answer

IF TOTAL IN 5 IS 3 OR MORE ACRES, ASK:

7. Did (or will) the value of agricultural products produced for sale or home use, excluding a home garden, on this farm in 1957 amount to $150 or more?
   1. ___ yes 2. ___ no 3. ___ no answer
   4. ___ not applicable

IF TOTAL IN 5 IS UNDER 3 ACRES, ASK:

8. Did (or will) the value of agricultural products sold in 1957 from this farm amount to $150 or more?
   1. ___ yes 2. ___ no 3. ___ no answer
   4. ___ not applicable

IF NO IN 7 OR 8, ASK:

9. Would the value of products sold (or produced) on this farm normally have amounted to more than $150?
   1. ___ yes 2. ___ no 3. ___ no answer
   4. ___ not applicable

ASK OF ALL:

10. Do you look upon your place of residence as a:
    1. ___ ranch 2. ___ farm 3. ___ both
     4. ___ neither 5. ___ no answer

IF NO IN 9 AND 1 OR 3 IN 10, TAKE A SCHEDULE II; IF NO IN 9 AND IF 4 IN 10 TERMINATE INTERVIEW.
11. What kind of ranching or farming did you do in 1957?

<table>
<thead>
<tr>
<th>RANCHING</th>
<th>FARMING</th>
<th>POULTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak number</td>
<td>Acres planted</td>
<td>Peak Number</td>
</tr>
<tr>
<td>1. ___ cattle</td>
<td>1. ___ cotton</td>
<td>1. ___ laying flock</td>
</tr>
<tr>
<td>2. ___ sheep</td>
<td>2. ___ peanuts</td>
<td>2. ___ fryers or broilers</td>
</tr>
<tr>
<td>3. ___ goats</td>
<td>3. ___ pecans (trees)</td>
<td>7. ___ turkeys</td>
</tr>
<tr>
<td>4. ___ other</td>
<td>4. ___ grain</td>
<td>4. ___ other</td>
</tr>
<tr>
<td>(Explain)</td>
<td>(Explain)</td>
<td>(Explain)</td>
</tr>
</tbody>
</table>

12. What is the major item you produced in 1957?

| 1. ___ cattle | 4. ___ cotton | 6. ___ poultry |
| 2. ___ sheep | 5. ___ grain | 7. ___ other |
| 3. ___ goats | | Explain |

13. What was the total amount you received from sales of produce from this farm last year? Include the value of crops, livestock, milk, and other produce sold. Do not include amounts received from sales of equipment or dairy, breeding or work animals.

| 1. ___ Under $400 | 5. ___ $3,000 - $4,999 |
| 2. ___ $400 - $799 | 6. ___ $5,000 - $9,999 |
| 3. ___ $800 - $1,799 | 7. ___ $10,000 - $19,999 |
| 4. ___ $1,800 - $2,999 | 8. ___ $20,000 and over |

14. What was your worst drought year?

15. What was the total amount you received from sales of farm produce during your worst drought year?

| 1. ___ Under $400 | 5. ___ $3,000 - $4,999 |
2. ___ $400 - $799  
3. ___ $800 - $1,799  
4. ___ $1,800 - $2,999  
5. ___ $5,000 - $9,999  
6. ___ $10,000 - $19,999  
7. ___ $20,000 and over  

16. ___ How many years have you operated this farm?

II. We would like to know something about your household.
17. For operators farming in sample precinct, obtain information on all persons in household at present time.

<table>
<thead>
<tr>
<th>Name</th>
<th>Relation to head of household</th>
<th>For persons 14 yrs. old</th>
<th>Residence old and older</th>
<th>'class in school of household</th>
<th>'class in school of school'</th>
<th>Occupation(s) of HH members</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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<td></td>
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<tr>
<td>4.</td>
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<tr>
<td>5.</td>
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<td>6.</td>
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<td>7.</td>
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<td>8.</td>
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<td>9.</td>
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<td>10.</td>
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</tr>
</tbody>
</table>

**Code for (1)**
1 - Head
2 - Wife
3 - Son
4 - Daughter
5 - Other

**Code for (4)**
0 - Under 14 yrs. old
1 - Under 7 yrs. schooling
2 - 7 & 8 years
3 - 9 years
4 - 10-H.S.
5 - Beyond H.S.

**Code for (5)**
1 - Operation of farm
2 - Nonfarm wage worker
3 - Retired
4 - Operation of nonfarm business or profession
5 - Housekeeping
6 - Student
7 - Other

**Code for (6) & (7)**
1 - Living on other farm
2 - Living on this farm
3 - Not living on farm
17. For operators farming in sample precinct, obtain information on all persons in household at present time.

<table>
<thead>
<tr>
<th>Name</th>
<th>Moves by years of occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>'1950' '1951' '1952' '1953' '1954' '1955' '1956' '1957'</td>
</tr>
<tr>
<td></td>
<td>(8) (9) (10) (11) (12) (13) (14) (15)</td>
</tr>
<tr>
<td>1.</td>
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<td>2.</td>
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<tr>
<td>3.</td>
<td></td>
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<tr>
<td>4.</td>
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<td>5.</td>
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<td>6.</td>
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<td>7.</td>
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<tr>
<td>8.</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
</tr>
</tbody>
</table>

**Code for (8) - (15)**
(Use 1 number from each column)
1 - Farm to farm
2 - Nonfarm to farm
3 - Farm to nonfarm
4 - Nonfarm to nonfarm
5 - Within precinct
6 - Into precinct
7 - Out of precinct
8 - Move not involving this precinct
1. Now will you tell us about any persons who were members of your household and any other persons who operated this farm between 1950 and 1957 who are living elsewhere?

<table>
<thead>
<tr>
<th>Address</th>
<th>Year</th>
<th>Type</th>
<th>Name</th>
<th>Location</th>
<th>From</th>
<th>To</th>
<th>Move from</th>
<th>Move to</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persons who were previous members of household

1.
2.
3.
4.
5.
6.
7.

Head of Household who previously operated all or any part of this farm.

1.
2.

Code for (4)

(Use 1 number from each column)

1 - Farm to farm
2 - Nonfarm to farm
3 - Farm to nonfarm
4 - Nonfarm to nonfarm
5 - Within precinct
6 - Into precinct
7 - Out of precinct
8 - Move not involving this precinct

(Locate these people and take Schedule III for former operators not now farming; and Schedule IV for individual family members or present precinct operators)

(For individual family members who have moved too far to contact, ask present respondent to fill a Schedule V for each such individual if possible)
FOR OPERATORS WHO MOVED FROM ONE FARM TO ANOTHER SINCE 1949:

19. Why did you move from your last farm? 

20. Were there any other reasons? 

IF "DROUGHT" MENTIONED, ASK:

21. Would you say that the drought played a major part in your moving or only a minor part? 1. major 2. minor 3. not applicable

III. We are interested in getting some idea about how the drought has affected farming and ranching in this area. First we would like to know about any changes you made since its beginning.

22. What year did you first begin to feel the effects of the drought? From now on, when we say the beginning of the drought, we will consider that for you it began in (From question 22.) (For farmers who began operating recently this may be the year they started farming.)

A. Now let's talk about your farming operations.

23. Have you either cut down or increased the acreage you have been operating since the beginning of the drought? 1. cut down 2. increased 3. both 4. neither
(For persons who have moved from one farm to another
think in terms of both farms)

IF CHANGES MADE, ASK:

24. Did you ___ cut down ___ more than half
    ___ increase ___ half
    ___ less than half

25. ___ When did you make this (these) change(s)?

26. ___ Why did you make this (these) change(s)?

27. ___ Were there any other reasons?

IF DROUGHT MENTIONED, ASK:

28. Would you say that the drought played a major part
    in these changes or only a minor part? 1. ___ major
    2. ___ minor

29. What changes have you made in crop production since
    the beginning of the drought? 1. ___ cut down
    2. ___ increased 3. ___ both 4. ___ neither

IF CHANGES MADE, ASK:

30. Did you ___ cut down ___ more than half
    ___ increase ___ half
    ___ less than half

31. ___ When did you make this (these) change(s)?

32. ___ Why did you make this (these) change(s)?

33. ___ Were there any other reasons?

IF DROUGHT MENTIONED, ASK:
34. Would you say that the drought played a major part in these changes or only a minor part? 1.____ major 2.____ minor

35. What changes have you made in livestock production since the beginning of the drought? 1.____ cut down 2.____ increased 3.____ both 4.____ neither

IF CHANGES MADE ASK:

36. Did you 1.____ cut down 1.____ more than half by 2.____ increase 2.____ half 3.____ less than half

37.____ When did you make this (those) change(s)?

38.____ Why did you make this (these) change(s)? ________

39.____ Were there any other reasons? __________________

______________________________

IF DROUGHT MENTIONED, ASK:

40. Would you say that the drought played a major part in these changes or only a minor part? 1.____ major 2.____ minor

41. What changes have you made in leasing or renting and buying or selling land since the beginning of the drought?

LEASING OR RENTING: 1.____ less 2.____ more 3.____ none

BUYING OR SELLING: 1.____ bought 2.____ sold 3.____ neither

IF CHANGES MADE, ASK:

42. Did you 1.____ cut down 1.____ more than half
2._____ increase by 2._____ half

3._____ less than half

43._____ When did you make this (these) change(s)?

44._____ Why did you make this (these) change(s)?

45._____ Were there any other reasons?

IF DROUGHT MENTIONED, ASK:

46. Would you say that the drought played a major part in
these changes or only a minor part? 1._____ major
2._____ minor

47._____ What changes did you make in the amount of labor
that you used?

<table>
<thead>
<tr>
<th>Hired</th>
<th>Increased</th>
<th>Decreased</th>
<th>Both</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seasonal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IF CHANGES MADE, ASK:

48. Did you 1._____ cut down 1._____ more than half
2._____ increase 2._____ half
3._____ less than half

49._____ When did you make this (these) change(s)?

50._____ Why did you make this (these) change(s)?

51._____ Were there any other reasons?
IF DROUGHT MENTIONED, ASK:

52. Would you say that the drought played a major part in these changes or only a minor part?  1.____ major
   2.____ minor

53.____ Other than the changes which we have already talked about, what other changes can you think of that you have made in your farming and ranching business in recent years? (example: Started irrigating - changed over to poultry production, etc.)
   1. ________________ 2. ________________
   3. ________________ 4. ________________

IF CHANGES MENTIONED, ASK:

54. Would you say that the drought played a major part in these changes or only a minor part?  1.____ major
   2.____ minor

55. Of the changes you have told us about, which, if any, do you feel:
   1.____ Improved your situation? ________________
   2.____ Made your situation worse? ________________

B. We are interested in finding out what adjustments (other than farming) people on farms and ranches made during the drought.

56. First, we would like to ask a few questions about
your employment in the past 10 years. Can you tell me in which years since 1948 you

1. Operated a farm 2. Did other agric. work

|------|------|------|------|------|------|------|------|------|------|------|

3. Did nonfarm work

---

IF WORK OTHER THAN OPERATING A FARM, ASK:

57. Did you increase the amount of your off-farm work after the beginning of the drought? 1.____ yes 2.____ no 3.____ neither

58. To what extent do you feel the drought played a part in your taking or remaining in your other jobs? 1.____ major 2.____ minor 3.____ no part

59. What part do you think the money earned from your other jobs had in keeping you on the farm? 1.____ major 2.____ minor 3.____ no part

IF CURRENTLY HAVE JOB OTHER THAN FARMING, ASK 60:
60. Now that you have another job what do you intend
to do with it when you feel the drouth is over?
1. ____ will keep it  2. ____ will give it up
3. ____ don't know

61. Did any of the members of your household hold jobs
other than working on your farm since the beginning
of the drouth?  1. ____ yes  2. ____ no

IF YES, ASK:

62. Did they increase the amount of their off-farm
work after the beginning of the drouth?
1. ____ yes  2. ____ no

63. To what extent do you feel the drouth played a part
in your family members taking or staying on in their
other jobs?  1. ____ major  2. ____ minor  3. ____ no part

64. What part do you think the money earned from their
other jobs had in keeping your family on the farm?
1. ____ major  2. ____ minor  3. ____ no part

65. In the year before the drouth begin, did your family
derive half or more of its income from operation of
your farm?  1. ____ yes  2. ____ no

66. In 1957, did your family derive half or more of its
income from the operation of a farm?  1. ____ yes
2. ____ no

IF FAMILY MEMBERS CURRENTLY HAVE OTHER JOBS ASK:

67. Since they have another job what do they intend to
do when the drouth is over?  1. ____ will keep it
2. __ will give it up  3. ___ don't know

C. Now let's talk about any plans that you had made which you were unable to put into effect in recent years.

68. Did you or any other family member want to go to college and didn't or delayed going?  1. ___ yes  2. ___ no

69. ___ Explain________________________________________________________

IF MORE THAN ONE REASON, AND DROUGHT IS MENTIONED, ASK:

70. Would you say that the drought played a major part in this or only a minor part?  1. ___ major  2. ___ minor

71. Did you have a son, daughter or other family member who wanted to remain on the farm, but moved away?  1. ___ yes  2. ___ no  3. ___ don't know

72. ___ Why did they go? _____________________________________________

IF DROUGHT MENTIONED, ASK:

73. Would you say that the drought played a major part in their going or only a minor part?  1. ___ major  2. ___ minor

74. Did you have any other plans that you feel were disrupted by the drought?  1. ___ yes  2. ___ no  3. ___ don't know

IF YES, EXPLAIN _________________________________________________
D. Now we would like to get some information on other things you have done in recent years.

75. Have you participated in farmer's or rancher's organizations (Farm Bureau, local co-ops, community organizations, etc.):
   1.____ more actively  2.____ less actively  3.____ about the same

IF 3, SKIP TO 77.

76. To what extent do you feel the drought played a part in your increase (or decrease) in participation?
   1.____ major  2.____ minor  3.____ none

77. Do you consult your County Agent and Home Demonstration Agent:
   1.____ more frequently  2.____ less frequently  3.____ about the same

IF 3, SKIP TO 79.

78. To what extent do you feel the drought played a part in your more frequent (or less frequent) use of agricultural agents?
   1.____ major  2.____ minor  3.____ none

79. Did you make use of any part of the government drought program?  1.____ yes  2.____ no  3.____ don't know

80.____ What phase(s) of the government drought program did you take a part in?

81. Do you feel that this program(s) was (were) of any benefit to you?
1. ___ greatly beneficial  2. ___ of some benefit
3. ___ no position  4. ___ of no benefit
5. ___ harmful

82. In what way(s) was it beneficial or harmful to you?

________________________________________________________________________

83. In general, what do you think of the drought relief program?

1. ___ approval  2. ___ qualified approval
3. ___ no position  4. ___ qualified disapproval
5. ___ disapproval

84. ___ How many acres did you have in the
Soil Bank Acreage Reserve Soil Bank Conservation Reserve

1956_____________________________ _____________________________
1957_____________________________

(IF none, enter 0)

IF LAND WAS IN EITHER OR BOTH PROGRAMS, ASK:

85. To what extent has the money received from this
source enabled your family to remain on the farm?
1. ___ major  2. ___ minor  3. ___ none

IV. Now we would like to know a little about your ideas about
farming (or ranching) in general:

86. ___ What do you like about farming?
1. ____________________________________________________________
2. ____________________________________________________________
3. ____________________________________________________________
97. What do you dislike about farming?
   1. ________________________________
   2. ________________________________
   3. ________________________________

98. If you were to balance out your likes and dislikes against each other, what would you say is your overall opinion about farming at the present time?
   _____________________________________________________________

   1. ___ approval   2. ___ qualified approval
   3. ___ no position  4. ___ qualified disapproval
   5. ___ disapproval

99. In recent years do you think there has been any change in your feeling toward farming as an occupation?
   1. ___ yes  2. ___ no  3. ___ no change

100. If you had a chance to sell out at a reasonable profit and had been promised a fairly good job in town but it involved leaving your farm, do you think you would:
   1. ___ jump at the chance  2. ___ have to think about it, but probably take it
   3. ___ turn it down  4. ___ don't know

V. Now we would like to know something about what caused some people to remain in agriculture and why some have left in recent years.
91. FOR INTERVIEWER: CHECK RESPONDENT AS:
A. ___ STAYED IN FARMING IN DROUGHT PERIOD
B. ___ STARTED FARMING DURING DROUGHT PERIOD
C. ___ MOVED CUT AND BACK INTO FARMING

IF A, ASK 92-94.

92. ___ As you see it what are some of the more important factors that caused you to stay on the farm in recent years?
   1. _____________________________________________________________
   2. _____________________________________________________________
   3. _____________________________________________________________

93. ___ Were there any other reasons? ________________________________

IF DROUGHT MENTIONED, ASK:

94. Would you say that the drouth played a major part in your decision or only a minor part? 1. ___ major
    2. ___ minor

IF NOT, ASK 95-97:

95. ___ As you see it what are some of the more important reasons for your starting in the farming business in recent years?
   1. _____________________________________________________________
   2. _____________________________________________________________
   3. _____________________________________________________________

96. ___ Were there any other reasons? ________________________________
IF DROUGHT MENTIONED, ASK:

97. Would you say that the drought played a major part in your decision or only a minor part? 1.____ major
2.____ minor

IF C IN V, ASK: 98-100

98.____ As you see it what are some of the more important reasons for your getting out of farming and back into it in recent years?
1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________

99.____ Were there any other reasons? __________________________

______________________________________________________________

IF DROUGHT MENTIONED, ASK:

100. Would you say that the drought played a major part in these changes or only a minor part? 1.____ major
2.____ minor

VI. Finally, we would like to know something about your plans for the future few years? 1.____ none 2.____ reduce acreage operated 3.____ increase acreage operated
4.____ change management arrangements 5.____ get out of farming

IF 1, SKIP TO 105.

102.____ Why do you plan to make these changes? (Specify)
103. ___ Are there any other reasons? _________________________________

IF DROUGHT MENTIONED, ASK 104.

104. Would you say that the drought would play a major part in these changes or only a minor part?
1. ___ major  2. ___ minor

105. Do you plan to move off this farm in the next few years?  1. ___ yes  2. ___ no  3. ___ don't know

IF 1, ASK 106-108.

106. Where do you expect to live when you move?
   1. ___ on another farm  2. ___ in a village
   3. ___ in a city  4. ___ other  5. ___ don't know

107. ___ Why do you plan to move off the farm?
   1. ___________________________________________________________
   2. ___________________________________________________________

108. ___ Are there any other reasons? _________________________________

IF DROUGHT MENTIONED, ASK 109:

109. Would you say that the drought played a major part in your decision or only a minor part?  1. ___ major
    2. ___ minor

ASK OF ALL OPERATORS

110. Have you made Social Security payments as a result of your farming operations?

__________________________
Year    '    Yes    '    No
111. What were the principal reasons for not paying?
   1. ___________________________________________________________
   2. ___________________________________________________________

112. Were there any other reasons? ________________________________

113. Would you say that the drought played a major part in this or only a minor part? 1. major 2. minor

114. Considering the various types of assets and debts that you have (or had) about how much would you have left if you were to sell (or had sold) or cash in all your property and pay off all the debts and accounts?

<table>
<thead>
<tr>
<th>Year</th>
<th>Debts Greater Than Assets</th>
<th>1950</th>
<th>1957</th>
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<td>Less Than $1,000</td>
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<td>$1,000 to 4,999</td>
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<td>$10,000 to 19,999</td>
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<td>$20,000 to 29,999</td>
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<td>$30,000 to 49,999</td>
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<td>$50,000 and Over</td>
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</tbody>
</table>
IF NET WORTH CHANGED, ASK:

115. As you see it, what are some of the more important reasons for the change in your net worth?
1. 
2. 
3. 

116. Were there any other reasons? 

IF DROUGHT MENTIONED, ASK:

117. Would you say the drought played a major part in this change or only a minor part? 1. major 2. minor

ASK OF ALL OPERATORS:

118. Are there any other houses on this farm? 1. yes 2. no

IF YES, ASK:

119. Do the people in these houses pay cash rent for house and yard only?
House 1: 1. yes 2. no 3. don't know
House 2: 1. yes 2. no 3. don't know
House 3: 1. yes 2. no 3. don't know

120. If 2 or 3 Fill in Schedule II for each household.
(May be filled in by operator if he can supply the information. If not go to the other houses to fill in Schedule II.)
Date ______________ Name of Interviewer________________

Respondent's Name:  (Last)  (First)  (Middle Initial)
Head of Household:    (Last)  (First)  (Middle Initial)
Mailing Address _______________________

I. First of all, I want to ask you some questions about your place:

1. Is this place on a farm or ranch?  1. ___ yes  2. ___ no

2. Do you pay cash rent for your house and yard only?
   1. ___ yes  2. ___ no

IF "NO" IN 1; OR "YES" IN 2; SKIP TO III.

II. Now I'd like to ask you about the members of your household.
### Relationship to Head of Household

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Sex</th>
<th>Education</th>
<th>Occupation</th>
</tr>
</thead>
</table>

1. |   |   |   |   |
2. |   |   |   |   |
3. |   |   |   |   |
4. |   |   |   |   |
5. |   |   |   |   |
6. |   |   |   |   |
7. |   |   |   |   |

**Code for (1)**

1 - Head
2 - Wife
3 - Son
4 - Daughter
5 - Other

**Code for (2)**

0 - Under 14 yrs. old
1 - Under 7 yrs. schooling
2 - 7 & 8 years
3 - 9 years
4 - 10-H.S.
5 - Beyond H. S.

**Code for (5)**

1 - Operation of farm
2 - Nonfarm wage worker
3 - Retired
4 - Operation of nonfarm business or profession
5 - Housekeeping
6 - Student
7 - Other

### III.

Now I'd like to ask you about any farming you are now doing or may have done in recent years.

3. Are you or any other member of your household now operating a farm inside this precinct's boundaries?

1. **yes**  2. **no**

**IF YES, TAKE SCHEDULE I**

4. Have you or any member of your household at any time since 1950 operated a farm in this precinct?

1. **yes**  2. **no** **IF YES, TAKE SCHEDULE III.**
TEXAS DROUGHT AND MIGRATION STUDY

SCHEDULE III

Department of Agricultural Economics and Sociology
Texas Agricultural Experiment Station
in cooperation with
Farm Population and Rural Life Branch
Agricultural Economics Division
Agricultural Marketing Service
U. S. Department of Agriculture

FORMER OPERATORS OF FARM LAND IN SAMPLE PRECINCT
WHO ARE NO LONGER FARMING

Date ______________ Name of Interviewer ____________

Respondent's Name:
(Last) (First) (Middle Initial)

Head of Household:
(Last) (First) (Middle Initial)

Mailing Address:

1. Does respondent live in sample precinct? 1.____ yes
   2.____ no

2. Does respondent live in household of person now
   operating farm in sample precinct? 1.____ yes
   2.____ no

I. Identifying information:

3. First of all, I'd like to know if you are (Mr.)
   (Mrs.) (Miss) (Name)
who operated a farm in [Precinct] of Mills County at some time after 1950? 1. yes 2. no
IF NO, TERMINATE INTERVIEW, but try to determine who did.

II. Could you tell me a few things about your farming operations the last year you farmed (the specified farm) in [Precinct]?

4. What year did you last farm it?
5. How many acres did you own?
6. How many acres did you rent or lease from others?
7. How many acres did you rent or lease to others?
8. Total acres operated (5 plus 6 minus 7)
9. Tenure status in last year of farming (check one)
   1. full owner 2. part 3. share tenant
   4. cash tenant 5. share-cash tenant
   6. other (explain)

IF TOTAL IN 9 IS 3 ACRES OR MORE, ASK:

10. Did the value of agricultural products you produced for home use or sale (excluding a home garden) the last year you farmed, amount to $150 or more?
   1. yes 2. no 3. no answer 4. not applicable

IF TOTAL IN 9 IS UNDER 3 ACRES, ASK:

11. Did the value of agricultural products you sold the last year you farmed amount to $150 or more?
1. ___ yes  2. ___ no  3. ___ no answer
4. ___ not applicable

IF NO IN 10 OR 11, ASK:

12. Would the value of products sold (or produced) on that farm normally have amounted to more than $150?
1. ___ yes  2. ___ no  3. ___ no answer
4. ___ not applicable

ASK OF ALL

13. Did you look upon your place of residence as:
1. ___ ranch  2. ___ farm  3. ___ both  4. ___ neither
5. ___ no answer

IF NO IN 12 AND NEITHER IN 13, TERMINATE INTERVIEW

14. ___ What did you consider to be the major item you produced?

15. ___ What was the total amount you received from sales of produce from this farm the last year you operated it? Include the value of crops, livestock, milk, and other produce sold. Do not include amounts received from sales of equipment or dairy, breeding or work animals.

1. ___ Under $400  5. ___ $3,000 - $4,999
2. ___ $400 - 799  6. ___ $5,000 - 9,999
3. ___ $800 - 1,799  7. ___ $10,000 - 19,999
4. ___ $1,800 - 2,999  8. ___ $20,000 and over

16. ___ When was your worst drought year?

17. ___ What was the total amount you received from sales
of farm produce during your worst drought year?

1. ___ Under $400  
2. ___ $400 - 799  
3. ___ $800 - 1,799 
4. ___ $1,800 - 2,999 
5. ___ $3,000 - 4,999
6. ___ $5,000 - 9,999 
7. ___ $10,000 - 19,999 
8. ___ $20,000 and over

18. ___ How many years did you operate that farm?

---

III. We would like to know something about your household at the time you were farming in the sample precinct.
19. For operators formerly farming in sample precinct who are no longer farming, obtain information on persons in household at time they quit farming in sample precinct.

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<tr>
<th>Name</th>
<th>Relation to head</th>
<th>Age</th>
<th>Sex</th>
<th>Years of school completed</th>
<th>Occupation of household members in 1950-1957 class in</th>
<th>Residence old and older of school(s) of 1950-1957</th>
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**Code for (1):**
1 - Head
2 - Wife
3 - Son
4 - Daughter
5 - Other

**Code for (4):**
0 - Under 14 yrs. old
1 - Under 7 yrs. schooling
2 - 7 & 9 years
3 - 9 years
4 - 10-H.S.
5 - Beyond H.S.

**Code for (5):**
1 - Operation of farm
2 - Nonfarm wage worker
3 - Retired
4 - Operation of nonfarm business or profession
5 - Housekeeping
6 - Student
7 - Other

**Code for (6) & (7):**
1 - Living on other farm
2 - Living on this farm
3 - Not living on farm
19. For operators formerly farming in sample precinct who are no longer farming, obtain information on persons in household at time they quit farming in sample precinct.

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Code for (8) - (15)
(Use 1 number from each column)
1 - Farm to farm
2 - Nonfarm to farm
3 - Farm to nonfarm
4 - Nonfarm to nonfarm
5 - Within precinct
7 - Into precinct
7 - Out of precinct
0 - Move not involving this precinct
20. Now will you give us information about members of your household who left between 1950 and the date you left the farm?

<table>
<thead>
<tr>
<th>Name</th>
<th>Address or location</th>
<th>Last move</th>
<th>Move</th>
<th>Location Information</th>
<th>Year of Move</th>
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Code for (4) (Use 1 number from each column) (Locate these people and take Schedule IV for each one listed.)

1 - Farm to farm
2 - Nonfarm to farm
3 - Farm to nonfarm
4 - Nonfarm to nonfarm
5 - Within precinct
6 - Into precinct
7 - Out of precinct
8 - Move not involving this precinct

(For individual family members who have moved too far to contact, ask present respondent to fill a Schedule V for each such individual if possible.)
IV. We are interested in getting some idea about how the
drought has affected farming and ranching in this area.
First, we would like to know about any changes you made
while farming between the beginning of the drought and
the time you quit farming.

21. ____ What year did you first begin to feel the effects
of the drought? From now on, when we say the be-
ingning of the drought, we will consider that for
you it began in ____ (From question 21.) (For
farmers who began operating recently this may be
the year they started farming.)

A. Let's talk about your farming operations first:

22. Did you either cut down or increase the acreage you
operated from the beginning of the drought until you
quit farming? 1. ____ cut down 2. ____ increased
3. ____ both 4. ____ neither

IF CHANGES MADE, ASK:

23. Did you 1. ____ cut down 1. ____ more than half
by
2. ____ increase 2. ____ half
3. ____ less than half

IF NO CHANGES, SKIP TO 28:

24. ____ When did you make this (these) change(s)?

25. ____ Why did you make this (these) change(s)? _______
26.____ Were there any other reasons? ______________________

IF DROUGHT MENTIONED, ASK 27.

27. Would you say that the drouth played a major part in these changes or only a minor part? 1.____ major
   2.____ minor

28. What changes have you made in crop production since the beginning of the drouth? 1.____ cut down
   2.____ increased  3.____ both  4.____ neither

IF CHANGES MADE, ASK:

29. Did you 1.____ cut down by 1.____ more than half
   2.____ increase  2.____ half
   3.____ less than half

IF NO CHANGES, SKIP TO 34.

30.____ When did you make this (these) change(s)?

31.____ Why did you make this (these) change(s)? __________

32.____ Were there any other reasons? ______________________

IF DROUGHT MENTIONED, ASK:

33. Would you say that the drouth played a major part in these changes or only a minor part? 1.____ major
   2.____ minor

34. What changes did you make in livestock production from the beginning of the drouth until you quit
farming?  1. ___ cut down  2. ___ increased  
3. ___ both  4. ___ neither

IF CHANGES MADE, ASK:

35. Did you  1. ___ cut down  1. ___ more than half  
   2. ___ increase  2. ___ half  
   3. ___ less than half

IF NO CHANGES, SKIP TO 40.

36. When did you make this (these) change(s)? ___

37. ___ Why did you make this (these) change(s)?

38. ___ Were there any other reasons?

IF DROUGHT MENTIONED, ASK 39:

39. Would you say that the drouth played a major part in 
   these changes or only a minor part?  1. ___ major  
   2. ___ minor

40. What changes did you make in leasing or renting and 
   buying or selling land from the beginning of the 
   drouth until you quit farming?

A - Leasing or Renting to Others:  1. ___ less  
   2. ___ more  3. ___ neither

B - Leasing or Renting from Others:  1. ___ less  
   2. ___ more  3. ___ neither

C - Buying or Selling:  1. ___ bought  2. ___ sold  
   3. ___ neither
EXPLAIN MAJOR CHANGES

IF NO CHANGES, SKIP TO 45.

41. __ When did you make this (these) change(s)?
42. __ Why did you make this (these) change(s)?

43. __ Were there any other reasons?

IF DROUGHT MENTIONED, ASK:

44. Would you say that the drought played a major part in these changes or only a minor part? 1. ___ major
   2. ___ minor

45. __ What changes did you make in the amount of labor that you used?

<table>
<thead>
<tr>
<th>Hired</th>
<th>Increased</th>
<th>Decreased</th>
<th>Lot!</th>
<th>None</th>
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IF CHANGES MADE, ASK:

46. Did you 1. ___ cut down by 1. ___ more than half
    2. ___ increase 2. ___ half
    3. ___ less than half

IF NO CHANGES, SKIP TO 51.

47. __ When did you make this (these) change(s)?
48. Why did you make this (these) change(s)?

49. Were there any other reasons?

IF DROUGHT MENTIONED, ASK:

50. Would you say that the drought played a major part or only a minor part? 1. ___ major 2. ___ minor

51. Other than the changes that we have already talked about, what other changes can you think of that you made in your farming and ranching business between the beginning of the drought and the time that you quit farming? (Example: Started irrigating - changed over to poultry production, etc.)

1. __________________________________________

2. __________________________________________

3. __________________________________________

IF NO CHANGES, SKIP TO 54.

52. To what extent do you feel that the drought played a part in these changes? 1. ___ major 2. ___ minor 3. ___ none

53. Of the changes you have told us about, which, if any, do you feel:

1. ___ Improved your situation? _______________________

2. ___ Made your situation worse? _______________________

5. We are interested in finding out what adjustments people
on farms and ranches made during the drought.

54. First, we would like to ask a few questions about your employment in the past 10 years. Can you tell me in which years since 1943 you

1. Operated a farm  2. Did other agric. Work

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3. Did nonfarm work

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IF WORK OTHER THAN OPERATING A FARM, ASK:

55. Did you increase the amount of your off-farm work after the beginning of the drought? 1. yes 2. no

IF YES, ASK:

56. To what extend do you feel the drought played a part in your taking or remain in your other jobs?

1. major  2. minor  3. none

57. What part do you think the money earned from your
other jobs had in keeping you on the farm?
1. ___ major 2. ___ minor 3. ___ none

58. Did any of the members of your household hold jobs other than working on your farm since the beginning of the drought? 1. ___ yes 2. ___ no

IF YES, ASK:

59. Did they increase the amount of their off-farm work after the beginning of the drought? 1. ___ yes 2. ___ no

60. To what extent do you feel the drought played a part in your family members taking or staying in in their other jobs? 1. ___ major 2. ___ minor 3. ___ none

61. What part do you think the money earned from their other jobs had in keeping your family on the farm?
1. ___ major 2. ___ minor 3. ___ none

6. Now let's talk about any plans that you had made but were unable to put into effect from the beginning of the drought until you quit farming?

62. Did you or any other family member want to go to college but had to either delay or not go at all?
1. ___ yes 2. ___ no

IF YES, ASK:

63. To what extent do you feel the drought played a part in their not going? 1. ___ major 2. ___ minor 3. ___ none

64. Did you have a son, daughter, or other family member
who wanted to remain on the farm between the beginning of the drought and the time you quit farming but didn't do so? 1 ___ yes 2 ___ no

IF YES ASK:

65. To what extent do you feel the drought played a part in their moving? 1 ___ major 2 ___ minor 3 ___ none

D. Now we would like to get some information on other things you did from the beginning of the drought until you quit farming.

66. During this period on the farm, did you participate in farmer's or rancher's organizations (Farm Bureau, local co-ops, etc.): 1 ___ more 2 ___ less 3 ___ about same 4 ___ not at all

IF 1 OR 2, ASK 67.

67. To what extent do you feel the drought played a part in your increase (or decrease) in participation? 1 ___ major 2 ___ minor 3 ___ none

68. Did you consult with your County Agent and Home Demonstration Agent: 1 ___ more 2 ___ less 3 ___ about same 4 ___ not at all

IF 1 OR 2 ASK 69:

69. To what extent do you feel the drought played a part in your more frequent (or less frequent) use of agricultural agents? 1 ___ major 2 ___ minor 3 ___ none
70. During this period on the farm did you make use of any part of the government drouth program?
1. ___ yes 2. ___ no 3. ___ don't know

IF YES, ASK:

71. ___ What phase(s) of the government drouth program did you take part in?

72. Do you feel that this program(s) was (were) beneficial to you?
1. ___ greatly beneficial 2. ___ of some benefit 3. ___ no position 4. ___ of no benefit 5. ___ harmful

73. In general, what do you think of the drouth relief program?
1. ___ approval 2. ___ qualified approval 3. ___ no position 4. ___ qualified disapproval 5. ___ disapproval

V. Now we would like to know something about what caused some people to remain in agriculture and why some have left it in recent years.

74. ___ As you see it, what are the more important reasons for your leaving farming as an occupation in recent years?
1. _______________________________
2. ____________________________________________

75. ___ Were there any other reasons? ____________________________

IF DROUGHT MENTIONED, ASK:

76. Would you say that the drouth played a major part in your decision or only a minor part? 1. ___ major
    2. ___ minor

VI. We would like to know something about your plans for the future.

77. Do you plan to return to farming in the next few years? 1. ___ yes 2. ___ no 3. ___ don't know

78. ___ Why? ________________________________________________

79. To what extent do you feel the drouth coming to an end would play a part in your returning to farming?
    1. ___ major 2. ___ minor 3. ___ none

VII. Finally, we would like to know a little about your ideas about farming (or ranching) in general:

80. ___ What did (or do) you like about farming?
    1. ________________________________________________
    2. ________________________________________________
    3. ________________________________________________

81. ___ What did (or do) you dislike about farming?
    1. ________________________________________________
2. If you were to balance out your likes and dislikes against each other, what would you say is your overall opinion about farming at the present time?

1. ___ approval 2. ___ qualified approval 3. ___ no position 4. ___ qualified disapproval 5. ___ disapproval

3. In recent years do you think there has been any change in your feeling toward farming as an occupation?

1. ___ yes 2. ___ no 3. ___ don't know

IF 1 OR 2, ASK:

34. ___ What are your main reasons for feeling differently about farming today as compared with a few years ago?

1. ____________________________________________

2. ____________________________________________

3. ____________________________________________

35. To what extent do you feel the drought has played a part in changing your opinion of farming?

1. ___ major 2. ___ minor 3. ___ none
TEXAS DROUGHT AND MIGRATION STUDY

SCHEDULE IV

Department of Agricultural Economics and Sociology
Texas Agricultural Experiment Station
in cooperation with
Farm Population and Rural Life Branch
Agricultural Economics Division
Agricultural Marketing Service
U. S. Department of Agriculture

INDIVIDUAL MEMBER(S) FORMERLY IN FARM OPERATOR
HOUSEHOLDS IN SAMPLE PRECINCT WHO COULD BE LOCATED

Date ____________ Name of Interviewer ____________

Individual member
(Last) (First) (Middle Initial)

Mailing Address: ___________________________________________

Respondent's Name:
(Last) (First) (Middle Initial)

1. Does individual member live in sample precinct?
   1. ___ yes  2. ___ no

I. First of all, could you tell me a few things about yourself?

2. ___ Age
3. ___ Sex
4. ___ Marital Status Code: 1 - NM  3 - W & D
   2 - M  4 - Sep.
5. ___ If ever married, year of last marriage.
6. Years of school completed.  
   Code:  0 - Under 14 yrs. old  
   1 - Under 7 years schooling  
   2 - 7 & 8 years  
   3 - 9 years  
   4 - 10-H.S.  
   5 - Beyond H.S.  

7. Present occupation  Code: 1 - Operation of farm  
   2 - Nonfarm wage worker  
   3 - Retired  
   4 - Operation of nonfarm business or profession  
   5 - Housekeeping  
   6 - Student  
   7 - Other  

8. Residence class in 1950'1957  
   LO  
   NLO  

9. Moves by year of occurrence 1950  
   Code:  
   Use 1 number from each column  

   1951  
   1 - Farm to farm  
   2 - Nonfarm to farm  
   3 - Farm to nonfarm  
   4 - Nonfarm to nonfarm  
   5 - Within precinct  
   6 - Into precinct  
   7 - Out of precinct  
   8 - Move not involving precinct  

II. Now we would like to know something about why some people stayed on farms and some left farms in recent years.
10. As you see it what are the more important reasons for your leaving the farm?

1. __________________________________________
2. __________________________________________
3. __________________________________________

11. Were there any other reasons?

___________________________________________

IF DROUGHT MENTIONED, ASK:

12. Would you say that the drought played a major part in your leaving or only a minor part? 1._____ major
2._____ minor

II. Now that you have moved we would like to know a little about your ideas about farming (or ranching) in general:

13. What did (or do) you like about farming?

1. __________________________________________
2. __________________________________________
3. __________________________________________

14. What do (or did) you dislike about farming?

1. __________________________________________
2. __________________________________________
3. __________________________________________

15. If you were to balance out your likes and dislikes against each other, what would you say in your overall opinion about farming at the present time?
1. ___ approval  2. ___ qualified approval
3. ___ no position  4. ___ qualified disapproval
5. ___ disapproval

16. In recent years do you think there has been any change in your feeling toward farming as an occupation?  1. ___ yes  2. ___ no

IF YES, ASK:

17. Do you look upon it 1. ___ more favorably
   2. ___ less favorably

18. To what extent do you feel the drought played a part in your changing feeling toward agriculture?
   1. ___ major  2. ___ minor  3. ___ none

---

IV. Now I want to ask you just a few questions about the last farm you lived on in precinct ___ before you left.

19. Did you look upon that place as a: 1. ___ ranch
    2. ___ farm  3. ___ both  4. ___ neither

20. ___ How many acres did your family operate the last year you were there?

21. ___ What did you consider to be the major item you produced?  __________

22. What was the operator's tenure status in last year you lived there (check one) 1. ___ full owner
    2. ___ part owner  3. ___ share tenant  4. ___ cash tenant
    5. ___ share-cash tenant  6. ___ other (explain)
23. What year did you first begin to feel the effects of the drought? From now on, when we say the beginning of the drought, we will consider that for you it began in ______ (From question 23.)

24. How many years did you live on your last farm?

V. We are interested in finding out what adjustments people on farms and ranches made during the drought.

25. First we would like to ask a few questions about your employment in the past 10 years. Can you tell me in which years since 1948 you

1. Operated a farm 2. Did other agric. work

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3. Did nonfarm work

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IF WORK OTHER THAN OPERATING A FARM, ACK:

26. To what extent do you feel that the drought played
a part in your taking or remaining in jobs other than farming? 1.____ major 2.____ minor 3.____ none

27. What part do you think the money earned from your job had in keeping you on the farm until you moved? 1.____ major 2.____ minor 3.____ none

VI. Now let's talk about some plans you had while you were still living on the farm.

(ASK FOR NON-COLLEGE PERSONS)

28. Did you want to go to college but didn't? 1.____ yes 2.____ no

IF 2, SKIP TO 32.

29.____ Why didn't you go? ____________________________________________

______________________________________________________________

30.____ Were there any other reasons? __________________________________

______________________________________________________________

IF DROUGHT MENTIONED, ASK 31:

31. Would you say that the drought played a major part in your not going or only a minor part? 1.____ major 2.____ minor

32. Did you want to remain on the farm but did not get to do so? 1.____ yes 2.____ no

IF YES, ASK:

33.____ Why did you leave the farm? ________________________________

______________________________________________________________

34.____ Were there any reasons other than those we men-
tioned earlier why you did not remain? ____________________________

IF DROUGHT MENTIONED, ASK 35:

35. Would you say that the drouth played a major part in your leaving or only a minor part? 1. ___ major 2. ___ minor

36. ___ Were there any other plans that you had made that you did not put into effect?
1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________

IF NONE, SKIP TO 38:

37. To what extent do you feel the drouth played a part in your not being able to carry out these plans?
1. ___ major 2. ___ minor 3. ___ none

VII. We would also like to know something about your plans for the future.

38. Do you plan to return to farming in the next few years?
1. ___ yes 2. ___ no 3. ___ don't know

39. ___ Why? ________________________________________________

40. ___ Are there any other reasons? ____________________________

IF DROUGHT IS MENTIONED, ASK:

41. Would you say that the drouth played a major part in these decisions or a minor part? 1. ___ major 2. ___ minor
TEXAS DROUGHT AND MIGRATION STUDY

SCHEDULE V

Department of Agricultural Economics and Sociology
Texas Agricultural Experiment Station
in cooperation with
Farm Population and Rural Life Branch
Agricultural Economics Division
Agricultural Marketing Service
U. S. Department of Agriculture

INDIVIDUAL MEMBER(S) FORMERLY IN FARM OPERATOR
HOUSEHOLDS IN SAMPLE PRECINCT WHO COULD NOT BE LOCATED
Information to be secured from respondent of Schedule I

Date __________________________ Name of Interviewer ____________

Individual member
(____) (____) (____)

Mailing Address: ______________________________________

Respondent's Name:
(____) (____) (____)

1. Does individual member live in sample precinct?
   1. ___ yes  2. ___ no

I. First of all, could you tell me a few things about this individual?

2. ___ Age

3. ___ Sex

4. ___ Marital Status

   Code: 1 - NM  2 - W & D
         3 - M  4 - Sp.
5. If ever married, year of last marriage.

6. Years of school completed.

   Code: 0 - Under 14 yrs. old
   1 - Under 7 years schooling
   2 - 7 & 8 years
   3 - 9 years
   4 - 10-H.S.
   5 - Beyond H.S.

7. Present occupation Code:
   1 - Operation of farm
   2 - Nonfarm wage worker
   3 - Retired
   4 - Operation of non-farm business or profession
   5 - Housekeeping
   6 - Student
   7 - Other

3. Residence class in 1950 to 1957:

   LO
   NLO

4. Moves by year of occurrence 1950 to 1957 Code:

   (Use 1 number from each column)

   1951 1 - Farm to Farm
   1952 2 - Nonfarm to Farm
   1953 3 - Farm to nonfarm
   1954 4 - Nonfarm to nonfarm
   1955 5 - Within precinct
   1956 6 - Into precinct
   1957 7 - Out of precinct
   1957 8 - Move not involving precinct
II. Now we would like to know something about why some people stayed on farms and some left farms in recent years.

10. As you see it, what are the more important reasons for his leaving the farm?
   1. ____________________________________________________________
   2. ____________________________________________________________
   3. ____________________________________________________________

11. Were there any other reasons? __________________________________

   IF DROUGHT MENTIONED, ASK:

   12. Would you say that the drought played a major part in his leaving or only a minor part? 1. ____ major
       2. ____ minor
VITA

The author was born September 28, 1921, in Arkansas City, Kansas. He received his elementary and secondary education in Oklahoma City, Oklahoma, graduating from Capitol Hill Senior High School in May, 1939. In September of the same year, he entered Cameron Junior College, Lawton, Oklahoma.

In August, 1941, he married Virginia Louise Spencer of Houston, Texas. They now have three daughters: Lillie Belle, born November 17, 1942; Virginia Clarene, born January 18, 1945; and Sandra Kay, born January 10, 1947.

The author attended Oklahoma Baptist University, Shawnee, Oklahoma; Southwestern Theological Seminary, Fort Worth, Texas; and the University of Houston, Houston, Texas, where in May, 1951, he received the degree of Bachelor of Arts.

The author served as minister of the A and M Christian Church, College Station, Texas, from January, 1950, through August, 1958. During this period, he studied in the Department of Rural Sociology and Agricultural Economics at the Agricultural and Mechanical College of Texas, College
Station, Texas, and in June, 1955, received the degree of Master of Science. In June, 1956, he took a fourteen-month leave of absence to continue his advanced studies in the Department of Sociology and Rural Sociology, Louisiana State University, Baton Rouge, Louisiana. In September, 1958, he was employed as associate professor in the Department of Sociology and Economics, Southwest Missouri State College, Springfield, Missouri, where he is currently teaching. At the present time he is a candidate for the degree of Doctor of Philosophy in the departments of Sociology and Rural Sociology at Louisiana State University.
EXAMINATION AND THESIS REPORT

Candidate: Clarence Willard Ketch

Major Field: Sociology

Title of Thesis: A Situational Analysis of the Effects of Drouth as a Disaster on the Mobility of a Selected Rural-Farm Population

Approved:

[Signature]
Major Professor and Chairman

[Signature]
Dean of the Graduate School

EXAMINING COMMITTEE:

[Signatures]

Date of Examination: January 10, 1961