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A Comparison of Economic, Demographic and Social Characteristics of Migrants and Nonmigrants of a Given Age Cohort of Graduating Seniors of Star Valley High School, 1946, 1947

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A COMPARISON OF ECONOMIC, DEMOGRAPHIC AND SOCIAL CHARACTERISTICS OF MIGRANTS AND NONMIGRANTS OF A GIVEN AGE COHORT OF GRADUATING SENIORS OF STAR VALLEY HIGH SCHOOL, 1946, 1947

by

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Douglas D. Anderson

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A Comparison of Economic, Demographic and Social Characteristics of Migrants and Nonmigrants of a Given Age Cohort of Graduating Seniors of Star Valley High School, 1946, 1947

by

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The hypothesis that migration from rural areas of declining population is selective of young, well-educated, achievement-oriented persons was tested on a cohort of graduating seniors from Star Valley (Wyoming) High School.

The 132 living members of the senior classes of 1946 and 1947 served as the population of study. The cohort approach was used to control such variables as age, high school education, rural area of origin and socio-cultural background.

Members of the population were located in their current places of residence through a number of tracking methods including checking high school reunion lists, contacting relatives, high school officials, and friends, and scanning telephone directories. Of the 126 who were located, 96 returned a stamped self-addressed questionnaire administered by the researcher in time to be evaluated in this study.

Analysis of data contained in the questionnaire and records on file at Star Valley High School support hypothesized relationships at

statistically significant levels. Young, high achieving (as measured by grade point averages and scores on the Ohio State Psychological Test) and well-educated members of the population left their rural community in response to better-paying, more plentiful and more satisfying job experiences elsewhere.

(130 pages)

INTRODUCTION

This study is concerned with the migration of people. It is complementary to other studies in that it seeks to document the socio-economic determinants of movement. It is unique in that unlike most research efforts in this field, census data are not utilized to test hypotheses, but rather information is collected by the researcher on a cohort of individuals through survey and other methods. The study further distinguishes itself in that movers are compared with stayers at the point of origin, not destination, to ascertain current differences in occupational classes, income levels, educational attainment and sex. The migration patterns of those who left the community of origin are also traced and evaluated.

By implication, the differences between migrants and nonmigrants that are established on the basis of the results of this study yield information about the place of origin as well as about the subjects involved. Because the study seeks to make statements about the selectivity of migrants within a given area, it can be clearly identified as regional in nature; generalizations are not intended to be applied universally.

The region of concern in this research effort is that of the intermountain states of Utah, Wyoming, and Idaho, particularly those small agricultural communities populated primarily by members of the Church of Jesus Christ of Latter-Day Saints (Mormons). The population which has been chosen for investigation consists of a cohort of

graduating seniors (1946-1947) of Star Valley High School, a public high school located in Afton, Wyoming.

The purpose for choosing this particular group and the methods and procedures used to analyze relevant information will be discussed in chapters to follow. First, however, attention is drawn to the existing body of literature on the subject of migration in order that the reader may understand more fully the complementarity with the existing literature as well as the unique contributions of this study.

REVIEW OF LITERATURE

Historical Background

The migration of people has been studied from a variety of perspectives. Of major interest to economists is the role migration plays in transferring resources to regions of the economy where productive potential may be maximized. There is perhaps no earlier recorded passage recognizing migration as a useful tool for economic adjustment than that in which Ulysses says to Eumea:

> I am accustomed to live by my industry. The city will give me more opportunities for it than the country. There is only one means of subsisting in the country. One can hope for nothing but continual labor, to which, I confess to you, I am but little suited. In the city there are a hundred resources, and often, with a little intelligence and experience, one advances more in a short time than in many years in the country. (Sorokin, Zimmerman, Galpin, 1932, p. 537).

Although the importance and usefulness of migration was recognized in Homer's day, migration as a field of research lay dormant until late in the nineteenth century when E. G. Ravenstein, of Great Britain, published a major study entitled "The Laws of Migration," in the Journal of the Royal Statistical Society (Ravenstein, 1885). Ravenstein used census data of 1881 to trace what he called "currents of migration." In the process he formulated seven "laws of migration" which likened the social behavior of migrants to physical behavior of currents.

Ravenstein's pioneering work generated substantial interest in migration. In the less than one hundred years which have elapsed since Ravenstein, and particularly in the last three decades, an

impressive body of literature has been generated by sociologists, demographers, and economists. These social scientists have researched migration on a number of different levels. In the early part of this century a great deal of work was conducted on international migrations until the phenomenon ceased to be as important in the 1920's. The exodus of other millions of persons from agriculture made rural to urban migration a highly studied special topic of internal migration. The social and economic conditions which have followed the Second World War coupled with technological progress in communications and transportation have resulted in widespread urban to suburban movements. Consequently, research has focused upon residential shifts and long distance commuting. Of particular interest to regional scientists has been the examination of patterns of migration, especially large-scale inter-sectional "streams of migration." On all levels the questions of who migrates and what factors determine migration have been important.

Migration Defined

The definitions of "migration" and of who constitutes a "migrant" depend upon the type of movement being studied. Naturally, a different definition would apply to international migration than to internal migration. Eisenstadt defines migration as, "The physical transition of an individual or a group from one society to another. This transition usually involves abandoning one social setting and entering another and different one." (Eisenstadt, 1955, p. 1). Hagerstrand speaks in terms of a change of residence of an individual "from one parish or commune to another" (Hannerberg, Hagerstrand, and Odeving,

1957, p. 28). The concept of permanence in the change of abode is included in Weinberg's (1961) definition.

In many studies, only a change of residence which includes a change of community is considered migration. "It is the severance with previous community ties which distinguished the migrant from the nonmigrant" (Bogue, 1957, p. 3). Lee (1966), however, uses the same term to apply to all permanent residential change irrespective of community change or distance moved.

In this study migration is considered to be a relatively permanent shift in county of residence. (This definition shall be further examined in the chapter on methods and procedures.) While it is recognized that counties are administratively designated geographical units and do not necessarily correspond to either labor market areas or social units, their use is prompted by the attendant simplification of analysis and also by their standardized use by the U. S. Bureau of the Census and studies utilizing census data.

Migration Theory

The theoretical work surrounding migration can be grouped under six headings (although the groupings are not necessarily mutually exclusive): total movement, behavioral, demographic process, social process, migration differentials, and economics of migration. Each of these shall be discussed in turn.

Total movement

Concern with the size and direction of migrational flows can be traced to Ravenstein (1885, p. 198). His attempts to

delineate universal trends in migration resulted in the following seven laws:

> 1. We have already proved that the great body of our migrants only proceed a short distance, and that there takes place consequently a universal shifting or displacement of the population, which produces "currents of migration" setting in the direction of the great centres of commerce and industry which absorb the migrants.
>
> In forming an estimate of this displacement we must take into account the number of natives of each county which furnishes the migrants, as also the population of the towns or districts which absorb them.
>
> 2. It is the natural outcome of this movement of migration, limited in range, but universal throughout the country, that the process of absorption would go on in the following manner:--
>
> The inhabitants of the country immediately surrounding a town of rapid growth, flock into it; the gaps thus left in the rural population are filled up by migrants from more remote districts, until the attractive force of one of our rapidly growing cities makes its influence felt, step by step, to the most remote corner of the kingdom. Migrants enumerated in a certain center of absorption will consequently grow less with the distance proportionately to the native population which furnished them, and a map exhibiting by tints the recruiting process of any town ought clearly to demonstrate this fact....
>
> These maps show at the same time that facilities of communication may frequently countervail the disadvantages of distance.
>
> 3. The process of dispersion is the inverse of that of absorption, and exhibits similar features.
>
> 4. Each main current of migration produces a compensating counter-current.
>
> 5. Migrants proceeding long distances generally go by preference to one of the great centres of commerce or industry.
>
> 6. The natives of towns are less migratory than those of the rural parts of the country.
>
> 7. Females are more migratory than males.

The rudiments of these nineteenth century generalizations have been confirmed by a number of studies both in Britian and America (Makower, Marschak, and Robinson, 1938, 1939, 1940), (Thomas, 1930),

(Taeuber and Taeuber, 1964). More recently, however, others have shown that the complexity of changing times and technology render universal generalizations futile (Goldstein, 1974). Jansen, a British sociologist, has compiled a step by step refutation of the "laws" for the Bristol area, showing particularily the laws of distance, absorption, sex, and rural origin no longer apply in modern industrial society (Jansen, 1968).

Ravenstein's distance hypothesis has received special attention. Zipf (1946) attempted to refine the distance theorem with a concept of social physics known as the "gravity model." He hypothesized that migration between any two points is a function of the size of the two places and the distance separating them. His simple formula is given by: $M=f(P_1P_2/D)$. Gross migration is thus inversely related to distance. The model, however, fails to answer the question of why people migrate and, therefore, cannot explain why persons with certain characteristics tend to migrate more readily than those without such characteristics. It also fails to explain direction of movement. Under its assumptions the volume of movement from one city to another would be identical regardless of direction. This clearly cannot be substantiated.

A further attempt to refine the distance hypothesis was that of Stouffer (1940) who incorporated the concept of "intervening opportunities" into the gravity model. His hypothesis was that mobility is not only inversely related to distance, but is a function of the number of opportunities at that distance and the number of intervening opportunities. "The relationship between mobility and distance may be said to depend on an auxiliary relationship which expresses

the cumulated (intervening) opportunities as a function of distance" (Bright and Thomas, 1941, p. 847).

This modification was helpful in explaining the direction of movement, but introduced the methodological problem of identifying "opportunities." Stouffer originally used housing vacancies as an index of opportunities in examining residential shifts. While this may be an effective index within localities, its usefulness at a distance is severely hampered by lack of information and is, therefore, an inappropriate measure for our purposes.

In 1960, Stouffer included the concept of "competing migrants" in the intervening opportunities model. The number of individuals moving from place A to B was now directly related to the number of opportunities in B, inversely related to the number of intervening opportunities, and inversely related to the number of other migrants competing for the opportunities in B (Stouffer, 1960). Galle and Taeuber (1960) applied the model with some success on 1960 census data.

Behavioral

In the last decade, increasing interest has been shown in a behavioral approach to identifying and measuring movement. The behavioral model views the potential migrant in the decision-making process as he asks "shall I move or shall I stay?" and "if I move where shall I go?" (Goldstein, 1974). From this perspective the mover/stayer is seen as constantly calculating the net advantages and disadvantages to moving or staying (Goodman, 1961) and selects what he

considers the appropriate means of adjusting to changes in his economic and social environment (Wolpert, 1965).

One behavioralist model which emphasizes this adjustment process is the so-called "stress-awareness" model. Migration is seen as an adjustment to stress with the migrant comparing the alternative payoffs to be derived from various places. The "treshold model" notes that different people may have different threshold levels as to when they become satisfied or dissatisfied (Wolpart, 1965).

Both approaches rely on Simon's (1955) concept of "intendedly rational" man whose object is "satisficing" rather than maximizing. The difference between satisficing and maximizing behavior, as Simon explains, is based on two assumptions taken from the treatment of motivation in psychology: "First, there is the widely accepted idea that motivation to act stems from drives, and that action terminates when the drive is satisfied. Second, there is the idea that the conditions for satisfaction of a drive are not necessarily fixed, but may be specified by an aspiration level that adjusts itself on the basis of experience," (Simon, 1963, p. 700).

A major criticism of the "satisficing" hypothesis is that it is not easily refutable. Its usefulness is enhanced if it is incorporated into the maximizing model. As Zeckhauser and Shaefer (1968, p. 93) have noted: "The satisficing model does have normative validity if it is looked at as an attempt to incorporate the costs of information and decision making into the conventional maximizing model. In this light, satisficing behavior can be conveniently interpreted as a method by which a decision maker takes the course of action that he feels will yield him the highest expected utility...The decision maker

should continue to evaluate new alternatives until the cost of this evaluation outweighs the expected gain should the new alternative prove superior to its predecessors."

Bond and Gardner (1971) have developed a behavioral model of utility maximization, aimed at explaining why families that depend upon farming for all or part of their livelihood choose to reside "in town" instead of on the farm. Household decisions are made on the basis of expected utility. Consumptive and productive activities are incorporated into the utility function. Both types of activities are subject to a time constraint. "Time spent in work and consumption is variable and subject to diminishing marginal returns (utility) in both types of activities." (Bond and Gardner, p. 51).

While the Bond and Gardner model emphasizes the opportunity cost attached to time as a basic resource of consumption and production, it is easily expanded to include the time costs of decision making. As such, it represents one of the more fruitful attempts at incorporating the concept of bonded rationality into utility maximization.

Demographic process

Demographers have the longest history of continued interest in the size and direction of migration although it was for many years considered the "stepchild of the profession" (Goldstein, 1974). However, as the current president of the Population Association of America has noted, "with the control of deaths and births, increasingly migration itself is going to become a more important factor and possibly the most important of the three components in accounting for the total changes in the population." (Goldstein, 1974).

Viewing migration as a demographic process has caused researchers to investigate the relationship between migration and the other demographic factors of fertility and mortality. The demographic geographer Zelinski (1962) has used an historical approach to demonstrate that parallel to changes in fertility and mortality one can identify changes in migration.

Other demographers have sought to refine the tools of migration research (Thomlinson, 1960) as well as to build mathematical models suitable for computer simulation (Price, 1959). Bogue, (1959) summarized some of the methodological lessons acquired in conducting migration research including definitional and measurement problems discussed elsewhere in this review.

Social process

Sociologists have shown a keen interest in migration research for a number of reasons. One of their more fruitful paradigms views migration as a social process. This line of inquiry emphasizes the need to understand the motivation of spatial movement and its impact on migrants. Moreover, concern is given to the impact of migrants on the economic and social structure of origins and destinations.

Mangalam (1968, p. 1) has explained the interest in this approach in the following way: "Migration has become recognized not only as a problem-creating phenomenon but also as a problem-solving social process. Whether international or internal, migration is generally assumed to be a response to new and existing opportunities in terms of migrants' unmet wants, both material and non-material."

One attempt to discover the interdependency of demographic, economic, and social variables in motivating and explaining migration is that of Tarver (1961). His conclusion is that although migration is not the effect of a single element, the economic factor is more important than any other in explaining white migration rates.

So great has been the interest in the impact of migrants on society that, according to Mangalam, nearly one-half of the work done by sociologists on migration has been devoted to one social problem or another:

> These problems span a wide range, including racial transition of neighborhoods, continuities and discontinuities in denominational loyalty, problems of assimilation of immigrants, migrants' adjustment to city life, social participation of rural migrants in urban settings, changes in the value patterns of migrants, anomie and social class of migrants, psychological and mental health aspects of migration and homelessness, delinquency and crime and migration, migration and socio-economic status, problems of urban public housing resulting from an influx of rural migrants, family disorganization and migrant labor, educational problems of the migrant children, economic problems of the migrants, and political effects of rural migration.
> (Mangalam, 1968, p. 4)

Migration differentials

Another theoretical and empirical approach which has generated a good deal of research is the so-called "migration differentials" approach. Here the concern is with discovering the selective characteristics of migrants, their origins and destinations which may affect the process of migration.

> Such research is based on the implicit assumption that if every resident within a given area at any given moment of time were equally likely to be resident outside the area at any later moment of time...there would be no selectivity of characteristics of persons in migration.
> (Suval, 1972, p.6)

The absence of selectivity of persons implies that economic, social and physical factors are exerting equal "push" and "pull" pressures on everyone.

In a similar fashion, if all places of origin and destination were equally likely to attract as well as to expel persons, there would be no selectivity of characteristics of places. Hoover (1971, p. 168) has thus asserted: "Migration is influenced by three conditions: the characteristics of both the origin and destination areas, the difficulties of the journey itself, and the characteristics of the migrant."

In discussing the factors of origin and destination which seem to affect migration, many researchers have referred to the "push" of unattractive conditions and the "pull" of favorable conditions. Sociologists have argued that, "The strength of 'push-pull' factors would be expected to vary according to the perceptions and predispositions of individuals which in turn are strongly influenced by the culture or subculture to which the individual has been socialized." (Suval, 1972, p. 8).

Individuals who have been socialized to place great importance upon maintaining family and community ties may be unwilling to move (and thus weaken or break these ties) even if the alternative was unemployment or reduced income. Others, who have been raised in a culture which places greater value on upward social or economic mobility, may be willing to move to achieve a perceived elevation in status for only a small increment in earnings.

The impact on migration of individualism and achievement (status improvement), two key elements of the American value orientation,

has been noted in studies cited in Suval (1972). Parsons (1964) has concluded that the "dominant American ethos" emphasizes the process of achievement as opposed to final goal attainment. The result is a strong incentive for continuing mobility. Strodtbeck (1958) has noted that the propensity to move, a willingness to leave home to make one's way in life, is an important "value" for achievement in the United States.

Given this theoretical framework, it is not surprising that sociologists postulate that migration which is motivated by "pull" characteristics tends to be selective of the achievers and the well educated while migration motivated by "push" characteristics tends to be negatively selective or not selective at all (Bogue, 1961), (Lee, 1966).

Economists, too, have theorized about the various differential effects of "push and pull." Lansing and Mueller (1967, p. 5) have noted that "the volume of movement of the labor force depends on broad economic forces, and its incidence on the characteristics of the worker."

The differential response of migration to economic growth is of vital concern to regional economists. It has been observed (Kuznets and Thomas, 1957, 1960, 1964), (Miller, 1973) that areas with relatively higher levels of income are also centers of net in-migration. Two views are advanced to explain this phenomenon. The more popular explanation holds that differential rates of migration are induced by differential growth in job opportunities or employment (Blanco, 1963), Mazek, 1966), (Lowry, 1966). The competing view is that differential changes in employment are the result of differential rates of

in-migration (Borts and Stein, 1964). Muth (1971) has found that migration and employment growth are affected by each other.

The second of Hoover's three migration-influencing factors is the "difficulties (or costs) of the journey itself." The economist who has given the greatest attention to cost-benefit analysis in migration is Larry Sjaastad. Sjaastad (1962) suggests that there are private and social costs and returns relevant to migration.

Important to the migrant, of course, are the private pecuniary and non-pecuniary costs and returns associated with a potential move. The money costs include the costs of physically transporting ones family and belongings, settlement costs, and incidentals. Non-money costs include opportunity costs, if any, of foregone earnings while traveling, searching for and learning a new job; psychic costs incurred with the disruption of family and community ties; and costs of risk and uncertainty.

Returns can either be pecuniary, e.g., higher wages, or non-pecuniary, e.g., clean air, nice climate, job security or friendly neighbors. The potential migrant is seen as a rational decision maker who weighs the costs of the move against the returns. In this sense the cost-benefit is similar to the behavioral model described earlier.

Hoover's third migration-related condition is that of the characteristics of the migrants themselves. Becker (1964, p. 50) has provided the theoretical basis for the selectivity of persons in the following manner:

> A relatively large fraction of younger persons are in school or on-the-job training, change jobs

> and locations, and add to their knowledge of economic, political, and social opportunities. The main explanation may not be that the young are relatively more interested in learning, able to absorb new ideas, less tied down by family responsibilities, more easily supported by parents, or more flexible about changing their routine and place of living. One need not rely only on lifecycle effects on capabilities, responsibilities, or attitudes as soon as one recognizes that schooling, training, mobility, and the like are ways to invest in human capital and that younger people have a greater incentive to invest because they can collect the return over more years. Indeed, there would be greater incentive even if age had no effect on capabilities, responsibilities and attitudes.

Becker's statement provides a wealth of theoretical extrapolations. The young, the well-educated, and the achievers are selected in migration because of opportunities to realize returns over greater periods of time. Mobility, like education, is an investment in human capital. It is not surprising that the educated choose to migrate to realize potential gains afforded them through their schooling. Furthermore, the well-educated not only have greater opportunities available to them through movement, but increasing education is usually accompanied by increasing access to information of opportunities elsewhere (Sjaastad, 1960).

The Becker hypotheses have been supported by others (Bowles, 1970). The notion that migration is selective of youth is rapidly becoming an axiom of migration theory (Jansen, 1968). Lansing and Mueller (1967, p. 40) have noted: "Age must operate indirectly, perhaps through reducing the gains from mobility in some manner or increasing its cost as the individual views the matter."

An extensive review of the literature of migration differentials has tended to support the selectivity of educated persons in

migration (Suval, 1972), while Bogue (1961, p. 6) has suggested: "Migration stimulated by economic growth, technological improvement etc., attracts the better educated. Conversely, areas tending to stagnation lose their better educated and skilled persons first."

It has also been hypothesized that migration is selective of persons in the professional and service occupations, while those in blue collar jobs and farmers are less likely to migrate (Beshers and Nishiura, 1961). Hoover (1971, p. 190) asserts: "In an area of labor surplus and outmigration, it is the people in the better paid occupations who move out most readily, a relatively larger differential is required to move the unskilled."

Lansing and Mueller (1967) have suggested that education plays a major role in explaining differential rates of migration among occupations. How much of this differential response is due to the effect of education has not been fully assessed. However, as they have noted:

> It has been argued that the markets for highly trained personnel are not local. These people tend to cross 'labor market' boundaries frequently because they actually sell their services in markets which are geographically broader. The 'skill gaps' are more important than the 'distance gaps' in the markets for trained personnel.
>
> (Lansing and Mueller, 1967, p. 44)

These occupational differential hypotheses have been confirmed for industrial societies by Tarver (1964). An extensive nation-wide study of the United States, which relied on a representative sample of 20,000 adult males, made the following conclusion:

> ...Migration has become increasingly selective of high potential achievers in recent decades... The careers of migrants are in almost all comparisons clearly superior to those of non-migrants...Whether

> migration between regions or between communities is examined; whether migration since birth or only after adolescence is considered; whether migrants are compared to non-migrants within ethnic-nativity groupings or without employing these controls; whether education and first job are held constant; and whether migrants are compared to natives in their place of origin or their place of destination - migrants tend to attain higher occupational levels and to experience more upward mobility than non-migrants with only a few exceptions (Blau and Duncan, 1967, p. 271-272).

Economics of migration

The interest of economists in migration has been evident throughout this discussion. As has been noted, the focus of concern is the role of labor mobility in facilitating economic growth. This implies as a policy goal an optimal distribution of population in accordance with maximization principles. What is not clear to many researchers, however, is whether standard neoclassical theory can be relied upon for the appropriate policy prescriptions.

The economic theory of migration is a special case of consumer behavior theory (Gallaway, Gilbert, and Smith, 1967). Workers are faced with the choice of varying amounts of work-related income and leisure in differing locations. Utility is maximized when the marginal rate of substitution of income for leisure is equated with the wage rate in each location. Thus in a situation characterized by inter-regional differences in real wages, workers will migrate from lower wage regions to higher wage regions until real wages are equalized.

The assumptions which underlie the theory can be identified briefly as follows: a comparative statics framework, homogeneous labor, constant returns to scale, zero migration costs, and perfect

knowledge. Furthermore, workers are assumed to move in response to wage differentials and for no other reasons (Richardson, 1969).

Much of the current empirical research by economists has been an examination of these assumptions as well as the predictive power of the theory. Sjaastad (1962, p. 82) for example, has noted that migration poses two questions for economists:

> The first concerns the direction and magnitude of response of migrants to labor earnings differentials over space. The second concerns the connection between migration and earnings; how effective is migration in equalizing inter-regional earnings of comparable labor?

Many of the assumptions of the perfect competition model described are clearly inappropriate for labor markets in a spatial setting. It should be clear that migration is a dynamic process which is not independent of changes in aggregate economic conditions as well as in origins and destinations. Furthermore, some economists believe that migration may be disequilibrating in its effects, accelerating growth in regions of destination while slowing it down in regions of origin (Richardson, 1969). Hart (1972, p. 151) asserts the existence of certain destablizing conditions which "provide the possibility that labour movement will assist in the process of the rich areas becoming relatively richer and the poor areas relatively poorer and hence... a disequilibrium theory of migration movement."

Other assumptions are more easily contradicted. It is obviously unrealistic to assume zero costs of moving and perfect information. Indeed, as noted earlier, Sjaastad (1962) has argued for greater attention to the various psychic and pecuniary costs of movement. Closely tied to the concept of distance as an impediment to physical movement is the concept of distance as an impediment to the

flow of information. Nelson (1959) was one of the first to investigate this relationship. Miller (1972) incorporated informational impediments in a note on the role of distance in migration, while Trott (1972) noted its role in explaining differential responses in the decision to migrate between blacks and whites. Others, concerned with the effect of uncertainty resulting from a lack of information, have attempted to incorporate time lags into models of migration response (Greenwood, 1970), (Lianos, 1972).

Another assumption which cannot bear scrutiny is that of homogeneity of the labor force. In the preceding section the theoretical basis for postulating migration differentials was discussed in detail. In conducting policy-oriented migration research one must take account of differences in quality and type of labor or run the risk of complications and distortions. It should also be evident that institutional rigidities and unionism cause further labor market imperfections. Another debate centers around the assumption that workers shift residences in response to wage differentials primarily. Much of this research has been prompted by Hicks' famous "Theory of Wages" statement:

> The movement of labour from place to place is insufficient to iron out local differences in wages. But the movement does occur, the recent researchers are indicating more and more clearly that differences in net economic advantages, chiefly differences in wages, are the main causes of migration. (Hicks, 1963, p. 76)

One of the studies to which Hicks alludes is that of Raimon (1962) who concludes that wage differentials and interstate movement in the United States conform largely to the predictive implications of the competitive model. In a separate, but similar study, Gallaway,

Gilbert, and Smith (1967, p. 223) concluded that "per capita income differences are a significant determinant of interstate population movements."

The competing viewpoint is that the imperfections of the neo-classical model make economic opportunity (as defined by excess demand or supply, e.g., job vacancies or unemployment) more relevant as a determinant of movement than income differentials. Hart (1972, p. 152) quoted Sjaastad in justification of utilizing "economic opportunity" as opposed to wage differentials:

> Most studies concerned about (the response of migrants to labour earnings differentials)... have found a relationship between income or earnings and migration, and usually in the expected direction (that is, high earnings are associated with net in-migration). The qualifications, however, are numerous; and the observed relationship is usually quite small and weak.

Hart tested his model for Great Britian and found that "the main economic impetus to labour movement is employment opportunity above all else." (Hart, 1972, p. 169). Later he modified his conclusions slightly to account for the role of expectations and disaggregation of migrants by socio-economic groups (Hart, 1973).

Others have found support for the economic opportunity hypothesis in additional countries. Vanderkamp (1968) found that unemployment had a significantly negative effect on the volume of mobility between Canadian regions although the relationship was not fully captured by regional unemployment differentials. Using data for West Germany, Vedder, Gallaway, and Chapin (1970) showed that job opportunities play a substantial role in the geographical distribution of labor while wage differences seemed not to explain the locational patterns of movers. As noted previously, the Gallaway, Gilbert, and

Smith (1967) report found exactly the reverse for the United States. This inconsistency could be due to the fact that variations in wages among regions in the U. S. are substantially greater than among regions in West Germany. Inadequate attention to real differences, rather than simply monetary differences may also be the source of some of the inconsistency.

Which of these views will predominate is as yet uncertain. Raimon (1962, p. 438) suggests that "the wage difference model incorporates the job vacancy model, goes beyond it and says more, (and therefore) may be regarded as the more useful." On the other hand, Richardson (1969) has indicated that employment opportunities, greater stability, security and continuity in industrial regions may be more important than higher earnings in inducing migration out of rural regions, while within highly industrialized economies with high employment levels, wage differences may be the more important in determining migration flows.

This increasing variety of theories of migration among economists should probably be viewed as healthy. Indeed, in speaking of the crisis of insecurity which often precedes major paradigm revision and discovery, Kuhn (1970, p. 71) suggests that the "proliferation of versions of a theory is a very usual symptom."

This symptom seems to characterize not only the research on migration conducted by economists, but that of the sociologists and demographers as well, as shall be discussed in the next and final section of this review.

General Theoretical Framework

The six theoretical approaches to migration that are reviewed above remain largely unconnected. As of yet, there exists no general theory of migration which combines all of the components that have been discussed, and is at the same time operational. Certainly, part of the reason for the lack of universality is due to the fact that researchers working in the field have tended to view migration from their own particular perspective without attempting serious inter-disciplinary study.

But perhaps even more fundamentally, the search for a general theory is retarded by the very nature of the phenomenon itself; a phenomenon which is in one word "complex." As an act of motivation, migration is influenced certainly by economic, demographic, and social variables. The problem from an analytical viewpoint is that the migratory behavior of man is not as easily identified as that of creatures - birds, fish or deer, for example. Migration viewed from the perspective of the individual cuts across cultural and anthropological boundaries. The problem is further complicated by changing technology and changing economic conditions and the effects of these changes on the spatial interaction of man.

Probably no one is more qualified to lament the restrictions which confront the would-be theorist than Sidney Goldstein, president of the Population Association of America and a demographer who himself has worked the field of human migration for over twenty years. In a population workshop at Utah State University in June, 1974, he said candidly:

> Up until the 1960's it was true that there has been no comprehensive effort to develop a migration theory analagous to the effort that Ravenstein had undertaken in 1885.
>
> While the number of theoretical works published since the mid-1960's have increased considerably over the previous decades...the fact of the matter remains...we still lack a model which is both comprehensive and operational.
>
> The theories which we have, if you want to dignify them by calling them theories, have tried to provide us with a general understanding of mobility, but haven't gone too far as yet in specifying models for use in empirical study.
>
> While these models have had some success in explaining the variation of migration...they still have not been successful in coming up with very full explanations...(which points up) the complex character of the whole migration process.
>
> We just don't know how general we can be... Maybe we just have to be specific with respect to locations and destinations.
>
> (Goldstein, 1974)

Professor Goldstein further identified a second major difficulty facing migration theorists:

> ...The other big challenge...is how one goes from the micro level in explaining migration to being able to use that information...on the much more aggregate level for both predictive purposes and control purposes as well as for explanations.
>
> (Goldstein, 1974)

Recognizing these limitations this study has been designed to yield information on migration differentials and the patterns of mobility of a specific cohort of individuals in a regional setting. It shall not be the aim of this report to make generalizations beyond the region and population of this study except to point up possible meaningful relationships for other areas and populations exhibiting similar characteristics to those under present study.

METHODS AND PROCEDURES

Design for Investigation

As has been noted, rates and routes of migration from rural to urban areas have been studied by demographers, geographers, sociologists, and economists. Population decline is closely associated with economic decline, both in terms of aggregate income and income per capita.[1]

In the preceding review of literature, it was asserted that the young, most gifted, best educated and economically most productive people originating in rural areas are those most likely to migrate in response to more renumerative, plentiful, and stable job opportunities available in urban centers.

It is, therefore, appropriate that these theoretical assertions should be tested for various regions of declining population in the United States. To do so requires that a representative sample of individuals from a given geographical region be analyzed with respect to relevant differences in those who migrate and those who remain.

Some obvious difficulties present themselves for such a study. It is extremely difficult to locate all migrants who moved from a region of origin in a time period years before. In any given urban

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[1]The material in these paragraphs is adapted from B. Delworth Gardner, "Research Proposal: A Comparison of Economic, Demographic, and Social Characteristics of Migrants and Non-Migrants of a Given Age Cohort of a Rural Population," Utah State University, July, 1971, (mimeograph).

center of destination, natives can be differentiated from immigrants, but immigrants originate from hundreds of different localities making statements about a particular region of origin tenuous, at best. Those who remain in the region of origin should be compared with all migrants, not just those who moved to a particular destination if serious bias is to be avoided.

In choosing a rural cohort for analysis, one should keep in mind the problem of tracking. It is advantageous both methodologically and scientifically to choose a group, therefore, which provides relative ease of tracking. However, the individuals in the cohort should be sufficiently mature to provide meaningful analysis of incomes, occupations and education. Accordingly, it would seem to be appropriate to choose an age group of people who are well established in their respective life styles and professions.

In the design of this study, it was observed that a unique characteristic of some areas of Utah, southwestern Wyoming, and southeastern Idaho offer unusual opportunities for tracing movements of people. A large proportion of the population belongs to the Church of Jesus Christ of Latter-Day Saints (Mormons) which maintains a file of current and past addresses of members in Salt Lake City.

It must be recognized, of course, that the migration patterns of people of this faith may be different from those who are not members of the Church. Obviously, this limits the generality of the study, but limitations are inherent in any study making use of cohort approach. The unique nature of, as well as insights to be gained from, the sampling of a population in which age, geographical location and cultural and religious heritage are held constant more than outweigh the disadvantages. Conclusions are reached with

a recognition of the specificity of this study, and insofar as generalizations are proffered, they are made in recognition of regional constraints.

One should not, on the other hand, overestimate these constraining influences. Certainly except for those constraints noted, such a cohort would still exhibit the usual variation in the casual variables hypothesized to be most important in geographic mobility: education, occupation, family incomes, leadership and high school achievement. Furthermore, by holding geographic location, cultural heritage and historical period constant, statements about migration-inducing variables can be given with greater confidence.

The nature of the unique characteristics as well as the limitations of this study having thus been stated, attention is directed to specific objectives and procedures.

Objectives

The objectives which guided this research effort were as follows: (1) To trace the migration patterns of 1946 and 1947 high school seniors from a common place of origin to locations of current residence; (2) To analyze the current differences in occupational classes, income levels, educational attainment and sex of those who migrated and those who did not; (3) To determine the significant casual factors which can be used to explain why certain graduates migrated and others did not.

Procedures

The decision to choose a cohort of high school students who graduated immediately after World War II was prompted by a recognition that those graduates are now well settled with respect to occupations and locations. Furthermore, in the more than twenty-five years since graduation, these individuals have married, served missions for their church, entered and left the armed forces, entered and left college. In many cases, they have moved several times (sometimes returning to live in their high school community) and have established patterns of migration.

The complete roster of seniors in the classes of 1946 and 1947 of Star Valley High School constitutes the population of this study. Star Valley High School (SVHS) is located in Afton, in southwest Wyoming, an agricultural community set apart by majestic, heavily-wooded mountains running north and south along the east side of the Valley and more gently rising hills on the west. Star Valley itself is actually composed of two valleys known to the natives as the "Upper" and the "Lower" valleys which are connected by a narrow neck of mountains which frame a passage for the Salt River to flow from the "Upper" to the "Lower" valley. The north end of the Valley lies at the confluence of the Salt, Greys and Snake Rivers.

Before a major highway running through Star Valley connected Yellowstone Park and Jackson Hole with more populated cities to the south in Utah, the Valley was relatively isolated from "the outside world." The original white settlers of the Valley were Mormon pioneers of Scandanavian, German, and English extraction who came to the Valley as part of the colonizing efforts of Brigham Young.

Severe winters shorten the growing season. The primary crop, alfalfa, is the chief staple of the Valley's dairy herds. In addition to the dairy products which the Valley produces, other important industries are logging and tourism. The largest town is Afton, a community of less than two thousand inhabitants. The high school serves students from each of the Valley's smaller communities.

Typical of students in other rural Mormon-settled communities, Afton's high school seniors were in part chosen as the population for study in the hope that church records would be made available to the researcher to locate current and past addresses. The researcher, however, was denied access to these records, and had to rely instead on other methods to obtain needed addresses. Fortunately, Star Valley residents maintain close ties with high school friends, frequently hosting class reunions for migrants returning during summers to visit family and friends. By interviewing the chairman of such reunions, many current addresses were obtained. Those that were not listed with reunion chairman often had relatives remaining in the Valley who were consulted by telephone. Of the 138 living members of the senior classes of 1946, 1947, 132 were located in their place of current residence.

As one would expect, some students married classmates. In the two classes there were five such couples. Since the study was designed to yield information about the family unit, information was collected for only one member of such couples to avoid double counting in describing patterns of migration.

Each member of the study population was surveyed by mail questionnaire to acquire the needed information implied by the three objectives. The questionnaire (which was designed by the researcher and which is included in the appendix along with the key used in coding the instrument for analysis by the computer) was mailed along with a cover letter explaining its purpose and a self-addressed, stamped return folder.

A second mailing and follow-up telephone requests along with personal visits to nearby subjects aided in securing an unusually high response rate. Of the 133 eligible class members in the population, 96 returned questionnaires in time to be included in the analysis. The response rate was 72 percent (higher if one considers that six members of the population did not receive a questionnaire). Of the 38 members of the two classes still living in Star Valley, 26 or 68.4 percent returned questionnaires while 73.6 percent of those currently residing outside of the Valley responded. The high response rate greatly aided in adding confidence to inferences about this population.

In addition to looking at the data assembled from those who responded to the questionnaire, it is sometimes also instructive to inquire about those who did not. Why didn't they respond? Was it because the questionnaire was too lengthy? Was it because they feared for the confidentiality of the information requested? Was it because the nonrespondents had failed in some way and did not care to document their failure. Clearly in the last case some bias would be introduced. The answer to these questions is not contained in this study. The researcher enumerates them with recognition of their importance, however.

Two important features of the questionnaire are a residence history table and a job history table which are useful in charting the residence and job shifts of the population as well as in explaining motivating factors of those shifts.

The questionnaire also sought information on the importance of various community and job characteristics as well as community satisfaction and involvement. For the most part this information was considered to be beyond this scope of this investigation but was included for purposes of providing data for possible further analysis. Income and unemployment data were sought along with estimates of the various costs associated with moving. A final section of the questionnaire dealt with the subjects' high school years, including questions yielding information on parental family size and incomes.

In many ways the questions asked in this study paralleled those of the Lansing and Mueller (1967) nation-wide study and as such provide opportunities for useful comparisons.

Access to high school records was permitted by the school superintendent for the purpose of this study. High school grade point averages were computed for each member of the study on a four-point scale. For most students a score on the Ohio State Psychological Test (Form II), a standard achievement test, was recorded. I.Q. scores were not available.

Differences between current residents and nonresidents of Star Valley were measured on such variables as sex; whether subject was raised on a farm; high school G.P.A. and achievement scores; high school leadership; whether the subject served a mission for his church,

served in the armed forces, or left Star Valley for schooling; educational attainment; occupational status; and income level; and community preference and satisfaction. Residency and each of these variables were tested for independence using the standard x^2 (Chi square) test. Those variables which were significantly dependent upon residency were incorporated into a discriminant function analysis utilizing the "Statpac" program of the Utah State University computer center.

Discriminant analysis is a method of multivariate analysis which seeks to determine linear functions or "certain indices" computed from various measurable characteristics of data. Data are collected on a number of variables relevant to two groups (in this case Star Valley resident or nonresident). The analysis "established linear functions of the characteristics which are such that they distinguish most successfully in a certain sense between these groups." (Tintner, 1965, p. 93). Thus, on the basis of variables deemed to be significant discriminators of residency by the x^2 test, individuals are predicted to be either residents or nonresidents of Star Valley. The success of this method is described in the next chapter.

The patterns of migrants in the population are examined to determine the number of moves which were returns to places of previous residence; the lengths of residence in each community, the number of migrants who moved to standard metropolitan statistical areas (SMSA's); migrants' reasons for leaving Star Valley; type of economic reason for moving; and reasons for most recent move by economic and demographic characteristics. The general mobility of the entire population (movers and nonmovers) is examined through such

measures as number of moves since high school, past mobility by age, age at time of first move from Star Valley, current distance from Star Valley, and distance from Star Valley by sex. Each of these topics is discussed in the section on "results and interpretation of data." In this study distance is calculated as the straight-line distance from Afton to the place in question, adjusted by an additional 20 percent. This overstates for mountainous regions and understates for flat regions, but is advocated by Lansing and Mueller (1967). The Rand-McNally Road Atlas was utilized for distance calculations.

As noted previously, a migrant for purposes of this study is someone who takes up a relatively permanent residence across county lines. The definition is only slightly modified for the first move. Because of the geographically-well defined borders of Star Valley, a move away from the Valley even if it does not involve leaving Lincoln County (the county in which Star Valley lies) is considered a migration. Three other qualifications are also made. Movers prompted by service in the military, school, or a church mission do not constitute migrations. The reason for exclusion is that such moves often are not the result of the voluntary decision-making process this study examines. The exclusion of such moves from analysis is conventional (Blanco, 1969).

RESULTS AND DISCUSSION

This chapter is divided into four parts: (1) an analysis of the general mobility of the entire population; (2) an analysis of the patterns of movement of those who at least once could be classified as migrants; (3) an analysis of the current differences in migration - related characteristics of Star Valley residents versus nonresidents; (4) a discriminant function analysis of residents and nonresidents. References to graphs and tables are to those appearing in the appendix.

General Mobility of Population

Census data have consistently shown that about one-fifth of the nation's population changes county of residence in a five-year period while the annual rate ranged from 6.1 to 6.7 percent from 1951 to 1961 (Lansing and Mueller, 1967). Table 1 presents the percentage distribution of respondents who moved in the last year, the last five years, and since high school graduation.

Age

At first glance the study population would appear to move with about the same frequency as national norms. However, one must not overlook an essential difference between census measures and this study. That is, in this study, age is held constant while it varies in census data. It has been hypothesized that age plays an important role in determining migration. That hypothesis is supported by the

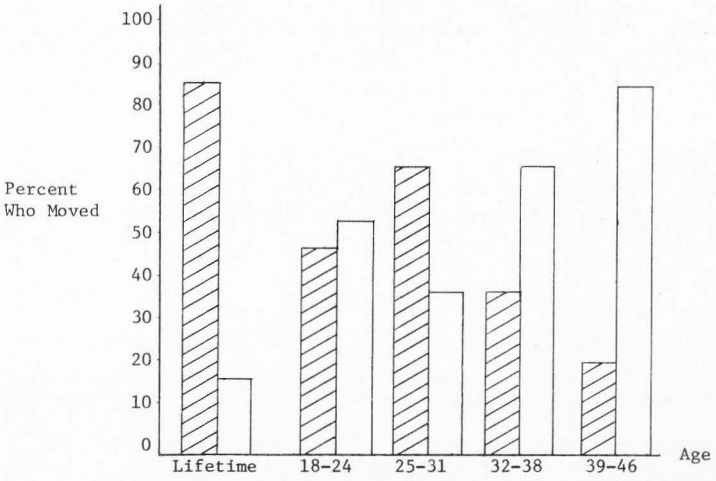
Table 1. Mobility of graduates (percentage distribution of Star Valley High School graduates, 1946-1947).

Percent who					
Moved in the last year[a]	6.25	Moved in the last five years[b]	17.71	Moved since high school graduation	83.33
Did not move in the last year	93.75	Did not move in the last five years	82.29	Did not move since high school graduation	16.67
Total	100		100		100

Number of subjects: 96

[a]"The last year" refers to calendar year, 1973.
[b]"The last five years" refers to 1968-1973.

results of this study as summarized in Figure 1 and Figure 2. The former documents the level of mobility within age periods and clearly supports the hypothesis that mobility declines with age. Forty-eight percent of the class moved when they were 18 to 24 years old, whereas 62.5 percent moved during the 25-31 age bracket. The volume of movement sharply falls off in the next two age groups with 37.5 percent moving while they were between the ages of 32 and 38 years old and 19.79 percent moving in the 39-46 age bracket. The fact that the 25-31 age bracket shows higher mobility than the 18-24 age does is due in part to the definition of migration used in this study which excludes military, education, and church mission related moves. Most of these moves occur in the 18-24 years old period which causes that age period to appear lower in level of mobility than otherwise.



Key

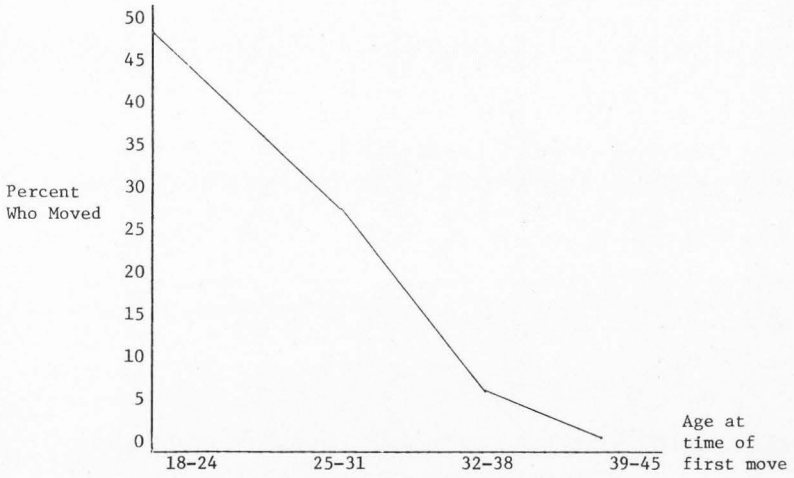
Moved during age period

Did not move during age period

Mobility by age	Percent who moved during age period[a]
Lifetime	83.33
18-24 years old	47.92
25-31 years old	62.50
32-38 years old	37.50
39-46 years old	19.79

[a]Percent who moved does not total 100 percent because categories are not mutually exclusive. Movers may be counted in more than one age bracket if they moved more than once. Excludes military moves, moves to school, moves for a church mission.

Figure 1. Past mobility by age (percentage distribution of movers by age).



Age	Percent who first left Star Valley during age period[a]
Never left Star Valley	15.63
18-24 years old	48.96
25-31 years old	27.08
32-38 years old	6.25
39-45 years old	2.08
Total	100

[a]Does not include as first move any moves which were for a church mission, to go away to school, or to serve in armed forces

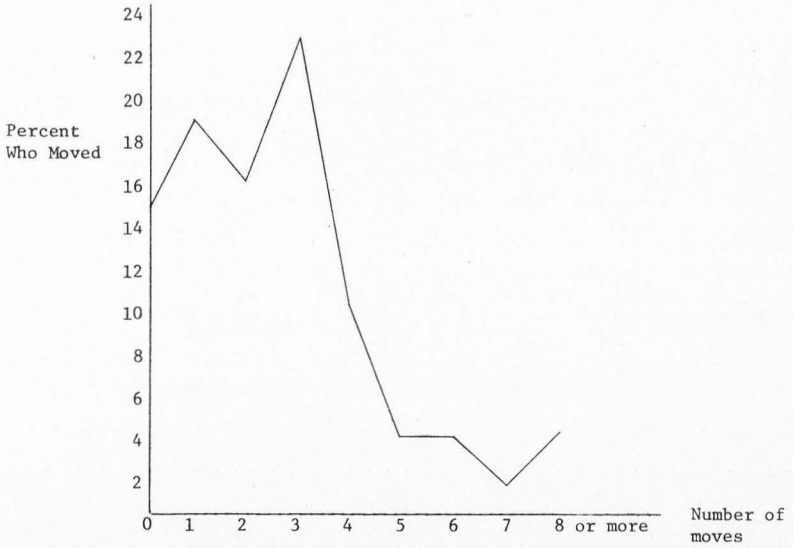
Figure 2. Age at time of first move from Star Valley (percentage distribution of Star Valley High School graduates 1946, 1947).

Figure 2 reinforces these results by documenting the age at which migrants first left Star Valley. Forty-nine percent of the class left the Valley before they were eighteen years old, 27.08 percent left during the 25-31 age bracket and less than nine percent left after they were 32 years old. The relationship between age and time period which respondents left Star Valley for other residences is clearly negative.

Utilizing the information summarized in these two figures in conjunction with Table 1, one comes to the conclusion that this population demonstrates greater mobility than would be expected on the basis of national norms. The 17.71 percent who were reported to have moved in the last five years were between 40 and 46 years old, an age period which accounted for less than twenty percent of the total movement of the class. Had all ages been included (as in the census data) one would have expected the percent who moved in the last five years to have been higher. The fact that this cohort closely approximates national mobility norms for total mobility in a five year period while keeping age constant at 40-46 years old, indicates that the population is more mobile than the national average.

Repetitive movement

In describing the level of mobility of the population, it is interesting to note the extent of repetitive movements. Figure 3 shows the percent of the population sample by number of moves. (percentages are calculated on the basis of those who returned questionnaires.) The population demonstrates a mode of three moves



Number of moves since high school	Percent of families who moved
None	15.63
One	18.75
Two	16.67
Three	22.92
Four	10.42
Five	4.17
Six	4.17
Seven	2.08
Eight or more	5.21
Total	100

Number of moves: 266
Mean number of moves: 2.77

Figure 3. Number of moves since high school (percentage distribution of respondents by number of moves).

per respondent for the time period of 1946-1973. The mean number of moves is 2.77. Approximately sixteen percent did not move at all. Since those who did not move were included in the calculation of mean number of moves, the figure is less than would be the mean number of moves per mover.

Distance

The hypothesis that movement declines as distance moved increases is also substantiated by this study. Table 2 presents the percentage distribution of respondents by distance from Afton, The data

Table 2. Current distance of respondents from Star Valley (percentage distribution of SVHS graduates, 1946-1947).

Distance (miles)[a]	Percent
Still in Star Valley	26.04
20-90	13.54
100-190	29.17
200-390	12.50
400-590	4.17
600-990	9.38
1000 or over	5.21
Total	100
Number of families: 96	

[a]Distances are measured on a straight line basis using the Rand McNally Atlas and adjusted by an additional twenty percent. All distances are computed from Afton, Wyoming.

indicate that the distance hypothesis, while generally supported, must be modified to account for opportunities. For example, 13.54 percent of the respondents are living 20 to 90 miles from Afton, whereas

29.17 percent are living 100 to 190 miles away. The reason appears to be that there are very few cities and, therefore, few jobs within 90 miles of Afton. In the next one hundred miles, however, lie the Utah cities of Logan, Ogden, Salt Lake City, and Provo. Of the study population's 93 migrants, 41 reside in the vicinity of these cities along Utah's "Wasatch front."

Table 3 records the number of SVHS migrants as a percentage of total population in selected "Wasatch front" counties. Using the population of these counties as an index of opportunity, as did Zipf (year), the distance hypothesis is supported in this region. In Cache County, migrants from our study population account for

Table 3. Star Valley High School migrants as a percentage of total population in selected Utah counties.

Location of migrants in Utah	Distance[a] from Afton, Wyoming	Population of center	No. of migrants in residence	Migrants as a percent of total population
Cache County	100	42,331	5	.000118
Davis-Weber Counties	145	225,306	15	.000067
Salt Lake County	190	458,607	14	.000031
Utah County	220	137,776	7	.000051

[a]Distances are given in miles.

.000118 of the population. In Davis and Weber counties they make up .000067 of the population, while in Salt Lake County, our respondents

account for .000031 of the population. The decline in migrants as a percentage of the total population as distance increases is consistent in each of these cases. In Utah County, which is slightly farther from Afton than is Salt Lake County, migrants make up .000051 of the local population. If our "index of opportunity" could be refined to include financial and commodity values, the apparent discrepancy could be explained.

The hypothesis of Ravenstein and others reported earlier that migration at a distance as differentiated by sex is rather weakly supported in this study (Table 4).

In Table 4, the x^2 test of independence is employed to test the null hypothesis (H_o) that distance and sex are independent of each other. This standard test is performed by establishing "expected values" (which are given in parentheses next to the actual or observed cell value) by multiplying the relevant column totals and dividing by the grand total. The x^2 value is obtained by squaring the difference of the observed and expected value, dividing by the expected value, $(f_o-f_e)^2/f_e$, and summing over all cells. If the x^2 value thus obtained exceeds the tabular x^2 value for the relevant degrees of freedom, the variables are said to be dependent (the H_o is rejected). This is the test of independence employed throughout this study. If the x^2 value is significant at the .05 level of significance, it is noted in the table by a single asterisk (*). If the x^2 value is significant at the .10 level of significance, it is noted by a double asterisk (**). In Table 4 the H_o is rejected at the .10 level of significance. This accounts for the statement that the distance and sex hypothesis is supported "rather weakly" in this study.

Table 4. Current distance from Star Valley by sex (x^2 test for independence).

	Distance (Miles)				
Sex	Still in Star Valley	20-90	100-390	400 or more	Total
Male	9 (10.94)	3 (5.69)	18 (17.5)	12 (7.88)	42
Female	16 (14.06)	10 (7.31)	22 (22.5)	6 (10.13)	54
Total	25	13	40	18	96

$x^2 = 6.734$**

**significant at the .10 level of significance

[a]Distance calculated as in Table 2.

These results lend credence to the notion that sales move longer distances. In Table 4 this difference is most pronounced in the column indicating current distance of more than 400 miles from Afton. Twelve male respondents are currently living 400 miles or more from Afton, whereas only six female respondents report residences at that distance. This compares with an x^2 expected value of 7.88 for men and 10.13 for women for the relevant cells.

Patterns of Movement

Given this overview of the general mobility of the entire cohort, attention is now directed to the patterns of movement deemed relevant in the first objective of this study.

Return movers

Since a person who was once a migrant could have returned to Star Valley after living elsewhere, the amount of return movement is of some interest. Table 5 documents the percent of return movers to Star Valley (10.53) percent) and to a place of previous residence other than Star Valley (7.14 percent). There are a number of reasons why migrants may return to a place of former residence. One reason

Table 5. Percentage of moves which were returns (percentage distribution of moves since high school).

Whether moves were returns	Percent of moves
A. To Star Valley	
Yes	10.53
No	89.47
Total	100
B. To a previous place of residence (other than Star Valley)	
Yes	7.14
No	92.86
Total	100
Number of moves: 266	

is that they left, not because they were "pulled" out by the attractive force of opportunities elsewhere, but simply because they could not afford to stay. Having left, they "made their fortune in the outside world" and were thus financially in a position to return. An alternative explanation is that expectations which prompted the move were unfulfilled, so the individual "returns home." Which of

these two (or other) explanations best explain return movement in this population was not established because of the relatively small number of moves involved. It is interesting to note, however, that Star Valley appeared to exert a stranger "return pull" on the sample than other places of former residence, since 10.53 percent of all moves were returns to Star Valley, whereas 7.14 percent of the moves were returns to all other places of former residence.

Length of period of residence

Through use of the residence history table included in the questionnaire, it was possible to determine the length of time people who moved lived in each place of residence. The distributions of periods of residence by length is summarized in Table 6. Over half of the moves were from places where the person had lived three years of less. This indicated that a large proportion of all movement is done by people who are shifting from place to place in quick succession, a finding also of Lansing and Mueller (1967).

Destination of move

It was hypothesized that migrants would tend to move to Standard Metropolitan Statistical Areas (SMSA's) to take advantage of increased cultural and employment opportunities associated with metropolitan areas of that size. In fact, a large percentage of moves were to SMSA's (Table 7) with a slightly larger percentage of "most recent moves" going to SMSA's than "first moves." These percentages appear large when one considers that the region within which most movement takes place consists of the sparsely-populated states of Wyoming, Idaho and Utah where there are few SMSA's.

Table 6. Length of time families who moved remained in each place of residence since high school graduation (percentage distribution of periods of residence).

Length of time in each residence	Percent of periods of residence
One year or less	26.32
Two years	18.42
Three years	9.40
Four years	6.77
Five years	6.39
Six years	2.63
Seven years	1.88
Eight or more years	28.19
Total	100

Number of periods of residence: 266

Table 7. Whether migrants moved to SMSA (x^2 goodness of fit test)

Characteristics of county of destination		
A. First move away from Star Valley	Count	Percent
SMSA	28 (39.5)	35
Non SMSA	51 (39.5)	65
Total	79	100

$x^2 = 6.696$*
*significant at the .05 level of significance

B. Most recent move		
SMSA	33 (39.5)	41.77
Non SMSA	46 (39.5)	58.23
Total	79	100

$x^2 = 2.139$

Reasons for movement

A major hypothesis developed in the review of literature is that people respond to economic incentives at a distance in contemplating a move. The results of this study bear this out. Ninety percent of the first moves away from Star Valley were at least partly prompted by economic reasons. (Table 8). Sixty percent of the moves were made exclusively for economic reasons.

Table 8. Migrants reasons for moving: first move and most recent move (x^2 goodness of fit test)

	Move			
	First move		Most recent move	
Reason	Count	Percent	Count	Percent
Purely economic (no non-economic reasons)	48 (26)	60.00	38 (25.67)	47.50
Partly economic (economic plus either family or community reasons or both)	24 (26)	30.00	32 (25.67)	40.00
Non-economic	6 (26)	7.50	7 (25.67)	8.75
No reason given[a]	2	2.50	3	3.75
Total	80	100	80	100

x^2 (First move) = 34.15*
x^2 (Most recent move) = 21.06*
[a]"No reason given" is not incorporated in the calculation of x^2 value

Table 8 also presents reasons for the most recent move. While still clearly demonstrating the predominance of economic motives in determining movement, it notes a rather large shift from the

exclusively economic to partly economic category over that which was reported for the first move. One explanation may be that as migrants become relatively better-off economically, moves can be undertaken which favor other values.

Moves which were prompted by an opportunity to take a job which offered a higher rate of pay or steadier work accounted for 35 percent of most recent moves while job transfers accounted for 22.5 percent (Table 9). Unemployment was a factor in only six of the most recent moves.

Table 9. Type of reasons for moving: migrants' most recent move (x^2 goodness of fit test).

Reason for move	Most recent move Count	Percent
Job transfer	18 (14.20)	22.50
Unemployment	6 (14.20)	7.50
Take job at higher pay, steadier work	28 (14.20)	35.00
Other economic	11 (14.20)	13.75
Non-economic	8 (14.20)	10.00
No reason given[a]	9	11.25
Total	80	100

$x^2 = 22.59$*

[a]"No reason given" is not incorporated in calculation of x^2 value.

Tables 10 and 11 analyze the reasons given for the most recent move by education, occupation, and income classes. One wonders

Table 10. Reasons for most recent move by demographic and economic characteristics (x^2 test for independence)

Demographic and economic characteristics	Reasons for move: Exclusively economic	Not exclusively economic	Total
All	38	39	77
Education			
Did not graduate from college	20 (20.73)	22 (21.28)	42
Graduated from college	18 (17.27)	17 (17.73)	35
Total	38	39	77
$x^2 = 0.1108$			
Occupation			
Professional/technical	9 (6.91)	5 (7.1)	14
White collar	18 (19.24)	21 (19.76)	39
Blue collar	6 (7.4)	9 (7.6)	15
Farm owner	4 (3.45)	3 (3.54)	7
Total	37	38	75
$x^2 = 2.104$			
Income			
Under $12,000	8 (10.36)	13 (10.63)	21
$12,000-$17,999	7 (9.38)	12 (9.63)	19
$18,000-$23,999	12 (9.87)	8 (10.13)	20
$24,000 and above	11 (8.39)	6 (8.61)	17
Total	38	39	77
$x^2 = 4.765$			

whether exclusively economic motives and education, occupation and income class are independent of each other. On the basis of data presented in Table 10 this appears to be the case.

Table 10 presents three x^2 tests. Education, occupation, and income are each tested to determine whether they are independent of the two classes of reasons: exclusively economic and not exclusively

economic. In all three cases the x^2 observed values fail to exceed critical x^2 values so the null hypothesis is not rejected. We conclude that the variables examined are independent. The interpretation given to these findings is that we cannot say that the rich or the poor, the educated or the non-educated, the professional or the farmer seem to move more frequently for exclusively economic reasons than for reasons which are both economic and non-economic.

In Table 11 three kinds of economic reasons are identified: job transfer, higher pay or steadier work, and "other." Like Table 10, Table 11 consists of three separate x^2 tests, matching these "kinds of reasons" against education, occupation and income. While "kinds of economic reason" and these economic and demographic characteristics fail to depend upon each other at statistically significant levels used conventionally in literature, some interesting relationships appear in the calculation of expected values. For example, Table 11 shows that college graduates are transferred more often, but move for higher pay or steadier work less often than would be expected if the variables were statistically independent. Those who did not graduate from college demonstrate exactly the reverse relationship with respect to these two variables. Furthermore, under the heading "occupation," it can be noted that professional, technical and white collar workers move because of job transfer more frequently than would be expected while blue collar and farm workers are transferred less frequently. While these relationships run counter to statistical expectations, they correspond to intuitive expectations which lead us to believe because of the nature of their jobs people in "service" occupations shift residence relatively more frequently because they are transferred by their employers.

Table 11. Type of economic reason for most recent move by demographic and economic characteristics of migrants (x^2 test for independence).

Demographic and economic characteristics	Kind of economic reason: Job transfer	Higher pay, steadier	Other	Total
All	18	28	17	63
Education				
Did not graduate from college	7 (8.85)	17 (13.78)	7 (8.36)	31
Graduated from college	11 (9.14)	11 (14.22)	10 (8.62)	32
Total	18	28	17	63
$x^2 = 2.689$				
Occupational				
Profesional/technical	4 (3.77)	6 (5.87)	3 (3.36)	13
White collar	13 (9.58)	11(14.9)	9 (8.51)	33
Farmers, Blue collar	1 (4.64)	11 (7.23)	4 (4.12)	16
Total	18	28	16	62
$x^2 = 7.151$				
Income				
Under $12,000	3 (4.86)	8 (7.55)	6 (4.58)	17
$12,000-$17,999	4 (4.0)	4 (6.22)	6 (3.77)	14
$18,000-$23,999	5 (4.86)	11 (7.56)	1 (4.59)	17
$24,000 and above	6 (4.29)	5 (6.67)	4 (4.05)	15
Total	18	28	17	63
$x^2 = 8.768$				

Residents Versus Nonresidents

The second major objective of this study is to analyze the current differences in occupational classes, income levels, educational attainment and sex of those who migrated and those who did not. In this section these differences will be reported. However, the

categories of investigation are slightly different from the previous section where anyone who had at one time lived outside of Star Valley was classified as a migrant. In this section the concern is for the differences which may exist between current residents and nonresidents of Star Valley. Those variables which appear to be related to residency were incorporated into the discriminant function analysis.

Sex

As reported in Table 12, the study failed to show a significant difference in residency status on the basis of sex. Of the 26 respondents currently living in Star Valley, 9 are male and 17 are female. Thirty-three of the non-Star Valley residents are male while 37 are female. These figures correspond closely to statistical independence expectations.

Table 12. Sex by resident status (x^2 test for independence).

	Sex		
Residency	Male	Female	Total
Star Valley	9 (11.38)	17 (14.63)	26
Non-Star Valley	33 (30.63)	37 (39.38)	70
Total	42	54	96

$x^2 = 1.209$

High school characteristics

Certain characteristics of the individuals in the cohort, as measured at the time they were in high school, appear to be related to residency while others do not. It does not appear that whether an individual was raised on a farm or not, for example, is related in an important way to current residency (Table 13). This is not surprising in as much as the dichotomy between those who grew up on a farm and those who did not is not great in Star Valley. One's father could be a storekeeper but still have a few acres which he farmed, for example.

Table 13. Whether raised on farm by resident status (x^2 test for independence).

	Raised on farm		
Residency	No	Yes	Total
Star Valley	4 (5.96)	22 (20.04)	26
Non-Star Valley	18 (16.04)	52 (53.96)	70
Total	22	74	96

$x^2 = 1.145$

High school grade point averages, scores on a standardized achievement test and leadership on the other hand demonstrate statistically significant relatedness to residency. As reported in Table 14, the mean grade point averages for Star Valley and non-Star Valley residents differed at the .10 level of significance using the standard two sample "t" test for difference between means. In this

Table 14. High school GPA by resident status (two-tailed test for difference between means).

Residency	
Star Valley	Non-Star Valley
$\bar{X}_1 = 2.621$	$\bar{X}_2 = 2.895$
$s_1 = .48$	$s_2 = .61$
$n_1 = 20$	$n_2 = 60$

Pooled standard deviation = .58
t = 1.815**

test the null hypothesis is given as follows: H_o: $M_1 - M_2 = 0$, where M_1 and M_2 refer to the mean of population one and population two, respectively. The "t" statistic is given by the following formula:

$$t = \frac{(\bar{X}_1 - \bar{X}_2) - 0}{S_{\bar{x}_1 - \bar{x}_2}} = \frac{\bar{X}_1 - \bar{X}_2}{S_{\bar{x}_1 - \bar{x}_2}}$$ where $\bar{X}_1$ and $\bar{X}_2$ are the respective sample means and $S_{\bar{x}_1 - \bar{x}_2}$ is the estimated standard error of the difference between two means. If the observed "t" value exceeds the critical "t" value (as determined by reference to standardized tables) we reject the null hypothesis and conclude on the basis of the sample data that the population means are different.

In Table 14, the observed "t" value exceeded the critical "t" value at the .10 level of significance. The mean grade point of the non-Star Valley respondents was 2.895 while that of the Star Valley residents was 2.621. We conclude that as a group migrants had higher high school grade point averages than nonmigrants. Furthermore, since the standard deviation of the nonmigrant group was .48 while

that of the migrant group was .61 we also conclude that as a group the Star Valley residents are more homogeneous than the migrants. This would tend to support the hypothesis reported in the literature that migration is selective of high achievers on the one hand who move out for increased opportunity and low achievers who are "pushed" out on the other hand.

In Table 15 the same test is performed on reported test scores of the Ohio State Psychological Test, a nation-wide test of high school achievement. Again, from the data it can be seen that migration is selective of the high achievers. (The "t" value observed is significant at the .05 level of significance.) The mean score of the migrant respondents was 62.03 whereas that of the Star Valley residents was only 48.8. Again the migrant group exhibited greater heterogeniety than the nonmigrant sample, although the difference is not great. (The standard deviation of the nonmigrant sample was 19.12 while the standard deviation of the migrants was 20.96.)

Table 15. High school achievement test scores[a] by resident status (two-tailed test of difference between means).

Residency	
Star Valley	Non-Star Valley
$\bar{X}_1 = 48.80$	$\bar{X}_2 = 62.03$
$s_1 = 19.12$	$s_2 = 20.96$
$n_1 = 20$	$n_2 = 60$

Pooled standard deviation = 20.53
$t = 2.478^*$
[a]The Ohio State Psychological Test (Form II) was used.

Another measure of achievement is high school leadership, as measured by whether the individual held positions of leadership in high school organizations. The x^2 test of independence reported in Table 16 shows that high school leadership and residency are dependent variables at the .05 level of significance. As is clear from the table, migration is selective of high school leaders.

Table 16. High school leadership by resident status (x^2 test for independence).

Residency	Held high school office: No	Yes	Total
Star Valley	22 (17.06)	4 (8.94)	26
Non-Star Valley	41 (45.94)	29 (24.06)	70
Total	63	33	96

$x^2 = 5.70$

Whereas 8.94 Star Valley residents are statistically expected to be leaders, the observed number is only four. On the other hand, 29 non-Star Valley respondents were observed to be high school leaders, while our statistical expectation is only 24.06.

While it may be argued that the grade point average of rural youth is not the best index of ability, the three measures together (GPA, OSPT scores, and leadership) lend support to the hypothesis stated earlier that migration is selective of achievers. Such variables are of further interest since as Suval (1972, p. 52) has noted and Nam and Cowhig (1962) have illustrated, "a positive correlation was found between school achievement and college attendance:

that is, prior school achievement is a relevant variable in the ultimate level of schooling obtained."

Education

Four measures of education are analyzed: whether an individual served a mission for his church, whether he served in the armed forces, whether he went away to school, and level of educational attainment.

One of the distinguishing characteristics of the Mormon Church is its missionary program. Young members may be asked to spend two to three years in the service of the church either in the United States or abroad. A working hypothesis was that once exposed to "the outside world" individuals may have a greater propensity to leave Star Valley when the mission is concluded. Because of the assumption that a mission experience tends to expose individuals to opportunities outside the community of origin, this variable is considered under the heading "education." The same argument applies for service in the armed forces.

The results of this study tended to support the "outside" world hypothesis as recorded in Tables 17 through 20. In Table 17 the x^2 test is employed on the variables of residency and mission service. The reported x^2 value of 2.862 exceeds the critical value at the .10 level of significance. We, therefore, conclude that mission service and residency are dependent. The direction of this relationship is that more non-Star Valley residents served missions than would be expected statistically.

Table 17. Served church mission by resident status (x^2 test for independence)

Residency	Served mission: No	Yes	Total
Star Valley	24 (21.13)	2 (4.88)	26
Non-Star Valley	54 (56.88)	16 (13.13)	70
Total	78	18	96

$x^2 = 2.862$**

The same relationship holds true for the variable "service in the armed forces" and residency, although the strength of the relationship is not statistically significant (Table 18). In Table 19 the variable "left Star Valley for school" is tested against current

Table 18. Served in armed forces by resident status (x^2 test for independence).

Residency	Served in armed forces: No	Yes	Total
Star Valley	22 (19.50)	4 (6.5)	26
Non-Star Valley	50 (52.50)	20 (17.5)	70
Total	72	24	96

$x^2 = 1.758$

residency and found to be dependent at the .05 level of significance. Again the hypothesized relationship holds: those who went away to

school are more migratory than would be expected on the basis of the statistical independence assumption.

Finally, all three variables, mission and armed forces service, and post-high school education are combined to form a composite variable which is matched against residency in Table 20. The resulting

Table 19. Left Star Valley for school by resident status (x^2 test for independence).

Residency	Left for school: No	Yes	Total
Star Valley	14 (9.21)	12 (16.79)	26
Non-Star Valley	20 (24.79)	50 (45.21)	70
Total	34	62	96

$x^2 = 5.295$*

observed x^2 value of 5.835 is the largest of the four tests and indicates that when all of the three "educational" variables are

Table 20. Left Star Valley for mission, military, and/or school by resident status (x^2 test for independence).

Residency	Left for mission/military/school: No	Yes	Total
Star Valley	13 (8.13)	13 (17.88)	26
Non-Star Valley	17 (21.88)	53 (48.13)	70
Total	30	66	96

$x^2 = 5.835$*

combined the hypothesized relationship holds with greater statistical significance.

The level of educational attainment appears to be the single most important variable in determining residency (Table 21 and discriminant function). Migration is clearly selective of those with

Table 21. Educational attainment by resident status (x^2 test for independence).

	Educational attainment				
Residency	High school	Vocational school	Attended college	Graduated college	Advanced degree	Total
Star Valley	14 (8.94)	5 (3.52)	6 (3.79)	1 (5.15)	0 (4.6)	26
Non-Star Valley	19 (24.06)	8 (9.48)	8 (10.21)	18 (13.85)	17 (12.4)	70
Total	33	13	14	19	17	96

$x^2 = 17.44$*

college degrees as shown in Table 21. The observed x^2 value of 17.44 is significant at the .01 level of significance. This funding is supportive of the hypothesized relationship asserted in the literature that migration is selective of the well-educated.

This point merits emphasis because it is one of the unique contributions of this study. In her 1972 review of the literature of migration, Elizabeth Suval speaking of intelligence tests and high school achievement tests, noted:

> Although the majority of the studies reviewed indicated some migration selective of the more intelligent and scholastically successful, especially in migration to cities, it is again difficult to determine to what, if any population

> the result of these studies could be generalized, since the procedures used did not include probability sampling...
> *No studies were located in which both intelligence or scholastic achievement and years of school were investigated in relation to migration.* The evidence does suggest the possibility that the major effect of intelligence and scholastic achievement on migration is reflected in the extent to which the two variables are related to educational attainment, which in turn appears to be related to migration behavior."
> (Suval, 1972, p. 53-54, italics are the researcher's)

This study fills in the gap which Suval reports in the following ways: (1) Both high school achievement scores and level of educational attainment were investigated in relation to migration and both were found to be positive; (2) The evidence presented in this section and the next clearly confirms that the effect of high school achievement variables is most felt in their relation to educational attainment, the single most discriminating variable between migrants and nonmigrants; (3) For reasons already pointed out, this study is able to generalize to relevant populations whereas studies which have investigated migrants and nonmigrants found together in urban settings have failed to do so because of inadequately controlling the many other contributing variables which enter in when multiple origins are involved.

Occupation

In part because of the close relationship between education and occupation, it would be expected that residency and occupation are closely related. In fact, this is the case (Table 22). It is somewhat surprising to note that none of the cohort's reported 14 professionals currently reside in Star Valley. Half (13) of those living in Star Valley are farm owners while less than 9 percent

Table 22. Current occupation by resident status (x^2 test for independence).

	Occupation				
Residency	Professional, technical	White collar	Blue collar	Farm owner	Total
Star Valley	0 (3.72)	6 (11.44)	6 (4.79)	13 (5.05)	25
Non-Star Valley	14 (10.28)	37 (31.56)	12 (13.21)	6 (13.95)	69
Total	14	43	18	19	94[a]

$x^2 = 26.04$*

[a]Two respondents did not report their occupation

of the nonresidents own farms. Occupation is thus a variable that has definite discriminating power.

Income

As expected, income and residency are dependent at a statistically significant level (Tables 23 and 24). This is not surprising in as much as migration was shown to be selective of higher-paying occupations. Furthermore, the researcher suspects that the data are biased upwards for residents of Star Valley where three ranchers reported incomes of over $27,000. The mean income as reported by the 1970 census for Lincoln County ranchers was only $6,057, however. Even allowing for an unusually good year among farmers and ranchers the income data appear high. The probable explanation is that farmers, who were asked for income before taxes reported income before expenses. In spite of this possible bias the relationships are in the expected direction.

Table 23. Current income by resident status (frequently distribution).

	Residency		
Current income	Star Valley	Non-Star Valley	Total
No response	4	2	6
Under $3,000	0	0	0
$3,000-$5,999	1	2	3
$6,000-$8,999	4	4	8
$9,000-$11,999	4	8	12
$12,000-$14,999	5	12	17
$15,000-$17,999	2	6	8
$18,000-$20,999	2	11	13
$21,000-$23,999	0	9	9
$24,000-$26,999	1	5	6
$27,000 and over	3	11	14
Total	26	70	96

Table 24. Current income by resident status (x^2 test for independence).

	Income[a]		
Residency	Under $15,000	$15,000 or over	Total
Star Valley	14 (9.78)	8 (12.22)	22
Non-Star Valley	26 (30.22)	42 (37.78)	68
Total	40	50	90

$x^2 = 4.344$*

[a]Classes combined to guarantee all expected frequencies ≥ 3.

Community preferences

A final set of tests were designed to determine if there were significant differences in commodity preferences and satisfaction by resident status (Tables 25 and 26). As is clear from the tables, and as would be expected, the large majority of current residents of Star Valley (96.15 percent) claimed it as "home." This relationship held true for residents who would retire in Star Valley (77 percent) and those who desired to be buried there (100 percent).

It is more interesting to ask to what degree do migrants still feel attached to the valley. The answer is that many do. Although it has been over twenty-five years since the first graduates of the class left Star Valley, 17.14 percent of the nonresidents still feel that the Valley "is where home is." An even larger number, 24.3 percent expressed a desire to be buried in the community in which they were reared, although they have lived away from it during much of their adult lives. The figures document a continuing affinity for the Valley among migrants.

Another test of community integration is that of community satisfaction by resident status (Table 26). Respondents were asked to indicate whether they were "very" satisfied, "pretty" satisfied, or "not very" satisfied with their way of life in their present community. On the basis of their response, it does not appear that migrants are more or less satisfied than nonmigrants in a statistically meaningful way.

Table 25. Community preference by resident status (x^2 test for independence).

Community Preference	Residency		
A. Place considered home	Star Valley	Non-Star Valley	Total
Star Valley	25 (10.02)	12 (26.98)	37
Elsewhere	1 (15.98)	58 (43.02)	59
Total	26	70	96
$x^2 = 49.96$*			
B. Where prefer to retire			
Star Valley	20 (10.02)	17 (26.98)	37
Elsewhere	6 (15.98)	53 (43.02)	59
Total	26	70	96
$x^2 = 22.18$*			
C. Where prefer to be buried			
Star Valley	26 (13.27)	23 (35.73)	49
Elsewhere	0 (12.73)	47 (34.27)	47
Total	26	70	96
$x^2 = 34.20$			

Table 26. Community satisfaction by resident status (x^2 test for independence).

	Community Satisfaction			
Residency	Very satisfied	Pretty satisfied	Not very satisfied	Total
Star Valley	15 (12.46)	9 (10.29)	2 (3.25)	26
Non-Star Valley	31 (33.54)	29 (27.71)	10 (8.75)	70
Total	46	38	12	96

$x^2 = 1.593$

Discriminant Analysis

The results of the various tests of independence reported above are incorporated in a discriminant analysis. Earlier the effort was to determine which of a number of variables suggested by theory were not independent of place of residence. In this study these variables were: sex, high school grade point average (G.P.A.), high school leadership, high school achievement scores (OSPT), whether the respondent served a church mission or in the military, or left for school (M/M/Sch), income, occupation and education.

The population under study was classified into two groups, resident and nonresident. Discriminant analysis is a statistical procedure designed to determine the linear combination of the various measurements taken on the above variables which will best discriminate between the two groups (Tintner, 1965). Like a regression equation, the discriminant function assigns weights to the various independent variables. However, since the dependent variable is ordinal, rather

than cardinal (as in the case of the regression prediction equation), we are concerned with predicting only whether a given subject falls (in our case) in the migrant or nonmigrant category.

The form of the discriminant function is given by the following equation:

$$Z = K, X, + K_2X_2 + \ldots K_nX_n$$

where K_i (i = 1, 2, 3...n) are the coefficient weights of the various independent variables X_i (i = 1, 2, 3...n). The dependent variable "Z" takes on the values "1" (for nonmigrants) and "2" for migrants. The discriminating power of the various independent variables can be determined by multiplying the coefficient of the variable by its mean and taking the absolute value ($|K\bar{X}|$).

The ranking of the independent variables used in this discriminant function is reported in Table 27. The variables are listed in order of discriminating power in the first column, their coefficients (K) in the second column, and their mean values ($\bar{X}$) in the third column. In the final column the absolute value of the mean and the coefficient ($|K\bar{X}|$) is given.

As can be seen from the table the variable with greatest discriminating power is that of education. In other words, if we know the level of education a member of the population has achieved, that information would serve us well as a predictor of his residence status. The next two most important discriminating variables are high school grade point average and high school achievement scores. We noted in the x^2 test of independence that migration is selective of high achievers. The results of the discriminant function confirm this

Table 27. Discriminant analysis (variables ranked in order of discriminating power).

Variable	Coefficient (K)	Mean ($\bar{X}$)	$1K\bar{X}1$
Education	.9179055	.75	.688429125
G.P.A.	.02160129	2.826	.0610452455
O.S.P.T.	.0008082462	58.725	.0474642581
Income	.005289398	6.4	.0338521472
M/M/Sch	.02063026	.5	.01031513
Occupation	.06843387	.0625	.0042771168
High School Leadership	.007632596	.2	.0015265192
Sex	.007594624	.025	.0001898656

finding and indicate that performance on various measures of achievement has discriminating (and thus predictive) power.

The least most important discriminator is the variable "sex." Once the effect of education, high school achievement and the other variables has been accounted for sex does not aid greatly as a discriminating variable. This is the reason why the variable "occupation" ranks sixth on our list. We noted earlier that while there were 14 professionals in the migrant group, there were none in the nonmigrant sample. Furthermore, we noted that one-half of the nonmigrants were farmers, whereas farmers accounted for a much smaller percentage of the migrant sample. It was thought, therefore, that occupation would be an important discriminating variable. Once the effect of education was accounted for, however, the importance of this variable was reduced. This is intuitively appealing since in

order to become trained as a professional or technician, advanced education is necessary. The finding that education serves as the most important variable of discrimination is central to this thesis.

A final finding under the heading "discriminant analysis" is that which is recorded in Table 28. Once the discriminant function was computed, it was tested on the individual respondents' of the study population to determine its success in classifying the respondents as either migrants or nonmigrants. Of the nonmigrant group, 15 of 20 were correctly classified. Forty-four of the 60 migrants were also

Table 28. Discriminant analysis predictive results (binomial x^2 test).

	Nonmigrants	Migrants	Total
Predicted correctly	15	44	59
Predicted incorrectly	5	16	21
Total	20	60	80

Binomial $x^2 = 9.03^a$
[a]Significant at .01 level of significance

predicted correctly. The success rate of this function in predicting nearly 75 percent of the respondents correctly is statistically significant at the .01 level of significance.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Results

This study was designed to test the hypotheses, asserted in literature, that the young, the most gifted, the best educated and the most productive people originating in rural areas are those most likely to migrate in response to more renumerative, plentiful, and stable job opportunities elsewhere.

A cohort of graduating seniors (1946, 1947) of a high school in rural Wyoming was chosen as the study population. The population chosen exhibits homogeneity of age, religion, place of origin, and high school education. These constant qualities allow more controlled observations to be made on migration-related variables such as post-high school education occupation, income, high school achievement, military or church mission service, parental occupation, and sex. Generalizations are made in the regional and social context relevant to the cohort chosen.

Results of this study indicate that the relationships predicted by theory obtain. Migration is selective of younger, rather than older persons who act as if migration were a means of investing in themselves. Education is the greatest single discriminating variable between migrants and nonmigrants. Professionals and technicians are more likely to migrate from the rural community of origin than are those in other occupations, particularly those in farming. A move away from Star Valley was a move out of agriculture, considering that only

8.6 percent of the migrants are farm owners. High school achievement (as measured by performance on standardized tests of achievement, grade point average, and leadership) is also associated with migration, although it appears as if these variables are primarily useful as predictors of future educational attainment, the most significant selective variable. While statistical tests did show that migrants have higher incomes than nonmigrants (which is consistent with the fact that migration is selective of persons in higher-paying occupations) there is reason to believe that the dichotomy is greater than reported because some respondents may have confused "before tax income" with "before expenses" income.

Another objective of this study was to trace the patterns of migration of the members of the study population. This was a complicated problem since students who graduated from high school shortly after World War II are by now widely dispersed throughout the nation and abroad. Fortunately, because many migrants still have family and social ties in the community of origin, most members of the cohort were located in their current residences. A high response rate lent confidence to inferences about the population and helped determine migrational patterns.

This cohort exhibited a high degree of mobility. (83.33 percent of the respondents indicated that they had at least once moved outside Star Valley.) There is evidence of a significant amount of return migration. (10.53 percent of all moves were returns to Star Valley while 7.14 percent were returns to places other than Star Valley.) The nature and meaning of these returns is still largely unexplored

however. It would be interesting to investigate whether return migration, age, income and other variables are related.

It was also found that migration is inversely related to distance, a suggestion which originates in the literature with Ravenstein and which has received the continued interest of modern theorists.

Finally, the results of the study demonstrate that economic motives are clearly most important in determining the cause of migration, whereas the direction of movement may be influenced by social and familial factors in concert with economic opportunity.

Need for Further Research

There are several remaining questions which merit further investigation. While documenting the importance of economic considerations in the migration decision, this study failed to answer the question of whether job opportunity or increased income was more important in determining movement. Furthermore, while it was recognized that familial and social ties play an important role in determining the direction of migration (especially through their influence on information) the relative importance of these ties was not clearly quantified. The importance of these ties are clearly implied in our findings of the degree of migration to Utah.

One way in which the question of the role of social and religious ties may be settled in terms of this cohort would be to ask: "In what ways do migrants to communities with high concentrations of Mormons differ from those who move to communities where Mormons account for a low percentage of the total population?"

The questionnaire which was prepared for this investigation yielded information beyond that which is reported here. Of particular worth to future analysis are two sections on employment and community characteristics. Respondents were asked to rank from one to ten the importance of various characteristics of their job, in one instance, and their community in another. A cross-tabulation analysis of the reuslts of these rankings and characteristics of the individual would be informative. For example if one could rank a respondent as either "security" or "achievement" oriented on the basis of rankings given job characteristics, it may provide a means of identifying the individual's propensity to migrate. Similarly a ranking of community characteristics could show that an individual favored environmental (non-pecuniary) to economic (pecuniary) values. An observed correlation to movement would be revealing. If cell size permitted it, these cross-tabulations could be run not just for migrant-nonmigrant, but among migrant groups as well; e.g., do migrants to California differ in their valuation of community characteristics from those who move to Utah?

Policy Implications

If one wishes to make statements about national population policy, it is essential to know the goals of that policy i.e., to redistribute population to or away from rural areas. Also, one's opinions about the world are, in a Bayesian sense, the result not only of one's sample observations, but of one's prior beliefs as

well. Hence the Bayesian would argue that sample results ought simply to be reported, but not interpreted by the researcher since other people's prior beliefs may be different from his own.

The importance of this study is that for a given cohort in rural western Wyoming, migration is selective of the young, the able, and the educated. Policy dealing with the demographics as well as the economic growth of regions similar to that of this study ignore this differential effect of migration at the potential cost of misallocation of resources.

LITERATURE CITED

Becker, Gary S. 1964. Human capital. National Bureau of Economic Research, New York. 252 p.

Beshers, James M., and Eleanor N. Nishura. 1961. A theory of internal migration differentials. Social Forces 39: 214-218. March.

Blanco, Cicely. 1963. The determinants of interstate population movements. Journal of Regional Science, 3: 77-84. Summer.

Blau, Peter M., and Otis Dudley Duncan. 1967. The American occupational structure. Wiley, New York. 356 p.

Bogue, Donald J. 1957. Subregional migration in the United States, 1935-1940. Scripps Foundation Studies in Population Distribution, Miami University, Oxford, Ohio. 333 p.

Bogue, Donald J. 1959. Internal migration, p. 486-509. In Philip Hauser and Otis Dudley Duncan (Ed.) The study of population. University of Chicago Press, Chicago.

Bogue, Donald J. 1961. Techniques and hypotheses for the study of differential migration. International Population Conference, paper 114.

Bond, Larry K. and B. Delworth Gardner. 1971. A theoretical framework for analyzing residence shifts of farm families. Intermountain Economic Review 2(2): 47-59.

Borts, George H.,and Jerome L. Stein. 1964. Economic growth in a free market. Columbia University Press, New York. 329 p.

Bowles, Samuel. 1970. Migration as investments: Empirical tests of the human investment approach to geographic mobility. Review of Economics and Statistics 52: 356-362. November.

Bright, M. L. and Dorothy S. Thomas. 1941. Interstate migration and intervening opportunities. American Sociological Reivew 6: 773-783.

Eisenstadt, S. N. 1955. The absorption of immigrants: A comparative study based on the Jewish community in Palestine and the State of Israel. The Free Press, Glencoe, Ill. 275 p.

Gallaway, L. E., R. F. Gilbert, and P.E. Smith. 1967. The economics of labor mobility: An empirical analysis. Western Economic Journal 5: 211-223. June.

Galle, O. K., and K. E. Taeuber. 1966. Metropolitan migration and intervening opportunities. American Sociological Review 31: 5-13. February.

Goldstein, Sidney. 1974. Address to population seminar, Logan, Utah. June.

Goodman, Leo. 1961. Statistical methods for the mover-stayer model. Journal of the American Statistical Association, 56: 841-868.

Greenwood, Michael J. 1970. Lagged response in the decision to migrate. Journal of Regional Science 10: 375-384. December.

Hannerberg, David, Torsten Hagerstrand, and Bruno Odeving (Ed.). 1957. Migration in Sweden: A symposium. Lund Studies in Geography, Series B., Human Geography, No. 13. The Royal University of Lund, Lund. 336 p.

Hart, R. A., 1972. The economics influences on internal labor force migration. Scottish Journal of Political Economy 19: 151-173.

Hart, R. A., 1973. Economic expectations and the decision to migrate: An analysis by socio-economic group. Regional Studies 7: 271-285.

Hicks, John R. 1963. The theory of wages. Macmillan and Company, Ltd. 289 p.

Hoover, Edgar M. 1971. An introduction to regional economics. Knopf, New York. 201 p.

Jansen, Clifford. 1968. Social aspects of internal migration. Bath University Press, Bath. 215 p.

Kuhn, Thomas. 1962. The structure of scientific revolutions. The University of Chicago Press, Chicago, Illinois. 210 p.

Kuznets, Simon and Dorothy Thomas. 1957, 1960, 1964. Population redistribution and economic growth in the United States, 1870-1950, American Philosophical Society, Philadelphia. 3 volumes.

Lansing, John B. and Eva Mueller. 1967. The geographic mobility of labor. Institute for Social Research, The University of Michigan, Ann Arbor. 421 p.

Lee, Everett S. 1966. A theory of migration. Demography 3(1): 49-63.

Lianos, Thedore P. 1972. The migration process and time lags. Journal of Regional Science 12: 425-433. December.

Lowry, Ira S. 1966. Migration and metropolitan growth: Two analytical models. Chandler, San Francisco. 179 p.

Makower, H., and J. Marschak, and H. W. Robinson. 1938. Oxford Economic Papers 1: 83-123. October.

Makower, H., J. Marschak, and H. W. Robinson. 1939. Oxford Economic Papers 2: 70-97. May.

Makower, H., J. Marschak, and H. W. Robinson, 1940. Oxford Economic Papers 4: 39-62. September.

Mangalam, J. J. 1968. Human migration: A guide to migration literature in English, 1955-1962. University of Kentucky Press, Lexington. 194 p.

Mazek, Warren. 1966. The efficacy of labor migration with special emphasis on depressed areas. Institute for Urban and Regional Studies, Washington University, St. Louis. (Working paper).

Miller, Edward. 1972. A note on the role of distance in migration: Costs of mobility versus intervening opportunities. Journal of Regional Science 12: 475-478. December.

Miller, Edward. 1973. Is out-migration affected by economic conditions? Southern Economic Journal 39: 396-405.

Muth, Richard F. 1971. Migration, chicken or egg? Southern Economic Journal 37: 295-306. January.

Nam, C. B. and J. D. Cowhig. 1962. Factors related to college attendance of farm and nonfarm high school graduates, 1960: farm population, Series Census--ERS (p. 27) No. 32, U.S. Department of Commerce and U. S. Department of Agriculture Economic Research Service. U. S. Government Printing Office, Washington.

Nelson, Phillip. 1959. Migration, real income and information. Journal of Regional Science 1: 43-74. Spring.

Parsons, Talcott. 1964.The social system. Free Press, Glencoe, Ill 527 p.

Price, Donald O. 1959. A mathematical model for migration suitable for simulation on an electronic computer. International Population Conference Proceedings, p. 665-673.

Raimon, Robert. 1962. Interstate migration and wage theory. Review of Economics and Statistics 44: 428-438. November.

Ravenstein, E. G. 1885. The laws of migration. Journal of the Royal Statistical Society 48: 167-235.

Richardson, Harry W. 1969. Regional economics: location, theory, urban structure and regional change. Praeger, New York. 301 p.

Simon, Herbert A. 1955. A behavioral model of rational choice. Quarterly Journal of Economics 69: 99-118.

Simon, Herbert A. 1963. Economics and psychology, p. 685-723. In Sigmund Koch (Ed.) Psychology: A study of a science. McGraw-Hill Company New York. 825 p.

Sjaastad, Larry A. 1960. The relationship between migration and income in the United States. Regional Science Association: Papers and Proceedings 6: 37-64.

Sjaastad, Larry A. 1962. The costs and returns of human migration. Journal of Political Economy 70 (5): 80-93.

Sorokin, Pitirim, Carle C. Zimmerman, and Charles J. Galpin. 1932. A systematic source book in rural sociology. University of Minnesota Press, Minneapolis. 732 p.

Stouffer, Samuel A. 1940. Intervening opportunities: A theory relating mobility and distance. American Sociological Review 5: 845-867.

Stouffer, Samuel A. 1960. Intervening opportunities and competing migrants. Journal of Regional Science 2: 1-26.

Strodtbeck, F. R. 1958. Family interaction, values and achievement, p. 135-194. In D. C. McClelland, A. F. Baldwin, U. Bronfenbrenner and F. L. Strodtbeck (ed.). Talent and society. S. Van Nostrand and Company, Inc., Princeton, New Jersey.

Suval, Elizabeth M. 1972. Selectivity in migration: A review of literature. North Carolina Agricultural Experiment Station Technical Bulletin No. 209. 79 p.

Taeuber, K. and Taeuber A. 1964. White migration and socio-economic differences between cities and suburbs. American Sociological Review 29(5): 718-729.

Tarver, J. D. 1961. Predicting migration. Social Forces 39: 207-213.

Tarver, J. D. 1964. Occupational migration differentials. Social Forces 43: 231-241.

Thomas, Brinley. 1930. The migration of labour into the Glamorgenshire coal fields. Economica 10: 27-45.

Thomas, Dorothy S. 1938. Research memorandum on migration differentials. Social Science Research Council Bulletin 43, New York. 423 p.

Thomlinson, Ralph. 1961. A model for migration analysis. American Statistical Association Journal 56: 675-686.

Tintner, Gerhard. 1965. Econometrics. John Wiley and Sons, Inc., New York. 297 p.

Trott, Charles, E. 1972. Differential responses in the decision to migrate. Regional Science Association: Papers and Proceedings 28: 203-219.

Vanderamp, John. 1968. Interregional mobility in Canada: A study of the time pattern of migration. Canadian Journal of Economics 1(3): 595-608.

Vedder, R. K., L. E. Gallaway, and G. L. Chapin. 1970. The determinants of internal migration in West Germany, 1967. Weltwirtschaftliches Archiv CVI: 309-317.

Weinberg, Abraham A. 1961. Migration and belonging: A study of mental health and personal adjustment in Israel. Studies in Social Life V. Martinus Nijhoff, The Hague. 402 p.

Wolpert, Julian. 1965. Behavioral aspects of the decision to migrate, Papers of the Regional Science Association 15: 159-169.

Zeckhauser, Richard and Elmer Shaefer. 1968. Public policy and normative economic theory p. 27-101. In Raymond A. Bauer and Kenneth J. Gergen (ed.). The Study of policy formation. The Free Press. New York. 392 p.

Zelinsky, Wilbur. 1962. Changes in the geographic patterns of rural population in the United States, 1790-1960. Geographical Review 52: 492-524.

Zipf, George Kingsley. 1946. The P_1P_2/D hypothesis: On the intercity movement of persons. American Sociological Review 11(6): 677-687.

APPENDIXES

APPENDIX A

MIGRATION STUDY QUESTIONNAIRE
STAR VALLEY HIGH SCHOOL, 1946-47 GRADUATES

No._____

C-O-N-F-I-D-E-N-T-I-A-L

1.0 We are interested in knowing where you have lived since graduating from high school. Please list your present community first.

Name of city or town	State	Year you moved there	Marital Status				No. of children	Why did you move there?				
			Single	Married	Widowed	Divorced		Job	School	Military	Mission	Other

2.0 When you consider a place to live, which of the following community characteristics do you feel is most important? Which comes next? Which third and so forth. Please rank from 1 (most important) to 10 (least important).

Community Characteristics or Services	Rank
A. Employment opportunities.	____
B. Public school programs.	____
C. Recreational opportunities.	____
D. Health and medical facilities	____
E. Religious programs.	____
F. Friendly people	____
G. Sewage, water, streets, electricity, etc.	____
H. Surrounding physical environment.	____
I. As a place to raise children.	____
J. Other (specify)	____

3.0 What is the major advantage of living here in your present community? _____

_____.

4.0 What is the major disadvantage of living here in your present community? _____

_____.

5.0 Where do you, yourself, feel is really home? Please check appropriate box.

Here in your present community	
Elsewhere (specify)	
Don't know	

6.0 If you could choose, where would you prefer to retire?

Here in your present community	
Elsewhere (specify)	
Don't know	

7.0 If you could choose, where would you prefer to be buried?

Here in your present community	
Elsewhere (specify)	
Don't know	

8.0 Do you consider your present community as permanent? Please check appropriate box.

Yes ☐

No ☐

Explain why or why not _____

9.0 How satisfied are you with your way of life in your present community?

Very satisfied	
Pretty satisfied	
Not very satisfied	
Not at all satisfied	

10.0 Here is a list of clubs and organizations some people belong to. Please check those you and/or your spouse are presently active in.

	You are active	Spouse is active
Farm groups	____	____
Church connected groups	____	____
Veteran's organizations	____	____
Fraternal organizations (e.g., Lions, Rotary)	____	____
Labor unions	____	____
Business or civic groups	____	____
Parent-Teacher associations	____	____
Youth groups (Scout leaders, etc.)	____	____
Neighborhood clubs, or community centers	____	____
Sports teams, country clubs	____	____
Professional groups	____	____
Political clubs or organizations	____	____
Charitable and welfare organizations	____	____
Other (specify)	____	____

11.0 We are interested in how much people travel. In the last year, how many trips did you take to places 100 miles or more away from your present community?

None ☐
1-2 ☐
3-5 ☐
6-9 ☐
10 or more ☐

12.0 Some people really enjoy taking trips, while others prefer not to. How do you feel about it?_____.

13.0 How many automobiles does your family currently own?

None ☐
Two ☐
Three or more ☐

14.0 We would like to know about the nature of all significant jobs you (or your spouse if he is the principal wage earner) have held since graduating from high school. Please begin with the present and work back. Please cover all periods since graduation from high school including any time you may have been out of work.

Time period		Were you				If employed		Approximate Yearly Income
Begin Mo./Yr.	End Mo./Yr.	self-employed	employed full time	employed part time	unemployed	Occupation	Location	

15.0 For someone in your present line of work, how does the rate of pay in your present community compared with other places?

- Higher ☐
- About the same ☐
- Lower ☐
- Don't know ☐

16.0 For someone in your present line of work, how much work is there in your present community compared with other places?

- More ☐
- About the same ☐
- Less ☐
- Don't know ☐

17.0 Are you covered by and old age pension plan other than social security?

- Yes ☐
- No ☐ (Skip to Q.20.0)

18.0 If yes, what kind of plan is it?

- Company run plan ☐
- Union plan ☐
- Other ☐ (Specify)_____

19.0 With some pension plans a person loses his right to the pension if he changes employers, but with other plans he doesn't. How is it with your plan?

- Lose right ☐
- Do not lose right ☐
- Other ☐ (Specify)_____.

20.0 Are you covered by government unemployment compensation so you would receive regular payments for a certain length of time if unemployed or laid off?

- Yes ☐
- No ☐
- I don't know ☐

21.0 Are you covered by any other unemployment compensation plan?

Yes ☐

No ☐ (Skip to Q.24.0)

22.0 If yes, what kind of plan is it?

Company run plan ☐

Union plan ☐

Other ☐ (Specify) _____.

23.0 With some unemployment plans a person loses his right to compensation if he moves to another state. How is it with your plan?

Lose right ☐

Do not lose right ☐

Other ☐ (Specify) _____.

24.0 Since graduation from high school have you at any time traveled back and forth to a job more than 50 miles from home?

Yes ☐

No ☐

If yes, why?_____.

25.0 When you consider a job for yourself (or for your spouse) which thing on the following list is most important? Which comes next, third, and so forth? Please rank from 1 (most important) to 10 (least important).

An occupation in which	Rank
A. Income is steady from year to year.	____
B. There's no danger of being fired or laid off.	____
C. Working hours are short, lots of free time.	____
D. Changes for advancement are good.	____
E. The work is important, gives feeling of accomplishment.	____
F. You can be your own boss.	____
G. Good health insurance and retirement plans.	____
H. Gives opportunity to serve other people	____
I. Annual income is high	____
J. Other (specify).	____

NOTE: IF YOU ARE THE PRINCIPAL WAGE EARNER IN YOUR FAMILY, PLEASE ANSWER THE FOLLOWING QUESTIONS IN TERMS OF YOUR SPOUSE. IF YOU ARE A WOMAN AND HAVE BEEN ANSWERING THE ABOVE JOB-RELATED QUESTIONS IN TERMS OF YOUR HUSBAND, PLEASE ANSWER THE QUESTIONS IN THIS SECTION IN TERMS OF YOURSELF.

26.0 Has your spouse ever worked?

Yes ☐
No ☐ (Skip to Q.31.0)

27.0 If yes, is your spouse working at the present time?

Yes ☐
No ☐ (Skip to Q.31.0)

28.0 If yes, what type of work does your spouse do?_____.

29.0 If yes to Q.27.0, is your spouse self-employed, or employed by someone else?

Self-employed ☐
Employed by someone else ☐

30.0 If yes to Q.27.0, does your spouse work full-time or part-time?

Full-time ☐
Part-time ☐

31.0 About how much total income did you and your spouse make during 1973? That is, before taxes.

Under $3000	☐	$15000-$17999	☐
$3000-$5999	☐	$18000-$20999	☐
$6000-$8999	☐	$21000-$23999	☐
$9000-$11999	☐	$24000-$26999	☐
$12000-$14999	☐	$27000 and over	☐

NOTE: ANSWER THE QUESTIONS ON THIS PAGE ONLY IF YOU WERE UNEMPLOYED OR LAID OFF AT ANY TIME IN THE LAST TWELVE MONTHS. IF NOT UNEMPLOYED OR LAID OFF, SKIP THIS PAGE AND GO TO Q.39.

32.0 Counting all the spells of unemployment, how many weeks have you been unemployed during the last twelve months? _____(weeks).

33.0 What is (was) the reason for your unemployment during the past twelve months? _____.

34.0 During the past twelve months did you receive any unemployment benefits from:

The state unemployment compensation office?	Yes ☐	No ☐
The company where you had worked?	Yes ☐	No ☐
A union, including any strike benefits?	Yes ☐	No ☐

35.0 If you hadn't been laid off or unemployed about how much income would you have made in the last twelve months?_____.

36.0 About how much income did you make as things were, counting unemployment compensation as part of your earnings?_____.

37.0 What kinds of things did you do to make ends meet with the smaller income?

Did you borrow money?	Yes ☐	No ☐
Did you use up any past savings?	Yes ☐	No ☐
Did you get any help from relatives?	Yes ☐	No ☐
Have you been (are you) on relief?	Yes ☐	No ☐
Have you moved so as to live cheaper?	Yes ☐	No ☐
Are you behind on your payments?	Yes ☐	No ☐
Did someone else in the family go to work to help out?	Yes ☐	No ☐

Anything else? (Specify)_____.

38.0 If you were offered a job that meant steady work but it was more than 100 miles from your present community, would you take it?

Yes ☐
No ☐
Why? _____.

39.100 What first brought up the idea of moving here to your present community?_____.

39.101 How long had you been seriously thinking of moving before you moved here to your present community?_____.

39.102 When you moved here to your present community, did you consider moving to other areas?

Yes ☐

No ☐

If yes, why did you decide to come here to your present community rather than to some other place?_____.

39.103 Why did you move just at the time you did?_____

_____.

39.104 Did you (your spouse) have a new job all arranged here in your present community before you moved here?

Yes ☐

No ☐

If no, what did you (your spouse) know about the job situation here in your present community before you moved?_____.

39.105 Did you have any friends or relatives living here in your present community before you moved here?

Yes ☐

No ☐

If yes, did they have anything to do with your move?

Yes ☐

No ☐

If yes, in what ways?_____.

39.106 Here is a list of ways people sometimes find out about the job situation in another town. Did you (your spouse) get any information about jobs in your present community through any of these sources?

Information Source		If Yes: What did you learn?	If Yes: Was the info. helpful?
Newspaper Ads?	☐ No ☐ Yes →		
A state employment agency?	☐ No ☐ Yes →		
A private employment agency?	☐ No ☐ Yes →		
Representatives of an employer?	☐ No ☐ Yes →		
A union	☐ No ☐ Yes →		
A special trip to look over situation?	☐ No ☐ Yes →		
Friends or relatives?	☐ No ☐ Yes →		
Any other way? (Specify)	☐ No ☐ Yes →		

39.107 Were you transferred to your present community by your employer?

Yes ☐

No ☐

If yes, did you come here to your present community because you wanted to, or because the employer wanted you here?

Because of own desires ☐

Because of employer ☐

39.108 Did your employer pay any of the moving expenses?

Yes ☐

No ☐

If yes, about how much did the move cost your employer?_____.

What did the money cover?_____.

39.109 Did you have any (other) expenses in connection with the move?

Yes ☐

No ☐

If yes, about how much were they?_____.

What did that money cover?_____.

39.110 How did the move affect:

Any seniority rights you (your spouse) may have had in employment?

_____.

Any pension or retirement plans you (your spouse) had?_____.

_____.

39.111 As a result of the move, was total family income

Raised? ☐

Lowered? ☐

No change? ☐

39.112 In general how do you (your spouse) like your (his) work here in your present community compared to the work you (he) did elsewhere?_____

_____.

39.113 Do you own your own home in your present community, or are you renting?

Own a home ☐
Renting ☐
Other ☐ (Specify)_____.

39.114 All things considered was the move to your present community a good idea, or a poor idea?

Good idea ☐
Poor idea ☐
Why?_____.

39.115 About how often did you return to Star Valley last year?

Never ☐
1-2 times ☐
3-5 times ☐
6-9 times ☐
10 or more times ☐

NOTE: WE HAVE JUST ASKED YOU SOME QUESTIONS ABOUT THE MOVE TO YOUR PRESENT COMMUNITY. NOW WE WOULD LIKE TO ASK YOU A FEW OF THE SAME QUESTIONS ABOUT YOUR FIRST MOVE AWAY FROM STAR VALLEY (OTHER THAN FOR SCHOOL, FOR A MISSION, OR FOR NON-CAREER MILITARY). IF YOU HAVEN'T MOVED AGAIN SINCE YOU FIRST LEFT STAR VALLEY, PLEASE SKIP THIS SECTION AND GO TO Q.40.0.

39.116 What first brought up the idea of leaving Star Valley?_____
_____.

39.117 How long had you been seriously thinking about leaving Star Valley before you did it?_____.

39.118 When you left Star Valley, did you consider moving to places other than where you did?

Yes ☐
No ☐
If yes, what made you decide to go where you did?_____.

39.119 Why did you move just at the time you did?_____
_____.

39.200 Have you ever thought seriously about moving away from Star Valley?

Yes ☐

No ☐ (Skip to Q.39.206)

If yes:

39.201 When was that?_____.

39.202 Why did you think of moving?_____.

_____.

39.203 Where did you think of going to live?_____

_____.

39.204 Did you (your spouse) look for work there?

No ☐

Yes ☐ → How did you (your spouse find out about the job situation there?_____.

39.205 Why did you decide to stay in Star Valley?_____

_____.

39.206 If you were to move to a community outside of Star Valley, which community on this list would be your first choice, which secound, third and so forth? Please rank from 1 (first choice) to 10 (last choice).

Community	Rank
A. Idaho Falls	____
B. Logan	____
C. Ogden	____
D. Rock Springs	____
E. Salt Lake	____
F. Provo	____
G. Laramie	____
H. Denver	____
I. Los Angeles	____
J. Other (specify)	____

40.0 Were you raised on a farm?

Yes ☐

No ☐ (Skip to Q.51.0)

41.0 About how many acres was the farm? _____ (acres).

42.0 Did your family (check the appropriate box(es) and fill in short answer):

Own the land? ☐ Acres owned _____.

Rent the land? ☐ Acres rented _____.

Lease government land? ☐ No. of permits _____.

43.0 What crops were raised?

Wheat ☐

Alfalfa ☐

Barley ☐

Oats ☐

Pasture ☐

Other ☐ (Specify)_____.

44.0 About how many dairy cows were on the farm?_____.

45.0 About how many beef cows were on the farm?_____.

46.0 About how many horses were on the farm? _____.

47.0 About how many sheep were on the farm?_____.

48.0 About how many chickens were on the farm?_____.

49.0 What other poultry and animals were on the farm?_____.

About how many of each?_____.

50.0 Did your family do any additional work, besides running your own farm to supplement the family income?

Yes ☐

No ☐

If yes, what kind of work?_____.

51.0 If you were not raised on a farm, what kind of business was your father or guardian in?_____.

52.0 Did your family do any additional work besides that?_____

_____.

53.0 What kind of work did you, yourself, do when not in school?_____

_____.

54.0 Was your family ever on relief during your high school years?

Yes ☐

No ☐

If yes, about how long?_____

55.0 Was the head of your family unemployed for any time during your high school years?

Yes ☐

No ☐

If yes, about how long?_____.

56.0 When you graduated from nigh school were your parents:

Living together ☐

Separated ☐

Divorced ☐

Mother dead ☐

Father dead ☐

57.0 How many brothers did you have at the time you graduated from high school?_____.

58.0 How many sisters did you have at the time you graduated from high school?_____.

59.0 How many other people besides your immediate family were living in your home at the time you graduated from high school?_____.

60.0 During high school did you hold any school offices?

Yes ☐

No ☐

If yes, which one(s)_____.

61.0 Here is a list of some high school and church organizations and activities Please check any you were active in while at Star Valley High School.

Sports teams. . . . . ☐
Music groups (band, voice, etc.). . . . . ☐
Dramatic productions, groups. . . . . ☐
Forensic (speech, debate) groups. . . . . ☐
FFA . . . . . ☐
FHA . . . . . ☐
Honor societies . . . . . ☐
Special interest clubs (photography, chess, etc.) . . . . . ☐
Student government. . . . . ☐
Church-connected groups . . . . . ☐
Booster, pep clubs. . . . . ☐
Girls League, Boys League . . . . . ☐
Boy Scouts, Girl Scouts . . . . . ☐
Other (Specify)_____.

62.0 After you graduated from high school, did you have any additional formal academic or vocational training?

Yes ☐
No ☐

If yes, please describe the nature and amount of training_____

_____.

If yes, where did you receive this training?_____.

63.0 Did you serve a mission for your church?

Yes ☐
No ☐

If yes, where_____.

64.0 When did you first get married? (Date)_____.

65.0 Where was your spouse from?_____.

66.0 Where did you meet your spouse?_____.

67.0 Did a change in your marital status (such as marriage ordiance) influence any of your moves in any way?

Yes ☐
No ☐

If yes, when, where_____.

THANK YOU SO MUCH FOR YOUR COOPERATION IN FILLING OUT THIS QUESTIONNAIRE. PLEASE BE ASSURED THAT YOUR ANSWERS WILL BE COMPLETELY CONFIDENTLY AND WILL NOT BE USED FOR PURPOSES OTHER THAN THIS STUDY.

APPENDIX B

QUESTIONNAIRE CARD CODE

Card 1

Key	Column
Number in Study	1-3
Resident of Star Valley or no 0 = Star Valley resident 1 = non Star Valley resident	4
Sex 0 = male 1 = female	5
Present Marital Status 0 = single 1 = married 2 = widowed 3 = divorced	6
Number of Children	7-8
High School G.P.A.	9-11
Ohio State Psychological Scores	12-14
Education 0 = no response 1 = high school graduate 2 = attended college; did not graduate 3 = graduated college 4 = advanced degree-university 5 = attended vocational school	15
Where received post high school education 0 = no response; none 1 = Wyoming 2 = Utah 3 = Idaho 4 = states other than Utah, Idaho, Wyoming 5 = Utah, Idaho, or Wyoming, and/or other states	16
Work status (current) 0 = no response 1 = self employed 2 = employed full time 3 = employed part time 4 = unemployed	17

Key	Column
Current occupation	18
0 = no response	
1 = professional, technical	
2 = other white collar	
3 = blue collar (including farm laborer)	
4 = farm owner, manager	
5 = not in labor force; head is housewife, retired, unemployed	
Current family income	19-20
0 = no response	
1 = under $3000	
2 = $3000-$5999	
3 = $6000-$8999	
4 = $9000-$11999	
5 = $12000-$14999	
6 = $15000-$17999	
7 = $18000-$20999	
8 = $21000-$23999	
9 = $24000-$26999	
10 = $27000 and over	
Number of moves since high school	21-22
Number of moves which were returns to Star Valley	23
Number of moves which were returns to places other than Star Valley	24
Number of places where length of residence was:	
one year or less	25-26
two	27-28
three	29-30
four	31-32
five	33-34
six	35-36
seven	37-38
eight	39-40
nine	41-42
ten or more	43-44
Moved in last year	45
0 = no	
1 = yes	
Moved in last five years	46
0 = no	
1 = yes	
Moved since high school graduation	47
0 = no	
1 = yes	

Key		Column
63.0	Served a mission for church 0 = no; no response 1 = yes	48
	If yes above, where 0 = no response; did not serve 1 = intermountain U.S.A. 2 = west U.S.A. 3 = east U.S.A. 4 = foreign	49
	Served in Armed Forces 0 = no; no response 1 = yes	50
	Left Star Valley for school 0 = no; no response 1 = yes	51
	Left Star Valley for mission, military and/or school 0 = no; no response 1 = yes	52
	Had a permanent residence in Star Valley after graduation 0 = no; no response 1 = yes	53
	At least once had a permanent residence outside Star Valley (for reasons other than military, mission, and school) 0 = no; no response 1 = yes	54
	Whether moved during years 1946-52 0 = no; no response 1 = yes	55
	Whether moved during years 1953-59 0 = no; no response 1 = yes	56
	Whether moved during years 1960-66 0 = no; no response 1 = yes	57
	Whether moved during years 1967-73 0 = no; no response 1 = yes	58
	Number of moves during 1946-52	59-60

Key		Column
	Number of moves during 1953-59	61-62
	Number of moves during 1960-66	63-64
	Number of moves during 1967-73	65-66
	Age at time of first move 0 = no response, did not move 1 = 18-24 (years 1946-52) 2 = 25-31 (years 1953-59) 3 = 32-38 (years 1960-66) 4 = 39-45 (years 1967-73)	67
	Work status at time of first move 0 = no response; did not move 1 = self employed 2 = employed full time 3 = employed part time 4 = unemployed	68
	Occupation at time of first move 0 = no response; did not move 1 = professional; technical 2 = other white collar 3 = blue collar (included farm laborer) 4 = farm owner, manager 5 = Not in labor force; head is housewife, retired, or unemployed	69
	Characteristics of county of destination 0 = no response; did not move 1 = county is in a SMSA 2 = county is non-SMSA	70
39.116	What first brought up idea to leave Star Valley? 0 = no response; did not move 1 = economic reasons only 2 = both economic and non-economic reasons 3 = non-economic reasons only	41
39.117	How long had you been thinking of moving? 0 = no response; did not move 1 = less than 1 year 2 = 1-2 years 3 = 2-3 years 4 = 3-4 years 5 = 4 years or more	72
39.118	Did you consider going to other places? 0 = no; no response; did not move 1 = yes	73

74

Key	Column
If yes, why did you go where you did? 0 = no response, did not move 1 = economic reasons only 2 = both economic and non-economic reasons 3 = non-economic reasons only	74
39.119 Why did you move just at time you did? (Economic reasons) 0 = no response; did not move 1 = transfer, reassignment 2 = unemployment, move to find work 3 = to take a job; move for higher play or steadier work 4 = other economic reasons (includes housing, graduation from school, etc. 5 = no economic or occupational reasons given	75
Distance of move from Star Valley 0 = no response; did not move 1 = less than 15 miles 2 = 20-40 miles 3 = 50-90 miles 4 = 100-190 miles 5 = 200-390 miles 6 = 400-590 miles 7 = 600-990 miles 8 = 1000-1490 miles 9 = 1500 or over	76
Number of card (1)	80

Card 2

Number in Study	1-3
Age at time of most recent move 0 = no response; did not move 1 = 18-24 (years 1946-52) 2 = 25-31 (years 1953-59) 3 = 32-38 (years 1960-66) 4 = 39-45 (years 1967-73)	4
Characteristics of county of destination (most recent move) 0 = did not 1 = county is in SMSA 2 = county is non-SMSA	5

Key	Column
Distance of move from last place of residence 0 = no response; did not move 1 = less than 15 miles 2 = 20-40 miles 3 = 50-90 miles 4 = 100-190 miles 5 = 200-390 miles 6 = 400-590 miles 7 = 600-990 miles 8 = 1000-1490 miles 9 = 1500 or over	6
Current distance from Star Valley 0 = still living in Star Valley 1 = 20-40 miles 2 = 50-90 miles 3 = 100-190 miles 4 = 200-390 miles 5 = 400-590 miles 6 = 600-990 miles 7 = 1000-1490 miles 8 = 1500 or over	7
39.100 What first brought up idea of moving (to present community)? 0 = no response; did not move 1 = economic reasons only 2 = both economic and non-economic reasons 3 = non-economic reasons only	8
39.101 How long had you been thinking of it? 0 = no response; did not move 1 = less than one year 2 = 1-2 years 3 = 2-3 years 4 = 3-4 years 5 = 4 years or more	9
39.102 Did you consider moving elsewhere? 0 = no; no response; did not move 1 = yes	10
If yes, why did you come here? 0 = no response; did not move 1 = economic reasons only 2 = both economic and non-economic reasons 3 = non-economic reasons only	11

Key	Column
39.103 Why did you move just at the time you did? (Economic reasons) 0 = no response; did not move 1 = transfer; reassignment 2 = unemployment; move to find work 3 = to take job; higher rate of pay; steadier work 4 = other economic reasons (includes housing, graduation from school, thus enter job market, etc.) 5 = no economic or occupational reasons given	12
39.104 Did you have a job all arranged before you moved? 0 = no; no response 1 = yes	13
If no, what did you know about the job situation? 0 = no response 1 = nothing, very little 2 = presumed employment available	14
39.105 Did you have friends, relatives here? 0 = no; no response 1 = yes	15
If yes, did they have anything to do with move? 0 = no; no response 1 = yes	16
If yes, in what ways? 0 = no response 1 = enhanced social environment 2 = helped adjust to community 3 = helped find job 4 = other ways	17
39.106 Did you learn anything about job through newspaper ads? 0 = no; no response; did not move 1 = yes	18
A state employment agency 0 = no; no response 1 = yes	19
A private employment agency 0 = no; no response 1 = yes	20
Representatives of an employer 0 = no; no response 1 = yes	21

Key		Column
	A union 0 = no; no response 1 = yes	22
	A special trip to look situation over 0 = no; no response 1 = yes	23
	Friends or relatives 0 = no; no response 1 = yes	24
	Any other way 0 = no; no response 1 = yes	25
39.107	Were you transferred? 0 = no; no response 1 = yes	26
	If yes, did you move because you wanted to or because employer wanted you to? 0 = no response 1 = because of own desires 2 = because of employer 3 = for both reasons	27
39.108	Did employer pay any of moving expenses? 0 = no; no response 1 = yes	28
	If yes, how much did it cost employer? 0 = no response 1 = unknown 2 = $0-$199 3 = $200-399 4 = $400-$599 5 = $600-$799 6 = $800-$999 7 = $1000 and over	29
	If yes, how much did it cover? 0 = no response 1 = all expenses 2 = partial transportation of possessions only 3 = mileage 4 = other incidentals	30
39.109	Did you have any other expenses? 0 = no; no response 1 = yes	31

Key	Column
If yes, how much were they? 0 = no response 1 = unknown 2 = $0-$199 3 = $200-$399 4 = $400-$599 5 = $600-$799 6 = $800-$999 7 = $1000 and over	32
If yes, what did it cover? 0 = no response 1 = all expenses 2 = partial transportation of possessions 3 = personal expenses 4 = housing 5 = other	33
39.110 How did move affect seniority rights? 0 = no response 1 = no effect 2 = damaged them 3 = improved them	34
How did move affect pension, retirement? 0 = no response 1 = no effect 2 = damaged them 3 = improved them	35
39.111 As a result of move was family income raised? 0 = no response 1 = raised 2 = lowered 3 = no change	36
39.112 In general, how do you like work here? 0 = no response 1 = better 2 = about the same 3 = not as well	37
39.113 Do you own your own home? 0 = no response 1 = own a home 2 = renting 3 = other	38
39.114 All things considered was a move a good idea? 0 = no response 1 = good idea 2 = poor idea 3 = both	39

Key	Column
Why? 0 = no reason 1 = improved employment 2 = improved social environment 3 = other reasons	40
39.115 How often did you return to Star Valley last year? 0 = no response 1 = never 2 = 1-2 times 3 = 3-5 times 4 = 6-9 times 5 = 10 or more times	41
39.200 Have you ever thought of leaving Star Valley? 0 = no response; not applicable 1 = no 2 = yes	42
39.201 If yes, when was that? 0 = no response 1 = years 1946-52 2 = years 1953-59 3 = years 1960-66 4 = years 1967-74	43
39.202 Why did you think of moving? 0 = no response 1 = to take a job (higher pay, steadier work) 2 = to find a job (unemployed) 3 = for part time temporary work 4 = to get out of Star Valley for awhile 5 = other; school	44
39.203 Where did you think of going to live? 0 = no response 1 = Wyoming (except Star Valley) 2 = Idaho 3 = Utah 4 = other U.S.A. states 5 = elsewhere in world	45
39.204 Did you look for work there? 0 = no response 1 = no 2 = yes	46
39.205 Why did you decide to stay in Star Valley? 0 = no response 1 = prefer social environment 2 = prefer physical environment 3 = prefer job 4 = other reasons	47

Key	Column
39.206 Where would you move? Rank in order of choice	
Rank 10 - most preferred	
Rank 1 - least preferred	
Rank 0 - no response	
Idaho Falls	48-49
Logan	50-51
Ogden	52-53
Rock Springs	54-55
Salt Lake	56-57
Provo	58-59
Laramie	60-61
Denver	62-63
Los Angeles	64-65
Other	66-67
Moved at least once during 1956-61	68
0 = no response	
1 = yes	
Work status during years 1956-61 (end of period)	69
0 = no response	
1 = self employed	
2 = employed full time	
3 = employed part time	
4 = unemployed	
Occupation during years 1956-61 (end of period)	70
0 = no response	
1 = professional, technical	
2 = other white collar	
3 = blue collar (includes farm laborer)	
4 = farm owner, manager	
5 = not in labor force; head is housewife, retired, or unemployed	
Characteristics of county of residence in 1956 or for repeated moves county of residence prior to last move	71
0 = no response	
1 = SMSA	
2 = non-SMSA	
Distance of last move in period	72
0 = no response; did not move	
1 = less than 15 miles	
2 = 20-40 miles	
3 = 50-90 miles	
4 = 100-190 miles	
5 = 200-390 miles	
6 = 400-590 miles	
7 = 600-990 miles	
8 = 1000-1490 miles	
9 = 1500 or over	

Key	Column
Distance from Star Valley at end of period 0 = still living in Star Valley 1 = 20-40 miles 2 = 50-90 miles 3 = 100-190 miles 4 = 200-390 miles 5 = 400-590 miles 6 = 600-990 miles 7 = 1000-1490 miles 8 = 1500 or over	73
Moved at least once during 1966-71 years 0 = no; no data; did not move 1 = yes	74
Work status during time period 1966-71 years (end of period) 0 = no response 1 = self employed 2 = employed full time 3 = employed part time 4 = unemployed	75
Occupation during years 1966-71 (end of period) 0 = no response 1 = professional, technical 2 = other white collar 3 = blue collar (includes farm laborer) 4 = farm owner, manager 5 = not in labor force; head is housewife, retired, or unemployed	76
Characteristics of county of residence in 1966 or for repeated moves, county of residence prior to last move 0 = no response 1 = SMSA 2 = non=SMSA	77
Distance of last move in period 0 = no response; did not move 1 = less than 15 miles 2 = 20-40 miles 3 = 50-90 miles 4 = 100-190 miles 5 = 200-390 miles 6 = 400-590 miles 7 = 600-990 miles 8 = 1000-1490 miles 9 = 1500 or over	78

Key	Column
Distance from Star Valley at end of period (in 1971) 0 = still living in Star Valley 1 = 20-40 miles 2 = 50-90 miles 3 = 100-190 miles 4 = 200-390 miles 5 = 400-590 miles 6 = 600-990 miles 7 = 1000-1490 miles 8 = 1500 and over	79
Number of card (2)	80

Card 3

Number in study	1-3
2.0 Community characteristics ranked Rank 10 - most preferred Rank 1 - least preferred Rank 0 - no response	
employment opportunities	4-5
public school programs	6-7
recreational opportunities	8-9
health and medical facilities	10-11
religious programs	12-13
friendly people	14-15
sewage, water, streets, etc.	16-17
surrounding physical environment	18-19
as a place to raise children	20-21
other	22-23
3.0 What is major advantage of living here? 0 = no response; none 1 = employment opportunities 2 = good place to raise children 3 = social environment, schools, church 4 = physical environment 5 = other social factors 6 = other economic factors	24
4.0 What is major disadvantage of living here? 0 = no response; none 1 = lack of employment 2 = lack of services 3 = isolation, small city size, lack of cultural development 4 = physical environment 5 = other social factors (too far from home, pollution, traffic) 6 = other economic factors	25

Key		Column
5.0	Where is home? 0 = no response 1 = Star Valley 2 = present community (if not currently Star Valley) 3 = elsewhere (other than Star Valley) 4 = do not know	
6.0	Where would you retire? 0 = no response 1 = Star Valley 2 = present community (if not currently living in Star Valley 3 = elsewhere (other than Star Valley) 4 = do not know	27
7.0	Where do you prefer to be buried? 0 = no response 1 = Star Valley 2 = present community (if not currently living in Star Valley) 3 = elsewhere (other than Star Valley) 4 = do not know	28
8.0	Is present community permanent? 0 = no; no response 1 = yes	29
	If yes, why? 0 = no response 1 = permanent employment here 2 = home, friends, relatives here 3 = no desire to move 4 = other social factors 5 = other economic factors	30
	If no, why not? 0 = no response 1 = job temporary or transfer 2 = other	31
9.0	How satisfied are you with your way of life here? 0 = no response 1 = very satisfied 2 = pretty satisfied 3 = not very satisfied 4 = not at all satisfied	32

Key		Column
10.0	List of clubs and organizations. Check if you/your spouse are active. Use the following code: 0 = no response; neither is active 1 = you are active 2 = spouse is active 3 = both are active	
	farm groups	33
	church groups	34
	veteran's organizations	35
	fraternal organizations	36
	labor unions	37
	business or civic groups	38
	Parent-Teacher Association	39
	youth groups	40
	neighborhood clubs	41
	sports teams	42
	professional groups	43
	political clubs	44
	charitable/welfare organizations	45
	other	46
11.0	How many hundred-mile trips did you make? 0 = no response 1 = none 2 = 1-2 3 = 3-5 4 = 6-9 5 = 10 or more	47
12.0	Some people enjoy trips. How about you? 0 = no response; do not like them 1 = like them	48
13.0	How many automobiles do you own? 0 = no response 1 = none 2 = one 3 = two 4 = three or more	49
15.0	For someone in your present line of work, how does rate of pay here compare with other places? 0 = no response 1 = higher 2 = about the same 3 = lower 4 = do not know	50

Key		Column
16.0	For someone in your line of work, how much work is there here? 0 = no response 1 = more 2 = about the same 3 = less 4 = do not know	51
17.0	Are you covered by pension other than social security? 0 = no; no response 1 = yes	52
18.0	If yes, what kind? 0 = no response 1 = company run 2 = union plan 3 = other	53
19.0	If yes to 17.0, would you lose right if move? 0 = no response 1 = lose right 2 = do not lose right 3 = other	54
20.0	Are you covered by a government unemployment compensation? 0 = no; no response 1 = yes 2 = do not know	55
21.0	Covered by any other unemployment plan? 0 = no; no response 1 = yes	56
22.0	If yes, what kind of plan is it? 0 = no response 1 = company plan 2 = union plan 3 = other	57
23.0	If yes, would you lose right if moved? 0 = no response 1 = lose right 2 = do not lose right 3 = do not know	58
24.0	Since graduation from high school, have you ever traveled 50 miles to work? 0 = no; no response 1 = yes	59

Key		Column
	If yes, why?	60
	0 = no response	
	1 = temporary or part time job	
	2 = no housing	
	3 = no closer employment, nature of job	
	4 = other	
25.0	Job characteristics	
	Rank 10 - most preferred	
	Rank 1 - least preferred	
	Rank 0 - no response	
	income steady	61-62
	no danger of being fired	63-64
	work hours are short	65-66
	chances of advancement are good	67-68
	work is important	69-70
	you can be own boss	71-72
	good health insurance	73-74
	gives opportunity to serve others	75-76
	annual income high	77-78
Number of card (3)		80

Card 4

Number in study		1-3
25.0	(Continued)	
	other	4-5
26.0	Has spouse ever worked?	6
	0 = no; no response	
	1 = yes	
27.0	If yes, is your spouse working presently?	7
	0 = no; no response	
	1 = yes	
28.0	If yes, what type of work?	8
	0 = no response	
	1 = professional, technical	
	2 = other white collar, including clerical	
	3 = blue collar	
	4 = other	
29.0	If yes, is spouse self employed?	9
	0 = no response	
	1 = self employed	
	2 = employed by someone else	

Key		Column
30.0	If yes, does spouse work...? 0 = no response 1 = full time 2 = part time	10
40.0	Were you raised on a farm? 0 = no; no response 1 = yes	11
41.0	About how many acres was the farm? 0 = no response; none 1 = record number of acres	12-15
42.0	How much land did family own? 0 = no response 1 = record number of acres	16-19
	How much land did family rent? (or lease) 0 = no response; none 1 = record number of acres	20-22
43.0	What crops were raised? Wheat 0 = no; no response 1 = yes	23
	Alfalfa 0 = no; no response 1 = yes	24
	Barley 0 = no; no response 1 = yes	25
	Oats 0 = no; no response 1 = yes	26
	Pasture 0 = no; no response 1 = yes	27
	Other 0 = no; no response 1 = yes	28
44.0	About how many dairy cows were on the farm? 0 = no response; none 1 = record number	29-30

Key		Column
45.0	About how many beef cows? 0 = no response; none 1 = record number	31-33
46.0	About how many horses? 0 = no response; none 1 = record number	34-35
47.0	About how many sheep? 0 = no response; none 1 = record number	36-38
48.0	About how many chickens? 0 = no response; none 1 = record number	39-41
49.0	Other poultry animals Pigs 0 = no response; none 1 = record number	42-44
	Turkeys 0 = no response; none 1 = record number	45-48
	Other (total) 0 = no response; none 1 = record number	49-50
50.0	Did family do any additional work? 0 = no; no response 1 = yes	51
	If yes, what kind? 0 = no response; none 1 = teaching, school-related 2 = carpentry, construction 3 = trucking, forestry 4 = farm-related 5 = other	52
51.0	If not raised on farm, what kind of work did family do? 0 = no response 1 = small business owner 2 = bookeeper, manager, salesman 3 = blue collar laborer 4 = other	53
52.0	Any additional work? 0 = no; no response 1 = yes	54

Key		Column
53.0	What kind of work did you do when not in school? 0 = no response, did not work 1 = held odd jubs	55
54.0	Was your family ever on relief? 0 = no; no response 1 = yes	56
	If yes, how long? 0 = no response 1 = less than one year 2 = over one year	57
55.0	Was head of family ever unemployed during high school years? 0 = no; no response 1 = yes	58
	If yes, how long? 0 = no response 1 = less than one year 2 = more than one year	59
56.0	When you graduated from high school were your parents...? 0 = no response 1 = living together 2 = separated 3 = divorced 4 = mother dead 5 = father dead	60
57.0	How many brothers did you have?	61-62
58.0	How many sisters did you have?	63-64
59.0	How many other people in your home at time you graduated	65-66
60.0	During high school did you hold any school offices? 0 = no; no response 1 = yes	67
	Check any you were active in 0 = no; no response 1 = yes	
	sports teams	68
	music groups	69
	dramatic productions	70
	forensic	71
	FFA	72
	FHA	73
	honor societies	74

Key		Column
	special interest clubs	75
	student government	76
	church groups	77
	booster clubs	78
	girls or boys league	79
Number of card (4)		80

Card 5

Number in study		1-3
61.0	(Continued)	
	boy scouts, girld scouts	4
	other	5
64.0	When first married (give year only)?	6-7
65.0	Where was spouse from? 0 = no response 1 = Star Valley 2 = outside Star VAlley	8
66.0	Where did you meet spouse? 0 = no response 1 = in Star Valley 2 = while at school (outside Star Valley) 3 = other (not in Star Valley)	9
67.0	Did a change in marital status ever influence any of your moves? 0 = no response 1 = yes	10
1.0	State of current residence 0 = no response, cannot tell 1 = Wyoming 2 = Utah 3 = Idaho 4 = California 5 = other U.S.A. 6 = foreign	11
Number of card (5)		80

VITA

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Master of Arts

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