THE NEW WEST: PATTERNS OF INTERNAL MIGRATION AT THE BEGINNING

OF THE 21$^{\text{ST}}$ CENTURY

A Dissertation

by

LESLIE DENISE MEYER

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 2010

Major Subject: Sociology

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ABSTRACT

The New West: Patterns of Internal Migration at the Beginning of the 21st Century.

(December 2010)

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The New West, located in the interior West of the United States and includes the

states of Arizona, Colorado, Montana, Idaho, Nevada, New Mexico, Utah, and

Wyoming, is experiencing a large and growing population of internal migrants. This

dissertation utilized data from the United States Bureau of the Census' *County and City

Data Book: 2007* and other sources to analyze migration patterns at the structural-

contextual level and the individual-level in the New West. At the structural-contextual

level, ordinary least squares regression equations were estimated to predict a series of

relationships between ecological factors and net migration rates for nonmetropolitan

counties. Focus was placed on variables pertaining to amenity-based characteristics and

sustenance organization in order to predict net migration rates. Findings suggest that

areas with flourishing sustenance producing activities and more amenity-based

characteristics are experiencing higher levels of in-migration. At the individual-level,

multinomial logit equations were estimated for a sample of residents living in the state of

Nevada based on age, educational background, sex, marital status, and racial/ethnic

identification to predict the likelihood of an individual having engaged in an interstate migration into the state of Nevada. Individuals having recently migrated to Nevada were found to be older, having obtained higher levels of education, and of Hispanic or Asian descent. These findings confirm that both structural-contextual level and individual-level predictors are essential in the understanding the patterns of migration occurring in the New West.

DEDICATION

This dissertation is dedicated to my daughter Chelsea McKee and my very dear friend Melissa Hall.

ACKNOWLEDGEMENTS

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CHAPTER I

INTRODUCTION

Human ecology profiles the environment pertaining to social changes and the
adaptability of a population. The principle measure of these changes is migration.
Human ecology focuses especially on the malleability of populations and their ability to
survive given their response to change within the limits placed on them by their
particular type of organization and surrounding environments (Hawley 1986). Human
existence is dependent upon organization for its survival, as organization determines the
ability to thrive in a particular setting. Sustenance organization is the primary source of
continued growth of a particular area. Sustenance activities are the means with which
populations secure the necessities for continued maintenance and survival (Poston &
Frisbie 2006). The organization of each population differs with respect to the resources
and jobs available to it. If organization and balance are not maintained in an
environment, population size will decrease.

In addition to differences in sustenance organization, limits set by a population's
surroundings have proven to impact that population and its chances of existence. A
population's size and level of living are dependent upon and influenced by
environmental factors. These factors will tend to influence the increase or decrease in an
area's net migration rates. Not all migration decisions are economically based. As

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This dissertation follows the style of *Population and Development Review*.

individuals start to migrate in relation to environmental factors such as natural amenities and recreational opportunities, a new type of migration emerges, the amenity-based migration. In my dissertation I attempt to bring these ideas together in an exploration of the relationship between ecological factors, amenity-based migration and net migration.

My research will seek to determine if the differentials in sustenance organization and amenity-based factors among the nonmetropolitan counties in the New West are related to differences in rates of net migration. The human ecological framework set forth examines macro-level net migration rates for the nonmetropolitan counties of the New West which encompasses the eight states located within the Mountain Region of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming. The New West is a recent destination as a site of migration that prior to the 1990s did not exist (Hansen et al. 2002).

The New West is on the map now because the number of people moving in is increasing dramatically. It is an area of renovations; counties located in this region embrace characteristics which are rapidly transforming. The Old West brings about images of cowboys, dusty cattle drives, and a vast expanse of ranch land. It is characterized by extractive activities as well as the Federal Governments expenditures on power plants, military facilities, and dams. In contrast, the New West conveys images of its inhabitants sporting stylist ski wear, designer jeans, and portable laptops in which they can conduct business remotely as well as retirees seeking a lifestyle relating to nature and the slow pace of country living. (Jackson and Kuhlken 2006; Riebsame 1997; Shumway and Otterstrom 2001).

I am particularly interested in the flow of individuals within the United States as they move into and out of the New West. While the first part of my research will examine county level measures of migration, it is well-known that micro-level characteristics also influence migration decisions. Table 1 shows the net migration rates for the eight states comprising the New West. Comparatively, Nevada's net migration rate is considerably higher than any of the other states. This higher rate of net migration appears to have tapped the fundamental nature of the arrival of large numbers of migrants and leads me to explore in more detail, the individual characteristics of migrants to state of Nevada; this will be the second part of my dissertation, namely, a micro-level analysis of individual migration in Nevada.

Table 1 Domestic Migration: New West States 1995-2000

	Immigration	Outmigration	Net Migration
Arizona	187.2	112.9	**74.3**
Colorado	173.6	129.7	**43.8**
Idaho	160.2	130.5	**29.6**
Montana	131.9	138	**-6.1**
Nevada	301.8	150	**151.5**
New Mexico	122.1	139.9	**-17.8**
Utah	125.2	112.2	**13.1**
Wyoming	154.9	181.6	**-26.6**

Source: Franklin (2003)

Before I justify the importance of my dissertation in regards to its place in demographic research, I will first address my personal interest in migration to and from nonmetropolitan counties. I find this topic personally relevant because I was born and

raised in rural Kleberg County in South Texas. After graduating from high school, I was forced to move because the economy in Kleberg County was not vital enough to provide sufficient opportunities to support a family. Since graduation, I have lived both in the United States and in Germany. In the United States, I have lived in Texas, Georgia, Arizona, New York, and Louisiana. All of my moves were directly related to economics and employment, and as soon as the opportunity presented itself to return to Texas, I did. Many of the people I met while living in the previously mentioned states were not native to the area. Considering this displacement—theirs and mine—further, I find it fascinating that we are such a mobile country, in part because of choice, but in part because of necessity. Even today, the economy of my home county, Kleberg County, is suffering and its population is continually decreasing. Do my experiences mirror a pattern for migrants in nonmetropolitan counties?

Migration is a permanent change in residence. There are many different types of moves; all migrations are residential moves, but not all residential moves are migrations. When a residential move involves the crossing of a county line, it qualifies as a migration. However, if a county line is not crossed, the move is not considered to be a migration (Poston & Bouvier 2010). Migration is viewed as the predominant measure of change and adaptability for human populations with population change due to net migration at the heart of most of the demographic applications of ecological theory (Poston & Frisbie 1998). Net migration shows us a distinct pattern of people moving into and out of a specific area during a given time. If indeed the populace indicates a larger migration into said area, a positive net migration has occurred. However, if the

populace of said area decreases considerably, it can be said that a negative net migration has occurred (Franklin 2003). It is imperative that a population maintain order and balance for survival. If adequate resources are not found and tapped into, the means of survival become limited. The ability to draw sustenance from the surroundings of an area dictates the size of the population and its rate of survival. (Poston & Frisbie 1998; 2006).

Several questions drive my dissertation project. What is the relationship between ecological factors and net migration? Why are some counties in the New West experiencing gains in population while others are losing? What makes one county more attractive than another similar county? What are the circumstances and driving forces behind these migration moves? In my dissertation I present and examine an ecological model in an attempt to better understand the recent phenomenon of increased net migration occurring in the New West. In addition to the macro-level county analysis, my research will also include a detailed study of differential migration and non-migration in the state of Nevada between the years of 1995 and 2000.

The next chapter of this dissertation reviews the previous and foundational literature about human ecology, sustenance organization, ecological studies of migration, amenity-based migration, the New West, and micro-level factors of migration.

CHAPTER II

LITERATURE REVIEW

There is an extensive literature pertaining to ecological analyses of net migration; most of it has been written in the past five decades. I will review this literature in detail in order to demonstrate comprehensively the foundation for the hypotheses I will test in my dissertation and my general overall research questions. I first cover the general area of human ecology, and I then consider the secondary but still indispensable topics of ecological studies of migration, amenity-based migration, and interstate migration.

Human Ecology

The study of sociological human ecology had its primary genesis in 1950, when Amos Hawley published *Human Ecology: A Theory of Community Structure* (1950). Hawley drew on the earlier work of his mentor and colleague, R. D. McKenzie (1924; 1934), when writing his 1950 classic treatment; indeed, had McKenzie not died prematurely, *Human Ecology* would have been coauthored by both Hawley and McKenzie. Sociologists had undertaken ecological analyses decades earlier, but the bulk of those were only descriptive and heavily focused on spatial patterns (Park and Burgess 1924; 1925). Early sociologists such as McKenzie took a more sociological orientation in seeking answers about society's interaction with the environment. He and his counterparts theorized that if change occurs in relation to plants and animals in order for a species to survive, so must the human species change within its habitats to survive.

Amos Hawley went even further in his studies of human ecology to show that the key to human survival is found not only in the environment but in the population and its ability to organize itself for survival. These factors are all necessary to form equilibrium in a society. He also emphasized the importance of transportation as well as communication through technological advancement. It is evident that he realized the importance of organization and environment as they pertain to ecological analysis. Today, virtually all research that employs the perspective of sociological human ecology is grounded theoretically in some aspect of Hawley's 1950 work.

An ecological approach to human behavior seeks to determine not why individuals engage in certain actions, but under what circumstances certain actions are likely to occur (Hawley 1986). It is based on the assumptions that "populations have unit character and integrity, and that the properties and attributes of these populations are not necessarily the mere assumption of their component parts" (Poston and Frisbie 1998:29). The principle unit of analysis is the human population. Within human ecology, the principal measure of social change and adaptability for human populations is the process of migration. More specifically, the level of net migration is a function of differentials in organization and environmental factors (Poston and Frisbie 1998).

Within a human ecosystem, there exists a network of interdependences that are the basis on which sustenance organization occurs. We can conclude from studies undertaken by Hawley, Poston and Frisbie, and others that human ecology necessitates organization; indeed Poston and Frisbie explicitly assert that "Human ecology is concerned with the organizational aspects of human populations that arise from their

sustenance-producing activities" (2006:603). How a population is structured as related to such sustenance activities as services, manufacturing, mining, and farming impact that population and its chances of existence. Therefore, if a population's sustenance organization and adaptability to change are such that it has no cooperation within the unit, it is unlikely to survive.

Sustenance Organization

I now turn to a brief outline of various county level sustenance organization of relevance and importance in the nonmetropolitan counties in the New West. Sustenance organization is multidimensional and influences net migration. Many counties are dependent on farming as the predominant foundation of sustenance organization; however, farming for the most part has been declining considerably over the past 80 years (Shumway and Davis 1996). A negative association with net migration is demonstrated in agriculture on the small industry side, while large-scale or commercial farming should have a positive net migration as it provides more jobs due to large volume producers needing full-time labor, which is not the case with small-scale, family-operated agricultural settings. It is also unlikely that there will be a need for labor-intensive jobs on rangelands. When large areas of land are used extensively with advanced agricultural technology, there will not likely be substantial opportunities for employment (Poston and Frisbie 2006).

Mining, i.e., the extraction of geological matter from the earth, goes through a period called a "boom," which are the early stages of the resource being discovered and

mined. Once extraction becomes no longer economically prosperous, it stops
(Freudenburg 1992). Mining dependent counties tend hence to have lower incomes and
higher poverty rates than nonmining counties because when the boom ends, many
mining employees lose their jobs. In spite of being unemployed, these individuals often
continue to reside in the same area with the hope that jobs will return. This can cause a
rise in poverty in mining areas (Freudenburg and Wilson 2002). Mining thus does not
usually provide a dependable source of income in an area for any substantial
period. Technology has led to the mechanization of mining. Mechanization has, in turn,
lead to the ability to achieve higher levels of extraction with fewer workers due to
increased efficiency, which, over time, has reduced the need for labor and has increased
wages for those workers who have the technological skills needed to remain
employed. As some studies have shown, the negative association between mining and
net migration is due to a reduced demand for labor (Freudenburg and Wilson 2002;
Frisbie and Poston 1975; Poston and Frisbie 2006; Cromartie and Wardwell 1999).

As with mining, technological advancements have also affected
manufacturing. The manufacturing industry has undergone an economic restructuring
and has become progressively more efficient due to modern technology. The size of
manufacturing has been decreasing and globalization is resulting in large amounts of
low-skill work being outsourced overseas. Technology has allowed for big business to
replace workers with computers (Green and Sanchez 2007). Areas that once had large
amounts of employment opportunities in manufacturing now provide fewer benefits to
employees, thereby creating a lack of job security. With a reduction in demand for

labor, there is less of a pull for potential migrants. Therefore, manufacturing related to sustenance production is expected to be related negatively with net migration (Green and Sanchez 2007; Hirschl et al. 1998; Johnson and Cromartie 2006; Poston and Frisbie 2006).

Unlike mining and manufacturing, the service related industry is dependent on individual personalized contacts with the consumer. Therefore, as the demand for personalized services increases so does the demand for personnel to meet the demands of new customers (Frisbie and Poston 1975).

Service related industries are able to operate from virtually anywhere; with the rise of the industrial revolution as well as telecommunications and vast improvement in transportation, employment opportunities have increased (Riebsame 1997; Travis 2007). Service related industries are broad and encompass both personal related services and business related services. Personal services consist of businesses that provide consumers with individualized services such as beauty salons, dry cleaning, and amusement and recreational activities. Business related services include providing legal, banking, insurance, and car repair services, selling groceries, clothing, and so on. Services in both retail and personal activities tend to support positive net migration due to employment growth in both areas (Kasarda 1980; Poston and Frisbie 2006).

The economy of the West that was once based on the extraction of natural resources from the land is shrinking, and substantial growth is occurring in other areas. Natural resources that previously lured people for employment in areas of farming or mining now draw people in with aesthetically pleasing amenities. Areas high

in natural amenities are experiencing gains in population due to growth in retirement and increases in recreational demands (McGranahan 1999; Travis 2007). Many individuals are now engaging in migration for amenity-based reasons. Therefore, I turn next to further explain amenity based migration.

Amenity-based Migration

Human ecology also takes into account the surrounding physical and social environment of a population. A population's environment consists of anything external to it that influences that population. A working relationship with the environment must involve more than the individual and is achieved by finding harmony through the collective efforts derived within a population (Hawley 1986). Individuals want to live in areas they find physically and socially appealing. Consequently, not only has this shift created a pull for migration to these areas, but also the trend has resulted in a desire for more goods and services in these areas. For these reasons, this growth in population has generated employment opportunities (Vias 1999).

Amenity-based migration is seen as a change of population due to an area's natural amenities and recreational destinations, as well as its retirement opportunities (Chipeniuk 2008). The movement of individuals to areas that have features such as pleasant climates, bodies of water, wildlife, or vast amount of undeveloped wilderness has been shown to be a rapidly occurring phenomenon in the United States (McGranahan 2008). Many of the rural counties in the West are attracting recent immigrants with tourist-based economies that capitalize on natural amenities

(Rupasingha and Goetz 2004; Hunter et al. 2005). Employment and population growth are occurring rapidly in nonmetropolitan counties with high levels of natural amenities. The amount of amenities offered tends to be related to variances in population change, establishing a positive relationship between natural amenities and net migration. Migration into an area brings persons with occupational, organizational, and leadership skills. A growth in population can potentially stimulate the development and expansion of business and services (McGrannahan 1999; Nord and Cromartie 2000; Hansen et al. 2002; Jenson 2006; Krannich et al. 2006).

Those areas offering high levels of natural amenities often find business opportunities in recreational activities. Various communities have found that recreation is a lucrative business and have taken advantage of what their area has to offer. As tourism increases, new jobs are created that, in turn, stimulate the economy as a whole. As people become aware of these opportunities, they are often willing to migrate for the positive attributes available to them. We can also see a trend in retirees migrating into these areas as they are drawn to amenities and services that offer a relaxed environment as well as recreational experiences close to home (Riebsame 1997).

During the 1990s, nonmetropolitan recreational counties experienced substantial growth. A significant number of counties in the New West boasted a variety of recreational amenities. With the influx of tourists, the economy was enhanced, which created the need for local employment, thus reducing outmigration (Beale and Johnson 1998). Marcouiller and colleagues (2002) examined the complexities between the demands for recreational services and amenity based developments. Artificial amenity

enhancements like ski resorts and golf course developments were found to link together natural amenities and recreational pursuits.

Many retirement counties have also experienced widespread growth. As individuals reach retirement age, they are less concerned with employment opportunities and are free to choose where they live since they are no longer required to reside in close proximity to their place of employment. Because of this freedom, a propensity develops to migrate to areas with more amenities (Graves and Knapp 1988; Clark and Hunter 1992; Chen and Rosenthal 2008). In his study of the retirement boom in nonmetropolitan counties, Bennett (1996) discovered that the growing demands for services created by retirees provided year round employment and business opportunities, thus enabling more individuals to remain in the area instead of seeking employment elsewhere.

Starting in the 1990s, amenity-based migrants have increasingly been attracted to the New West. The New West is a combination of both physical environment and population. New West counties have high levels of natural amenities, high levels of employment in services, and large percentages of land owned by the federal government. They are fast becoming major retirement and recreation destinations (Shumway and Otterstrom 2001:495). Jackson-Smith and colleagues (2006) have identified New West counties as rural counties in the Mountain Region of the United States; they have high natural amenities associated with rates of rural inmigration, greater than 15 percent seasonal housing, and greater than $2,500 average income per capita from dividends, interest, rent, and retirement income.

The impetus of the incentives offered by the nonmetropolitan West tends to fuel migration decisions, which have an impact on many communities throughout the region (Cromartie and Wardwell 1999). The New West is experiencing an increase in the number of recreational tourists, thus increasing the number of potential migrants to the area. Migrants attracted to the New West tend to be more affluent with higher levels of income, and their ability to support the local expansion of commercial, educational, health, and financial services results in the increase of economic activity (Jackson and Kuhlken 2006). Because of their positive economic impacts, migrants to the New West are fueling service-based economies (Shumway and Otterstrom 2001). The New West has benefited greatly from migration with the infusion of capital in business, housing, and social institutions.

Where high-amenity areas exist, the demand for customer services that cater to tourism is increasing. Jobs generated by this demand are a direct source of growth in the local economy (Vias and Nelson 2006). For example, nonmetropolitan counties in the New West have undergone a restructuring process that consists of an increase in average store size. However, many migrants drawn to high amenity areas demand goods that are not usually offered in rural areas or by the big chain stores like Wal-Mart. This new market creates a need for new small, locally owned stores that offer that extra touch that big chains do not provide. These high-amenity areas are experiencing an explosive growth in migration due to expanded employment opportunities now available from both types of retail (Vias 2004).

Ecological studies have shown the importance of sustenance organization. More recently, environmental factors have also been shown to explain a considerable proportion of the variance in migration patterns. The following is a brief outline of some of the major ecological studies of migration that employ not only sustenance organization but also environmental factors as explanations of net migration.

Ecological Studies of Migration

There are numerous ecological studies of net migration. For instance, Sly (1972) developed a model of migration based on sustenance organization in which he analyzed Southern Black migration during 1940-1950 and 1950-1960. The changes in sustenance organization created through technological and environmental factors were shown to affect Black migration rates. Frisbie and Poston (1975) calculated the percentage of change in population for nonmetropolitan counties in the 48 contiguous states between 1960 and 1970. Almost one-quarter of the variability was explained by sustenance activities. Saenz and Colbert (1988) used a human ecological framework to explain net migration for small, nonmetropolitan Texas communities during the 1970s and 1980s. They found that the sustenance activities of the communities explained a substantial proportion of net migration rates. Poston and colleagues (1992) analyzed net migration patterns among the counties of New York State and found sustenance organization variables accounted for a considerable proportion of the differences in net migration rates. As a final example, Nord and Cromartie (2000) analyzed domestic migration patterns in the rural South during the 1990s. They found that sustenance

organization and county level characteristics such as natural amenities and retirement also influenced migration rates.

These studies all examined different geographical locations within the United States; they all found that factors of sustenance organization influence net migration rates. In addition to sustenance organizational factors, other county level characteristics were examined and were found to impact net migration as well. Additional studies have shown that many rural communities are experiencing changes in industry and economic restructuring which, combined with the valuable aesthetic landscape surrounding them, are providing the impetus for transformation and diversification. The economic and population growth of counties dependent on industries based on traditional resource extraction seems to suffer from stagnation. In contrast, the fastest growing counties are those sporting high levels of natural amenities that have evolved from traditionally based economies to those based on tourism or other amenity-based industries (Hansen et al. 2002; Winkler et al. 2007).

In my dissertation, in addition to estimating aggregate ecological models that examine patterns of net migration in the nonmetropolitan counties of the New West, I will also undertake a microlevel analysis of individual migration patterns in the state of Nevada. In the next section of this chapter, I review the literature that will guide this microlevel investigation.

Interstate Migration

Interstate migration occurs when individuals change their permanent residence to that of a different state. The percentage of a state's population born in that state and still residing in that same state reflects the proclivity of native-born residents to leave it and the propensity of non-natives of the state to move into it (Morrison et al. 2004). Over 22 million people were domestic migrants in the U.S. who changed their state of residence between 1995 and 2000. Of these domestic migrants, approximately half relocated to a state in a different region. This movement, however, did not affect all states equally: inmigration and outmigration levels varied widely, with markedly uneven tests across the county (Berkner and Faber 2003). Research has demonstrated that age, education level, sex, marital status, and race/ethnicity are important factors in relation to migrational decisions (Greenwood 1985; Liaw and Ledent 1988, Long 1988; Newbold 1996; Gurak and Kritz 2000). In a report written for the United States Bureau of the Census, Schachter (2004) explained that individual's holding at least a bachelor's degree were found to be more likely to make an interstate move than those with less education. People aged 55 and older, males, and singles were also found to be more likely to make long-distance moves. Young people, females, and married couples, were shown to be less likely to make an interstate move (Greenwood 1985).

One's racial or ethnic identification also influences migration choices. Sandefur and Jeon (1991) analyzed the effects of race and ethnicity on the likelihood of interstate migration. They found that while interstate migration rates for minority groups have been consistently moving closer to those of Whites, there are still distinct

differences. The propensity for Blacks to engage in an interstate migration was found to have increased over the years but still remains lower than that of Whites. Interstate migration rates for Asians were also found to be lower than those of Whites, while the interstate emigrational rates of Hispanics has almost converged with that of Whites. Interestingly, as levels of education increased, the variances among all racial and ethnic groups decreased as levels of education increased.

The probability of migration is affected by one's place in the lifecycle. As people age, they encounter many different experiences, and these experiences tend to create a greater knowledge base. The older the person, the greater the knowledge for making informed, life-changing decisions (White and Lindstrom 2006). Marriage, divorce, as well as entering and leaving the workforce all work together as major factors in one's decision to move. Marriage affects many aspects of the lifecycle. Choices must be made that not only affect an individual, but also the family unit. As family size increases, mobility tends to decrease. Sandefur and Scott (1981) found that a change in marital status also contributes to a positive increase in the likelihood of migration. The newly married, as well as the newly divorced, often find themselves relocating to begin a new chapter in their lives. Growing families will seek larger accommodations as well as higher paying jobs to support the lifestyles they desire. Younger individuals are more likely to rebound from the financial losses suffered from a move. Young adulthood and retirement have been found to be two points in the lifecycle that greatly increase migration (White and Lindstrom 2006).

The human capital theory of migration posits that an individual's decision to migrate is based on his or her location within the lifecycle and the level of training and skills that have been acquired. If those individuals are young and highly educated, they are more likely to set higher standards of living for themselves and their families. They tend to be more informed, and they consider the potential for economic gain. As people age, they are less likely to engage in a long distance move. Personal characteristics, knowledge base of specific job skills in a particular area, as well as ties to the community are all deterrents for people over the age of 35 to migrate (Sandfur and Scott 1981). However, when considering a move, many factors weigh in, including whether or not the area will provide a reasonable housing market, affordable taxes, quality schools, and public goods and services (Greenwood 1985). In making this evaluation, the economic gains are weighed heavily and are expected to be greater for individuals who have invested in education (White and Lindstrom 2006).

Conclusion

I expect that the analyses to be undertaken in this dissertation will contribute to the current literature in several ways; it will take previously explored sustenance organization variables—farming, mining, manufacturing, and service—and combines them with environmental level variables—natural amenities, recreation, and retirement— in an attempt to explain differences in net migration rates for nonmetropolitan counties in the New West. As shown, many studies have previously used human ecology as the framework for studying net migration in relation to

sustenance organization. More recently, environmental factors such as natural amenities, recreation, and retirement have explained much of the variances in net migration rates. My research will take this one step further by combining sustenance organization and environmental factors, as well as focusing the research on the New West.

The New West is a recent phenomenon and as such lacks a clear definition. It is up to the author of each research study to operationalize the New West. The information found in the literature will be the basis for my county level variables. It will be employed to analyze net migration rates on two different levels. I also go more in depth by examining individual characteristics in regard to interstate migration relative to the state of Nevada.

The next chapter provides a detailed explanation and description of my data, methodological procedures, and hypotheses.

CHAPTER III

HYPOTHESES, METHODS, AND DATA

My dissertation research examines the relationships that exist between ecological

factors, amenity-based migration and net migration among the nonmetropolitan counties

in the New West. Specifically, I investigate how variation in net migration rates is

related to sustenance organization and amenity-based characteristics. A primary source

of continued growth of a particular area or location is its sustenance organization. This

is the means by which a population secures the necessary essentials needed for survival.

Each population's organization differs with respect to its availability of jobs and

resources. The size of a population depends greatly upon its ability to maintain balance

and organization within its boundaries. Additionally, the environmental characteristics

of a county play a major role in enhancing a given location, potentially increasing its

potential for in-migration. For example, individual migrants may seek out environments

with natural amenities and the availability of recreational opportunities.

New West counties vary as to the type and structure of their sustenance

organizations and the amenity-based characteristics. I am including aspects of

sustenance organization, such as farming, mining, manufacturing, and service in my

model to emphasize the complexity of specific types of economic structuring and how

they might influence the sustainability of said counties. This is important because if

opportunities are readily available, then people will be drawn a particular area.

Moreover, amenity-based characteristics are important to my model because amenity-

based migration is a rapidly growing phenomenon. What an area offers to its consumers will either draw people to the area or turn them away.

The New West is the fastest growing area in the United States and is increasing rapidly in population. An understanding of not only county level factors but also individual level factors will provide a broader and more complete understanding of the migration patterns in the New West. Of the states comprising the New West, namely, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming, Nevada stands out with an exceptionally high level of net migration. Thus in this dissertation I include a separate analysis only of Nevada. The considerably higher amount of migrants relocating to Nevada makes it a prime location for an analysis of the individual characteristics that influence migration choices. It also allows for a more in depth examination of the types of individuals living in and moving into the New West.

This chapter describes the hypotheses, methods and data used to analyze the net migration rates for: 1) the 138 nonmetropolitan counties in the New West between the years 2000 and 2006; and, 2) the individual level patterns of differential migration and non-migration in the state of Nevada between the years 1995 and 2000.

The New West is a recently developed phenomenon and as such its boundaries and qualifiers are sometimes ambiguous. The literature presents multifaceted portraits of the New West. Exactly how the New West is defined varies. Jackson-Smith et al. (2006) identify the New West as those counties maintaining greater than 15% seasonal housing, receiving greater than $2,500 income per capita from dividends, interest, rent, and retirement income. However, according to Shumway and Otterstrom (2001), the

term New West is a label reserved for counties that are high in natural amenities and services, as well as the highest percentage of federal land ownership. They also recognize areas that are considered to be major retirement and recreation destinations. Travis (2007) simply defines New West as those areas of the interior West which have a foundation in high tech, telecommunications, and service related industries.

While some definitions of the New West are very specific, for the purposes of this research, my definition will mirror that of Travis and refer to the interior Western region of the United States. The United States Bureau of the Census divides the United States into 4 regions: the Northeast, the Midwest, the South, and the West. The West is divided into the Mountain Division (Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, and Wyoming) and the Pacific Division (Alaska, California, Hawaii, Oregon, and Washington). My analysis focuses on nonmetropolitan counties located within the Mountain Division.

County-level Hypotheses

The main purpose of this dissertation is to model the large influx of migrants to the New West. Previous research has shown that sustenance organization has been a significant predictor of net migration rates (see Chapter II). A county's sustenance organization is based on its economic structuring and level of dependence in industries such as farming, mining, manufacturing and service industries. Emerging research also stresses the importance of characteristics related to amenity-based migration. Amenity-based characteristics include both physical and social attributes such as aesthetically

pleasing qualities, i.e., natural amenities or recreational opportunities which attract

retirees looking for an opportunity to relax in areas offering such appealing qualities.

My research combines the traditional economic structuring of the Old West

based on the extraction of natural resources with the amenity-based lure of natural

resources, associated with the New West, as the foundation for the large influx of

migrants. This economic restructuring of the New West has sparked a rapid

transformation as populations adapt and reorganize themselves to maintain a balance

between resources and survival. Nonmetropolitan counties of the New West will be

examined in relation to these factors that have been used in the literature to explain

differentials in migration rates. Net migration is the difference between a population's in-

migration and out-migration and follows distinct patterns as it interacts with

environmental factors. Variations in net migration rates have been explained by the

influence of sustenance organization and amenity-based characteristics (as reviewed in

the previous chapter).

The following hypotheses will be tested:

Hypothesis 1: Nonmetropolitan counties in the New West with higher

percentages of individuals identified as living on a farm are less likely to have

substantial positive net migration rates. My first hypothesis reasons that

nonmetropolitan counties that have higher percentages of individuals identified as living

on a farm will experience lower rates of net migration. Modern advancements in

technology and the industrialization of farming have tended to replace human workers

with more efficient machinery. The demand for human labor for farming dependent counties will result in a negative relationship with net migration rates.

Hypothesis 2: Mining-dependent nonmetropolitan counties in the New West are less likely to have substantial positive net migration rates. My second hypothesis reasons that nonmetropolitan counties that are mining dependent will experience lower rates of net migration. Since the initial economic boom created by mining is not sustainable over time, the relationship between mining dependence in a county and net migration will be negative.

Hypothesis 3: Manufacturing-dependent nonmetropolitan counties in the New West are less likely to have substantial positive net migration rates. My third hypothesis is grounded in the understanding that nonmetropolitan counties that are manufacturing dependent will experience lower rates of net migration. Efficient ways of producing goods have developed out of technology as manufacturers have found opportunity to increase their output of goods by using modern machinery. As a result, they have less of a need for personnel.

Hypothesis 4: Nonmetropolitan-counties in the New West with higher percentages of income from retail are more likely to have substantial positive net migration rates. My fourth hypothesis holds that nonmetropolitan counties that have higher percentages of income derived from retail will experience higher rates of net migration. The expansion of service based industries in the New West should result in higher net migration rates.

Hypothesis 5: Nonmetropolitan counties in the New West with higher percentages of employees in the food and accommodations industries are more likely to have substantial positive net migration rates. My fifth hypothesis states that nonmetropolitan counties that have higher percentages of employees working in the food and accommodations industries will experience higher rates of net migration. Services related to recreation and leisure offer more incentive to employees. The prevalence of service industries related to recreation and leisure in the counties of the New West should be positively associated with rates of net migration.

Hypothesis 6: Nonmetropolitan counties in the New West with more natural amenities are more likely to have substantial positive net migration rates. My sixth hypothesis reasons that nonmetropolitan counties with more natural amenities will experience higher rates of net migration. As the number of natural amenities increases, the number of potential migrants that are attracted to that county should increase, resulting in a positive effect on net migration rates.

Hypothesis 7: Nonmetropolitan counties in the New West identified as recreation-focused are more likely to have substantial positive net migration rates. My seventh hypothesis holds that nonmetropolitan counties identified as recreational will experience higher rates of net migration. The more recreational opportunities available within a county, the greater the draw for potential migrants, resulting in a positive effect on net migration rates.

Hypothesis 8: Nonmetropolitan counties in the New West identified as retirement-focused are more likely to have substantial positive net migration rates. My

eighth hypothesis reasons that nonmetropolitan counties identified as retirement-focused will experience higher rates of net migration. The influx of retirement aged individuals is assumed to be due, at least in part, to natural amenities, recreation, and services. As the percentage of residents over the age of 60 increases and as economies grow, the more likely there will be a positive effect on net migration rates.

Table 2 presents a summary of the county-level hypotheses with regard to the sustenance organization and amenity-based characteristics and shows the signs of expected relationships. Dependence on farming, mining and manufacturing are predicted to negatively affect net migration rates. These industries have become more technologically advanced; thus where people were once needed to perform a large number of tasks, machines have been incorporated into industries allowing for a reduction in labor intensive jobs. With the rise of technology the need for many people to complete one task has been reduced significantly. As a result, jobs which once required a large work force have been eliminated. This leaves little room for available jobs and creates less of a pull for migrants.

However, dependence on retail and accommodations and foodservices industries are predicted to positively affect net migration rates as these industries are expanding in the New West. Amenity-based characteristics will tend to affect net migration in a positive direction. Counties with high levels of natural amenities and more recreational opportunities should hold more appeal for amenity-based migrants. Retirees are drawn to the New West for the same reasons as amenity-based migrants. With the offer of

serene surroundings and an abundance of recreational opportunities, individuals of all

ages are afforded the opportunity to enjoy a lifestyle of beauty and recreation.

Table 2 Independent Variables and
Hypothesized Direction

	Effect
Sustenance Organization	
Farming	-
Mining	-
Manufacturing	-
Retail	+
Accomfood	+
Amenity-based Characteristics	
Natural Amenities	+
Recreation	+
Retirement	+

The New West in general has a lot to offer potential migrants. While aggregate-

level analyses address the qualities and characteristics of populations that either pull

people into, or push people away from, an area, it is also important to examine the

individual characteristics of the migrants themselves. As previously noted, the state of

Nevada shows a larger population increase relative to other states in the New West. This

provides an opportunity to tap into a wealth of information on specific individual

characteristics of the population such as age, education, sex, marital status, and race/ethnicity and ascertain how these influence migration.

The following section presents individual-level hypotheses for my micro-analysis of the migration patterns of the residents of the state of Nevada.

Individual-level Hypotheses for the State of Nevada

The New West is quickly becoming a popular destination with its boundless amenities and recreational opportunities leading to favorable conditions in many areas such as employment, tourism, and retirement. As the fastest growing state in the New West, Nevada deserves special attention, as its migration patterns may reveal both unique and common features of the New West migrant population as a whole. Specifically, Nevada will be analyzed in my attempt to account for micro-level differences in migration patterns. In the discussion that follows, I present the hypotheses associated with individual characteristics of residents of the state of Nevada.

The decision to engage in an interstate migration to the state of Nevada is influenced not only by a migrant's level of human capital but also by that migrant's current location in the lifecycle. To measure human capital and current lifecycle position, I will compare the characteristics of distant, recent, and return migrants with native residents by age and educational attainment, and with controls for sex, marital status and racial/ethnic identification. The predictor variables of age and educational attainment have been shown to have negative and positive relationships, respectively, that are associated with migration choices. As age increases, the likelihood of engaging

in an interstate migration decreases. As levels of educational attainment increase, the likelihood of engaging in an interstate migration increases. It is hypothesized that younger individuals with higher levels of education will be more likely to engage in an interstate migration.

Hypothesis 1: If the respondent is younger with higher levels of educational attainment, he or she is more likely to have engaged in an interstate migration into the state of Nevada.

As individuals' age and progress through the lifecycle, they form numerous networks and ties to the community in which they live. They also become established at their places of employment. For individuals who are married, there exist twice as many networking ties linking the couple to the community and careers. These stronger connections make an interstate migration less likely. Men have been shown to engage in long distance moves more frequently than women. It is hypothesized that males will be more likely than females and the not married more likely than the married to engage in an interstate migration.

Hypothesis 2: If the respondent is male and not married, he or she is more likely to have engaged in an interstate migration into the state of Nevada.

The propensity to engage in a migration is also affected by racial and ethnic identification. Even though interstate migration has steadily increased among minority group members, the rates for Hispanics, Blacks, Asians, and others remain lower than those of Whites. It is hypothesized that Whites are more likely than Hispanics, Blacks, Asians, or others, to engage in an interstate migration.

Hypotheses 3: If the respondent White, he or she is more likely to have engaged in an interstate migration into the state of Nevada.

I turn now to the statistical methods to be used in the analyses of migration in the New West.

Statistical Methods

My principal research design for this dissertation is that of secondary data analysis. Analyses will be done in three stages. The first stage will provide descriptive analyses of both the dependent and independent variables. The second stage of my data analysis will involve calculating and examining each variable's tolerance statistic in order to ensure that my independent variables are not problematically multi-collinear. After determining that there is no risk of collinearity, I will estimate regression models—the third stage of my analysis—to measure the effects of the independent variables on the dependent variable.

County-level Regression

The dependent variable for my county-level analysis of net migration is viewed as a linear function of independent predictor variables related to sustenance organization and environmental characteristics. The proper method for this type of analysis is that of ordinary least squares regression (OLS). OLS is a regression method that measures an average change in a dependent variable based on a corresponding change in predictor variables (Vittinghoff et al. 2005). This type of regression equation determines the

extent of association between the dependent and independent variables. Estimating a series of multivariate regression equations will provide an expansive explanation of each county's net migration rate in relation to its sustenance organization and environmental characteristics. The coefficients produced by OLS modeling will provide a measure of the effects of each predictor variable as the rate of net migration either increases or decreases for each county. Due to the effects of each predictor variable, differences in the rate of net migration are expected.

Individual-level Regression

To analyze the migrant status of individual residents of the state of Nevada, I will employ the dependent variable of MIGRANT. Based on the length of time an individual has lived in the state, they will be classified as a native resident, distant migrant, recent migrant, or return migrant.   This variable is multicategorical with four possible nominal outcomes, and, as such, the proper statistical procedure is that of multinomial logit modeling. This model assumes that the data are case specific and that each independent variable has one value for each individual respondent (Long and Freese 2006). The base category "native" will be used as the reference group to which distant, recent, and return migrants will be compared. A separate binary logit for each pair of outcome categories will be calculated providing a comparison of native residents, distant, recent, and return migrants in reference to the respondent's age, level of educational attainment, sex, marital status, and race/ethnicity.

The following section describes the data and coding for the analyses of migration patterns in the New West at both the macro- and micro-levels.

County-level Data

County level data were obtained from the United States Bureau of the Census' *County and City Data Book: 2000* and *County and City Data Book: 2007* (United States Bureau of the Census 2000b; 2007). Each data book is a statistical abstract summary of the United States Bureau of the Census' *Statistical Abstract of the United States* (United States Department of Agriculture 2004) in regards to social and economic structuring at the state, county, and city levels. Topics covered include personal income, labor force and employment, land area and population. Data files are comprised of a collection from the United States Bureau of the Census and other federal statistical bureaus, governmental administrative and regulatory agencies, and private research bodies (United States Bureau of the Census 2007). Tabular presentations of the social and economic structuring are available for all states, counties, and cities with a minimum population of 25,000.

My analysis focuses on the dependent variable net migration. The resulting analyses use as independent variables two sets of independent variables: sustenance organizational factors and environmental characteristics. Sustenance organization is broken down by each county's level of economic dependence on farming, mining, manufacturing, and service. The service industry is further divided into the retail industry as well as accommodations and food services industries. Environmental

characteristics of each county are measured in relation to levels of natural amenities, recreational focus, and retirement focus. The data for my independent variables will primarily come from data developed and made public by the United States Department of Agriculture's (USDA) Economic Research Service Division (United States Department of Agriculture 2004).

Individual-level Data

Data for the micro-level analysis of the residents of the state of Nevada were obtained from the Integrated Public Use Micro-data Series (IPUMS) available from the Minnesota Population Center. IPUMS is a data base that supplies data and documentation about the population of the United States and its changes for over one hundred and fifty years (Ruggles et al. 2010). My sample is extracted from the state-level Census 2000 data with records of the characteristics for a 5 percent sample of people and housing units.

IPUMS is composed of microdata in which each case reports data for an individual allowing for the selection of specific samples and variables (Ruggles et al. 2010). All IPUMS samples are cluster samples, and individuals are sampled as per their connection to a household (Ruggles et al. 2010). Individuals from the same household are likely to share similar characteristics. "Clustering increases the sampling variance as a function of homogeneity within the clusters on the survey statistics" (Groves et al. 2004). Small selected sampling points tend to be homogeneous in regards to sociodemographic variables such as age of respondents, levels of educational attainment,

and racial identification (Treiman 2009). The impact of clustering varies and usually depends on the variable. Age and sex are heterogeneous because they are not based on a household connection. This type of variable should not be influenced by clustering in the same way as their homogeneous counterparts (Ruggles et al. 2010). If statistical procedures intended for random samples are used on clustered samples, the computed standard errors will more than likely be too small (Treiman 2009). Because the data are based on individuals, they allow for the selection of specific samples and variables.

Often with complex sample designs such as the United States Census, weights are used to counter the unequal probability of selection and the differences in response rates for certain subgroups (Groves et al. 2004). Clustering within sample designs means that not all members of a population share an equal chance of selection to be included in the sample data, and weights are hence generated as compensation (Groves et al. 2004).

Some sample cases correspond to more people within a given population while others do not. Because one person may not be representative of the number of persons

in the total population, IPUMS samples contain weighted variables (Ruggles et al. 2010). Weighted variables provide information about the representation of the number of individuals within the population per each sample case. Sample weights are needed for sample statistics to be representative of population parameters. IPUMS provides both a household weight (HHWT) and an individual person weight (PERWT). Since my analysis is done on the individual level, I will use PERWT, which designates how many individuals from the population each respondent represents from the entire population (Ruggles et al. 2010).

Survey estimation commands will account for sampling errors due to overrepresentation or underrepresentation. If sampling error is underestimated, there is a higher risk of making a type one error by rejecting a true null hypothesis (Treiman 2009). By using the "svy" suite of commands in STATA, I will be able to weight each case and provide representative statistics that can be generalized to my population of study.

Tables 3 and 4 contain the definitions and coding for the dependent and independent variables for the county-level and individual-level analyses respectively.

Table 3 Definitions of Variables: County-level Models

	Definition/Coding
Dependent Variable	
Net Migration Rate	Net migration rate per 1,000
Independent Variables	
Sustenance Organization	
Farm	% value, 0.00 to 100.00
Mining	1 = mining dependent county
Manufacture	1 = manufacturing dependent county
Retail	% value, 0.00 – 100.00
Accommodation and Food	% value, 0.00 – 100.00
Amenity-based Characteristics	
Natural Amenities	Natural Amenities Rank, 1-7
Recreation	1 = recreation dependent county
Retirement	1 = retirement dependent county

Source: United States Department of Agriculture (2004)

Table 4 Definitions of Variables: Individual-level Models

	Definition/Coding
Dependent Variables	
Native Resident	1 = born in NV and living in NV in 1995 and 2000
Distant Migrant	1 = not born in NV but living in NV in 1995
Recent Migrant	1 = not born in NV, not living in NV in 1995 but living in NV in 2000
Return Migrant	1 = born in NV, not living in NV in 1995 but living in NV 2000
Independent Variables	
Age	Age as of last birthdate: 1=20-29, 2=30-39, 3=40-49, 4=50-59, 5=60-69, 6=70-79, 7=80+
Sex	1 = male, 0 = female
Marital Status	1 = married, 0 = not married
Education	Educational attainment intervals ranging from 0 (less than high school diploma) to 5 (graduate degree or higher)
White	1 = non-Hispanic White, 0 = Hispanic
Black	1 = non-Hispanic Black, 0 = Hispanic
Asian	1 = non-Hispanic Asian, 0 = Hispanic
Hispanic	1 = Hispanic, 0 = non-Hispanic
Other	1 = non-Hispanic Other, 0 = Hispanic

Source: Ruggles et al. (2010)

Nonmetropolitan Counties

My research focuses specifically on the estimation of equations to model the net migration rates of the nonmetropolitan counties in the New West. Nonmetropolitan counties of the New West are rapidly increasing in population. The characteristics of

each county will hopefully provide information as to why some counties are gaining

each county will hopefully provide information as to why some counties are gaining

population while others are not. Table 5 below shows change in the number of

nonmetropolitan counties in the New West between the years of 2000 and 2007. The

first column reports the total number of counties for each state; the second column

reports the percentage of nonmetropolitan counties for 2000 (total number); and the third

column reports the percentage of nonmetropolitan counties for the year 2007 (total

number). When comparing information from the year 2000 with the year 2007, the

number of nonmetropolitan counties located within the New West has decreased by at

least 14 percent in each state. New Mexico, Idaho and Arizona all lost at least 40

percent of their nonmetropolitan counties.   Utah experienced the highest drop in

nonmetropolitan counties with a 49 percent loss. The decreasing number of

nonmetropolitan counties in the area makes them an important area to investigate.

Table 5 New West Nonmetropolitan Counties 2000 and 2007

	Total Counties	Nonmetro 2000	Nonmetro 2007
Arizona	15	60% (9)	20% (3)
Colorado	64	81% (52)	61% (39)
Idaho	44	93% (41)	46% (21)
Montana	56	96% (54)	82% (46)
Nevada	16	81% (13)	44% (7)
New Mexico	33	82% (27)	33% (11)
Utah	29	79% (23)	48% (14)
Wyoming	23	91% (21)	61% (14)

Source: United States Bureau of the Census (2000; 2007)

To identify counties that are nonmetropolitan, I examined Table B-1 – Area and population (United States Bureau of the Census 2007). Counties are labeled with a metropolitan area code when they have a minimum of one urban area (with a population of 50,000 or more) and also include any adjacent areas that are socially and economically integrated to a high degree with an urban core. If a county is not labeled with a metropolitan area code, it means that county is lacking an urban area, thus qualifying it as nonmetropolitan. A total of 155 counties were without a metropolitan area code, with complete datum available for 138 counties. For the purpose of analysis for this dissertation research, I selected the 138 nonmetropolitan counties in the states of Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, and Wyoming.

County-level Operationalization and Construction of Variables

County-level Dependent Variable

This research analyzes the continuous dependent variable of net migration that occurred between the years 2000 and 2006 for the 138 nonmetropolitan counties located in the New West. Net migration is the difference between the number of in-migrants and the number of out-migrants for a geographical area during a specified period of time (Edmonston and Michalowski 2004). Each county's net migration rate is calculated by taking the difference between the number of in-migrants and out-migrants and dividing by the population of that county in the year of 2000. That quotient is then multiplied by 1,000 indicating the net migration rate per 1,000 people.

$$\text{Net Migration Rate} = \frac{\text{Total Population Change between 2000 and 2006}}{\text{2000 Population}} \times 1,000$$

Population counts for each year were provided in Table B-1 Counties – Area and Population of the United States Bureau of the Census' *County and City Data Book: 2007*. Population estimates for each county are based on a calculation of the total number of individuals that reside in that county as of July 1. Table B-2 – Components of Population Change provides the increase in population for each county occurring between April 1, 2000, and July 1, 2006, based on natural increase (births over deaths) and net international migration. Estimations of international migration are based on migration of the foreign born, movement from Puerto Rico, movement of the U.S. Armed Forces, and emigration of native-born U.S. citizens (United States Bureau of the Census 2007).

County-level Independent Variables

The data for my independent variables come mainly from data developed and made public by the United States Department of Agriculture (2004) and county-level information provided in the United States Bureau of the Census' *County and City Data Book: 2000*. The USDA has developed a mutually exclusive typology to classify each nonmetropolitan county based on such social and economic characteristics as Farming-dependent, Mining-dependent, Manufacturing-dependent, Federal/State government-dependent, Services-dependent, or non-specialized (United States Department of Agriculture 2004). The measures of sustenance organization for each of the counties used in my analysis are based on the dependence of each county as it pertains to farming, mining, manufacturing, and service.

Sustenance Organization

Sustenance Organization (see Chapter II) is a fundamental element in basic human existence. It is derived from the need for sustenance producing activities such as service, manufacturing, mining, and farming which yield income, and whether they be from sustainable elements or jobs created from each. These elements provide the necessities needed for survival. How these activities are organized and their success in the given areas is important in that they each have a determining factor in a community's ability to thrive or fail.

Farming, mining, and manufacturing are traditional forms of sustenance based activities dating back to the Old West. In the past the migration pull toward large areas of land was based on one's ability to extract what one could from it as a means of survival. The land was valued in that it produced crops for food as well as minerals that were necessary for the manufacturing of many things that would help in creating a productive society. This same land (pertaining to non-metropolitan migration) today is valued more for its aesthetically pleasing qualities. My independent variables are reflective of the transformation of the New West. The growth in the service industries is tied to amenity-based migration and environmental characteristics. The service industry blends into the environmental characteristics because high levels of natural amenities and plenty of recreational opportunities are tending to pull migrants into an area and are creating a need for services that previously did not exist.

A county's level of dependence on farming is taken into account to measure the impact of traditional land extraction industries on net migration rates. To measure the

level of dependence on farming for each of the counties in my study, I first examined the USDA's farming county typology (United States Department of Agriculture 2004). Each county is classified as either farming-dependent or not, based on whether or not a minimum of 15 percent or more of earnings are derived from farming between the years 1998 and 2000. The dichotomy of this variable does not allow for explanations of variances occurring among net migration rates that could possibly be caused by increases or decreases in the level of dependence.

The United States Bureau of the Census' *County and City Data Book: 2000* divides a county's total personal income into specific categories according to industry. Personal income is a summation of wages and salary, other labor income, proprietor's income, rental income, personal interest and transfer payments minus personal contribution for social insurance. Table B-10 - Farm Population, Farm Earnings, and Agriculture (United States Bureau of the Census 2000b) reports the farm population for 1990, farm earnings, and agriculture data. The percent of total personal income derived from farm earnings is reported for each county for the year 1998. Unfortunately, data were unavailable for 37 out of the 138 counties due to column headings or sub lines making entries meaningless and amounts totaling less than half of the unit of measurement. Because of the missing data, I would have lost the ability to study over 26 percent of my chosen counties. Using the information available to me, I instead decided to examine the 1990 farm population for each county, which includes all individuals living in households located on a farm residence. The established criteria for a farm residence are met if the property is at least one acre or larger and agricultural products

totaling at least $1,000 were sold from said property in 1989 (United States Bureau of the Census 2000b).   FARM is a continuous variable entered as a percent value 0.00 to 100.00 to represent each county's percentage number of farm population.

I next examined dependence on mining because its economic structure is based on traditional land extraction. Each county's personal income from mining is included in the total percentage of goods related income on Table B-8 – Personal Income and Earnings (United States Bureau of the Census 2000b). Unfortunately, it is not shown as a separate category. Since this information was not available, I instead used the USDA mining county typology. Each county's dependence on mining is determined by the average earnings from labor and proprietors totaling 15 percent or more between the years 1998 and 2000 (United States Department of Agriculture 2004). MINING is a dummy variable coded 1 if the county meets these criteria of mining dependence and coded 0 if it does not.

The prevalence of manufacturing for each county is used to measure the effects of more efficient technology in the New West on net migration rates. To measure manufacturing the percentage of total personal income specific to that industry is taken into account. Table B-8 – Personal Income and Earnings (United States Bureau of the Census 2000b) reports the total percentage of personal income for the year 1998 by selected industry. Goods-related earnings for manufacturing are available for each county. However, one of the drawbacks to using data from the United States Census is that of confidentiality. Information for 23 counties was unavailable to avoid disclosure of a specific organization or individual. This would have resulted in 23 counties being

struck from my analysis. Instead of losing over 16 percent of my population, I chose

instead to use the USDA manufacturing typology. According to this typology, a county

is considered to be manufacturing dependent if at least 25 percent of earnings from

proprietors and annual labor are acquired from manufacturing during 1998-2000 (United

States Department of Agriculture 2004). MANUFACT is a dummy variable coded 1 if

the county meets these criteria of manufacturing dependent, and coded 0 if it does not.

Service dependency as defined by USDA typology recognizes those counties

who attain at least 45 percent of average annual labor and proprietors' earnings from

services (United States Department of Agriculture 2004). This is a very broad

categorization and refers to all types of services including retail trade, finance, insurance,

and real estate. Service jobs are broad in spectrum and require various levels of

education and training to perform certain tasks. It is important to determine how the

type of services present in each county influences its net migration rate. Table B-8 –

Personal Income and Earnings (United States Bureau of the Census 2000b) provides the

percent of total personal income for each county separated by industry and includes

retail and finance, insurance, and real estate (FIRE). Retail establishments are those that

sell merchandise made available to the public in small quantities. I created the

continuous variable RETAIL, which is entered for each county as the percent of the total

personal income derived from retail trade for each county ranging from 0.00 to 1.00.

In order to analyze the more lucrative side of service industries, I wanted to use

each county's percentage of personal income from FIRE. These industries typically have

higher pay and more benefits. However, information was not available for 24 of my

counties due to possible disclosure of specific organizations or individuals. Instead of losing approximately 17 percent of my identified population, I decided to examine the service industry from a different angle and obtain the level of employment of each county in the accommodations and foodservices industries.

To calculate the percentages of employees for each county in accommodations and foodservices industries, I divided the total number of employees in both industries for each county by its civilian labor force. I then multiplied that result by 100 to obtain each county's percentage. Table B-7 – Labor Force and Private Business Establishments and Employment (United States Bureau of the Census 2000b) provides the raw number of each county's civilian labor force for the year 2000. The civilian labor force encompasses all civilians living in a particular county that are age 16 and older, both unemployed and employed. The data found in Table B-12 – Accommodation and Foodservices, Banking, and Federal Funds (United States Bureau of the Census 2000b) report the total number of paid employees in the accommodations and food industries, but only for the year 1997. To maintain consistency, I accessed the 2000 information via the U.S. Census's 2000 County Business Patterns web page (United States Bureau of the Census 2000a). Economic data are provided for each county, and I was able to ascertain the total number of employees in the accommodations and foodservices industries specific to the year 2000. Accordingly, I created ACCOMFOOD, a continuous variable entered as each county's actual percentage ranging from 0.00 to 100.00. For example, Sublette County, WY, has 195 accommodations and foodservices employees and a civilian labor force of

3,243. Dividing 195 by 3,243 and then multiplying by 100 equals 6.01 percent, the percentage of accommodations and foodservices employees for Sublette County, WY.

Amenity-based Characteristics

The measures of amenity-based variables for each county are based on USDA county typology. To examine the environmental characteristics of each county, I employ the independent variables of level of natural amenities, recreation-focus and retirement-focus.

The USDA natural amenities scale measures each county in relation to its physical characteristics. The scale combines six measures of climate based on warm sunny winters and mild summers with low humidity, variations in land topography, and water area. Information is available for all counties in the contiguous United States reporting each county's original score, standardized score, and amenity scale ranking. A county's amenity ranking is relative to the number of standard deviations it falls away from the mean (United States Department of Agriculture 2004).

Standard deviations tell how the scores of a distribution are spread out. Scores range from a low of 1, representing a county with the least natural amenities, to a high of 7, representing a county with high levels of natural amenities. A score of 1 is two or more standard deviations below the mean; 2 is one to two standard deviations below the mean; 3 falls between one standard deviation below the mean and the mean itself; 4 is up to one standard deviation above the mean; 5 is one to two standard deviations above the mean; 6 is two to three standard deviations above the mean; and 7 is three or more

standard deviations above the mean. NATAM is an ordinal variable entered as each county's assigned amenity rank.

Recreation counties are "classified using a combination of factors, including share of employment or share of earnings in recreation-related industries in 1999, share of seasonal or occasional use housing units in 2000, and per capita receipts from motels and hotels in 1997" (United States Department of Agricultural 2004). RECREATION is a dummy variable coded 1 if the county meets the above mentioned criteria of recreational status and coded 0 if it does not.

Retirement counties are those in which the percentage of individuals age 60 and older have increased by 15 percent or more between the years 1990 and 2000 due to in-migration. RETIREMENT is a dummy variable coded 1 if the county meets the above mentioned criteria of retirement status and coded 0 if it does not.

In the next section of this chapter, I will illustrate the data and methods that will be used in my micro-level analysis of the migration patterns of residents of the state of Nevada.

Individual-level Operationalization and Construction of Variables

I will analyze the residents of the state of Nevada in relation to their migration status. This will allow me to account for variances in migration patterns attributed to individual level characteristics. My dependent variable of migrant status will represent four different resident types in the state of Nevada: native residents, distant migrants, recent migrants, and return migrants. I will make comparisons based on each

individual's age and level of educational attainment, while holding constant sex, marital status, and racial/ethnic identification. For the purposes of this study, the population sample is limited to Nevada residents age 20 and older in the year 2000.

Individual-level Dependent Variable

For my dependent variable, I examined the migration status of respondents living in the state of Nevada. I compared the variable from the 2000 United States Census, MIGPLAC5, which reports the U.S. state, outlying territory or foreign country where the respondent was living 5 years ago with the variable BPL, which indicates the U.S. state, the outlying U.S. area or territory, or the foreign country where the person was born. My purpose was to examine differences between residents who are native to Nevada and interstate migrants currently living in Nevada. Since Nevada experiences such high levels of migration, I thought it would be interesting to compare distant, recent, and return migrants to native residents.

I created a multinomial dependent variable labeled MIGRANT with four categories: NATIVE coded 1, DISTANT coded 2, RECENT coded 3, and RETURN coded 4. If an individual were born in the state of Nevada, lived in Nevada in the year 1995, and still resides in Nevada in the year 2000, this individual is considered a native resident. If an individual were not born in the state of Nevada but lived in Nevada in the year 1995 and still resides in Nevada in the year 2000, this individual is considered a distant migrant. If an individual were not born in the state of Nevada and did not live in Nevada in the year 1995, but in the year 2000 this individual does live in Nevada, he or

she is considered a recent migrant. If an individual were born in the state of Nevada and did not reside in Nevada in the year 1995, but he or she returned to live in Nevada in the year 2000, this individual is considered a return migrant.

Individual-level Independent Variables

The 2000 United States Census variable AGE reports respondents' ages in years as of the respondents' last birth dates. I restricted my analysis to adult respondents age 20 and above. In terms of my study, the effect of age on migration can best be examined by basing the analysis on interval groupings instead of on a one-year increase. Therefore, to allow for comparisons based on an individual's lifestyle position, I created the interval dummy variable AGE1 with 7 categories. Respondents ages 20 to 29 were labeled "twenties" and coded as 1; ages 30 to 39 were labeled "thirties" and coded as 2; ages 40 to 49 were labeled "forties" and coded as 3; ages 50 to 59 were labeled "fifties" and coded as 4; ages 60 to 69 were labeled "sixties" and coded as 5; ages 70 to 79 were labeled "seventies" and coded as 6; and respondents ages 80 and above were labeled "eighties plus" and coded as 7.

The 2000 United States Census variable MARST reports each person's current marital status. The original question asks respondents to state their marital status with the following choices: married spouse present, married spouse absent, separated, divorced, widowed, or never married/single. To determine if migration patterns differ between people who are married and those who are not, I created the dummy variable MARST1. Married spouse present and married spouse absent were treated as the

individual's being married; separated, divorced, widowed, and never married/single were treated as the individual's not being married. Married was coded 1 and not married coded 0.

To measure each individual's level of educational attainment, I examined the 2000 United States Census variable, EDUC. This variable is based on the respondent's highest year of school completion or highest degree obtained. Respondents are given a choice of the following responses: no schooling completed, nursery school to grade 4, grade 5 or 6, grade 7 or 8, grade 9, grade 10, grade 11, grade 12, no diploma, high school graduate or GED, some college but less than 1 year, 1 or more years of college credit with no degree, associate's degree, bachelor's degree, master's degree, professional degree beyond a bachelor's, and doctoral degree. To demarcate variances in the levels of education, I created a dummy interval level variable EDUC1 by combining the 17 possible responses into 5 categories, coded 1 for less than high school completion, 2 for high school completion or GED obtainment, 3 for some college or an associate's degree, 4 for bachelor's degree, 5 for a master's, professional, or doctoral degree.

To examine the differences between males and females in their propensity toward migration, I examined the 2000 United States Census variable SEX, which reports whether the person was male or female. I then created the dummy variable MALE, coded 1 if respondent was male and 0 if female.

Because race and ethnicity are powerful predictors of migration, I also wanted to account for racial and ethnic differences. To determine each respondent's race/ethnicity, I examined the 2000 United States Census variable RACE. Respondents were given the

following choices: White, Black, American Indian or Alaska Native, Chinese, Japanese, Other Asian or Pacific Islander, other race, two major races, or three or more races. I then recoded these classifications into a dummy variable RACE1 coded White 1, Black 2, Asian 3, and other 4. My next step was to examine the HISPAN variable which identifies persons of Hispanic/Spanish/Latino origin and classifies them as non-Hispanic, Mexican, Puerto Rican, Cuban, other, and not reported. I created the dummy variable HISPANIC, where respondents were coded 1 if they were Hispanic and coded 0 if they were not Hispanic.

After comparing the RACE1 variable with the HISPANIC variable, I created 5 dummy race/ethnicity variables: WHITE, HISP, BLACK, ASIAN, and OTHER. For the WHITE variable, if respondents were not Hispanic and White, they were coded 1; if they were Hispanic, they were coded 0. For the HISP variable, if the respondents were Hispanic, they were coded 1 and 0 if they were not. For the BLACK variable, if the respondents were not Hispanic and Black, they were coded 1; if they were Hispanic and Black, they were coded 0. For the ASIAN variable, if the respondents were not Hispanic and Asian, they were coded 1; if they were Hispanic and Asian, they were coded 0. For the OTHER variable, if the respondents were not Hispanic and other, they were coded 1; if they were Hispanic and other, they were coded 0.

Conclusion

In this chapter I have discussed the hypotheses, methods, and data I will use in my analyses of migration in the New West. I first provided hypotheses predicting either

positive or negative flows of net migration in regards to sustenance organization and environmental characteristics for the 138 nonmetropolitan counties. Reliance on farming, mining, manufacturing, are expected to negatively impact net migration rates while retail and accommodations and food services should both be positive. Due to the recent surge in amenity-based migration, amenity-based characteristics of a county are important factors and influence net migration in a positive direction. High levels of natural amenities and more recreational opportunities lure people in, often those that are retired.

My analysis of net migration rates for the nonmetropolitan counties offered a broad view of net migration in the New West. I then narrowed my focus to individual characteristics of residents for the state of Nevada. Based on levels of human capital, certain life cycle position, and racial/ethnic identification, it was predicted that younger more educated males who are not married and White are more likely to have engaged in a long distance migration. I next looked at the proper statistical methods for analyzing the variances in net migration. Since a county's net migration rate is a linear function of both sustenance organization and environmental characteristics, OLS will be used. My multicatagorical dependent variable of migrant status for native residents, distant, recent and return migrants requires the use of a multinomial logit model. Finally a detailed account of the coding and definitions of variables was presented. The next chapter provides summary statistics and details the results of my statistical analyses.

CHAPTER IV

RESULTS AND DISCUSSION OF THE MACRO AND MICRO ANALYSES OF

MIGRATION

My research investigates the effects of ecological factors and amenity-based

migration factors on patterns of net migration in the nonmetropolitan counties in the

New West. The growing trend of migration into the New West has sparked interest

about why this specific area of the United States has become such a popular destination

for migrants. The West has been transformed from the Old to the New, primarily in the

area of natural resources. Land extraction as a means of survival once provided the Old

West with its special appeal. Structured around farming and mining, the Old West was

dependent upon land for its income and livelihood. The New West is based on

opportunities provided by the introduction of modern technology, service related

industries, as well as its many appealing physical characteristics. The same land that was

once valued for its sustenance producing activities in farming and mining is now coveted

in large part for its recreational value. Though the use of land has changed considerably,

the need for its sustaining qualities has not. When looking into reasons for population

growth in the New West, it is important that we not only understand why people are

drawn to these locations but also how these areas are able to sustain themselves.

Each area in the New West has qualities and characteristics that make it unique

and play a major role in its ability to survive, develop, and grow. Patterns of net

migration are accounted for not only by factors of sustenance organization, but also by

environmental characteristics. Sustenance organization is the means by which a

population secures the necessities for survival and allows for growth in communities; it gives structure and balance within an area. People are drawn to areas not only because they provide a means for income but also because of the characteristics pertaining to the land and what it has to offer them in the form of recreation, climate, as well as scenery. The relationship between sustenance organization and amenity-based characteristics is researched to give a more concise picture of how each relates to the growth and prosperity of a community.

The transition from Old to New that is occurring in the New West will be examined using each county's level of dependence on farming and mining as they are traditional forms of sustenance organization. Manufacturing will be taken into account as it measures the role of modern technology and how the workplace has become mechanized and more efficient. Due to the vast opportunities for recreational enjoyment and the influx of retirees, many more service based industries have emerged in the New West. Amenity-based characteristics should also play a large role in accounting for the migration patterns. The allure of the beauty of the natural resources in the New West now tends to draw in many amenity-based migrants.

As a whole, the New West is rapidly increasing in population. My analysis of the nonmetropolitan counties will hopefully paint a broad image of the ebb and flow of migration that is occurring. It is also important to delve deeper into the individual characteristics of residents of the New West to provide a better understanding of what brings people to migrate into particular geographical areas. The state of Nevada reflects the largest influx of migrants into the New West. To analyze individual characteristics

that influence migrant patterns, I will also include an individual-level analysis of the migration patterns of the residents of the state of Nevada.

This chapter presents the results of my study into patterns of migration in the New West. The following paragraphs provide the demographic characteristics of the population of nonmetropolitan counties and the extracted sample of residents of Nevada. Descriptive analyses of both the dependent and independent variables for each population are first presented. Each variable was selected based on its theoretical relevance to migration. A series of regression equations have been estimated and the results are then presented in reference to the New West for both the nonmetropolitan counties and individual residents of the state of Nevada; these are in the form of tables with the findings of the macro and micro-level analyses. The chapter concludes with a detailed discussion of the results and their meaning.

Summary Statistics and Discussion - County-level

The nonmetropolitan counties in the New West are experiencing sharp rises in population making them a prime location to investigate the effects of ecological factors and amenity-based characteristics on net migration to help determine what is happening and why. For a more in-depth understanding of the high levels of population growth, aggregate-level analyses of differences in net migration rates among the nonmetropolitan counties of the New West are provided.

Dependent Variable

Net migration follows the patterns of and interacts with environmental factors. By examining net migration rates for the nonmetropolitan counties, it can easily be determined which counties are losing population and which ones are gaining. Once this is established, characteristics of each county can be isolated to establish patterns of significance with regard to their effects on the patterns of in net migration. Each county's net migration rate was calculated to measure migration between the years of 2000 and 2006. The total net migration population change – the difference of in-migrants and out-migrants - occurring between the year 2000 and 2006 is divided by the size of the 2000 population. This ratio is then multiplied by 1,000 to provide the total number of net migrants per 1,000 people.

Table 6 presents the descriptive statistics for the net migration rates for the 138 nonmetropolitan counties of the New West. The mean net migration rate for all 138 counties is -16.28, with values ranging from a low of -197.44 to a high of 215.54. The highest net migration rate of 215.54 indicates that for every 1,000 people in the county in the year 2000, that county had 216 more persons moving to the county between 2000 and 2006 than moving from the county. The lowest rate of -197.44 means that for every 1,000 people in the county in 2000, the county lost 197 more residents than it gained through migration. The difference between the highest net migration rate of 215.54 for Sublette County, Wyoming and the lowest net migration rate of -197.44 for Treasure County, Montana is 412.98. Net migration rates for the top 10 counties (see Table 7) ranged from a high of 215.54 for Sublette County Wyoming to a low of 107.66 for

Saguache County, Colorado. The top county has a rate that is 108 higher than the 10th

ranked county. Among the bottom 10 counties (see Table 8), net migration rates ranged

from -197.44 for Treasure County, Montana to -106.68 for Wheatland County, Montana.

This clearly demonstrates that some nonmetropolitan counties are indeed gaining in

population through net migration while others are losing population.

Table 6 Descriptive Statistics: New West Nonmetropolitan Counties

	Frequency	(%)	Mean, SD	Min – Max
Dependent Variable				
NETMIG			-16.28, 72.97	-197.44 – 215.54
Independent Variables				
Sustenance Organization				
farming			9.15, 7.64	0.2 – 47.30
mining	24	16.13%		
manufacturing	6	4.35%		
retail			10.10, 3.89	2.4 – 22.10
accommodations and foodservices			8.12, 7.00	.59 – 53.76
Environmental Characteristics				
natural amenities				
Scale Ranking = 2	2	1.45%		
Scale Ranking = 3	18	13.04%		
Scale Ranking = 4	39	28.26%		
Scale Ranking = 5	58	42.03%		
Scale Ranking = 6	19	13.77%		
Scale Ranking = 7	2	1.45%		
recreation	48	34.78%		
retirement	19	13.77%		

Source: United States Department of Agriculture (2004) and United States Bureau of the Census (2000; 2007)

Independent Variables

        Differences in net migration rates are often explained by both sustenance

organization and environmental characteristics as net migration is frequently a linear

function of both. The measures of sustenance organization (i.e. farming, mining,

manufacturing, retail, accommodations and foodservices) in the year of 2000 are

expected to be related with the amount of net migration occurring during the 2000-2006

period. Similarly, the measures of amenity-based characteristics (i.e. natural amenities,

recreation, and retirement) should also be associated with the net migration rates. These

differences provide the framework for an analysis of migration occurring in the New

West. Tables 7, 8, 9, and 10 present descriptive statistics for sustenance organization

measures and amenity-based characteristics for the 10 counties with the highest net

migration rates, and the 10 counties with the lowest net migration rates respectively.

Table 7 Top 10 Nonmetropolitan New West Counties by Net Migration Rate: Sustenance Organization

County	Net Mig (per 1,000)	% Farm Pop	Mining	Manufact	% Retail	% Accommodations and Foodservices
Sublette , WY	215.54	7.5	*		10.3	6.01
Archuleta , CO	213.28	3.8			17.3	11.22
Valley , ID	143.00	2.4			13.9	11.98
Lincoln , NV	131.57	1.6			6.9	9.21
Johnson , WY	130.32	6.5			13.5	7.17
Ouray , CO	128.27	4.9	*		14.3	13.98
Ravalli , MT	113.86	5.7			12.1	4.26
Custer , CO	113.62	7.5			12.6	5.38
Bonner , ID	109.62	2.6		*	17.9	5.99
Saguache, CO	107.66	11.6			6.2	1.89

*Yes

Table 8 Top 10 Nonmetropolitan New West Counties by Net Migration Rate: Amenity-based Characteristics

County	Net Mig (per 1,000)	Natural Amenities	Recreation	Retire
Sublette , WY	215.54	6	*	
Archuleta , CO	213.28	6	*	*
Valley , ID	143.00	5	*	*
Lincoln , NV	131.57	5		*
Johnson , WY	130.32	5	*	
Ouray , CO	128.27	6	*	
Ravalli , MT	113.86	4		*
Custer , CO	113.62	6	*	*
Bonner , ID	109.62	5		*
Saguache, CO	107.66	6		

*Yes

Table 9 Bottom 10 Nonmetropolitan New West Counties by Net Migration Rate: Sustenance Organization

County	Net Mig (per 1,000)	% Farm Pop	Mining	Manuf	% Retail	% Accommodations and Foodservices
Wheatland, MT	-106.68	16.7			14.1	4.01
Lincoln , CO	-111.06	18.7			14.2	11.66
Liberty , MT	-119.44	17.9			6.1	0.81
Lander , NV	-130.48	1.7	*		6.6	7.22
Kiowa , CO	-133.44	12.5			2.4	3.26
Prowers , CO	-134.09	7.7			9.9	6.21
Cheyenne , CO	-162.71	17.9			4.6	1.20
Esmeralda , NV	-165.81	5.7	*		3.2	2.60
Hidalgo , NM	-178.19	3.9		*	9.9	13.93
Treasure , MT	-197.44	21.2			5.9	2.29

*Yes

Table 10 Bottom 10 Nonmetropolitan New West Counties by Net Migration Rate: Amenity-based Characteristics

County	Net Mig (per 1,000)	Natural Amenities	Recreation	Retire
Wheatland, MT	-106.68	5		
Lincoln , CO	-111.06	4		
Liberty , MT	-119.44	4		
Lander , NV	-130.48	5		
Kiowa , CO	-133.44	4		
Prowers , CO	-134.09	4		
Cheyenne , CO	-162.71	3		
Esmeralda , NV	-165.81	5		
Hidalgo , NM	-178.19	5		
Treasure , MT	-197.44	3		

*Yes

Sustenance organization variables are used to provide a measure of the influence of the type and prevalence of different industries on net migration. Farming dependence is measured as the percentage of each county's total population living on a farm. Values range from .2 to a little more than 47 percent (47.3 percent) with a mean value of 9.15. Out of the 138 nonmetropolitan counties, 24 (17.39 percent) were classified as mining dependent and 6 (4.35 percent) were manufacturing dependent. To measure the prevalence of services in each county, two different measures were used, namely, the dependence on retail and accommodations and foodservices industries. The presence of retail in each county is based on the percentage of total income for each county from the retail industry. The mean percentage is 10.10, with values ranging from 2.4 percent to

22.1 percent. The percentage of employees in the accommodations and foodservices industries had a mean value of 8.12 with values ranging from 0.59 percent to 53.76 percent.

Among the top 10 counties with the highest net migration rates (see Table 7), the percentage of the population identified as living on a farm for each county ranges from 1.6 percent to 11.6 percent with a mean value of 5.41 percent. Percentages for the bottom 10 counties (see Table 8) range from 1.7 percent to 21.2 percent, with a mean value of 12.39 percent.   This indicates a higher prevalence of farming for counties with lower net migration rates. For the top 10 and bottom 10 counties, each contained 2 mining-dependent counties and 1 manufacturing-dependent county. The percentage of total income from the retail industry for the top 10 counties ranges from 6.9 percent to 17.9 percent, with a mean value of 11.88 percent. The bottom 10 counties ranged from 2.4 percent to 14.2 percent, with a mean value of 7.69 percent. This indicates a higher prevalence of retail trade in counties with higher net migration rates. The percentage of employees in accommodations and food services industries for the top 10 counties ranges from 4.26 percent to 13.98 percent with a mean of 7.71 percent and from 0.81 percent to 13.93 percent, with a mean value of 5.32 percent for the bottom 10 counties.

Table 6 presents descriptive statistics for the amenity-based characteristic measures. In relation to amenity-based characteristics, natural amenities rankings ranged

in value from 2 to 7. The most frequently occurring value was a score of 5 (42.03 percent). Approximately 43 percent (42.75) of counties had scores 4 and below and 15.22 percent scored 6 or 7. Almost 35 percent (34.78) of all the counties were recreation-focused and 13.77 percent were retirement-focused. The top 10 counties of my analysis are rich in natural amenities with all but one scoring 5 or above, with one score of 4. The bottom 10 counties tell a different story, with the scores almost evenly distributed from a low of 3 to a high of 5. Of the top 10 counties in my analysis (see Table 8), 6 were recreation-focused counties and 6 were retirement-focused counties. In the bottom ten (see Table 10), none are classified as recreation-focused, and none are classified as retirement-focused.

Farming in the New West was found to be more prevalent in counties with lower net migration rates. Higher net migration rates to counties with less of a farming presence lend support to the transition away from Old West land extraction based industries. Notably, the top and bottom 10 counties shared the same proportions of mining-dependent and manufacturing-dependent counties. My later statistical analyses will show if this relationship holds significance. Services are predominating in counties with higher levels of net migration. The mean value for retail was, as expected, higher among New West counties with higher net migration rates in comparison with counties

of low net migration rates. Since accommodations and food services were expected to positively affect net migration rates, I was surprised that the counties with higher net migration rates had a much lower percentage of employees in these industries.

Amenity-based characteristics describe vividly the natural resources so prominent in many of the New West counties. Counties with higher net migration rates also had higher levels of natural amenities, while counties with lower net migration rates tended to have fewer natural amenities. Recreation-focused and retirement-focused counties were more prominent when there were higher levels of net migration. Finally and most interestingly, among the bottom counties in my analysis, none were recreation-focused or retirement-focused. This points to the recent wave of migrants to the New West being amenity-based.

My analysis of migration in the New West will now examine the individual characteristics that factor into migration choices. To measure the characteristics of those living in and moving to the New West, the residents of the state of Nevada will be analyzed. Since Nevada has such a large arrival of many people, inferences can be drawn and information provided about the people currently living in the New West based on the micro-analysis of Nevada residents.

Summary Statistics and Discussion – Individual-level

Table 11 presents descriptive statistics for the residents of the state of Nevada in the year of 2000. The total number of cases in my sample is 71,495. Almost 19 percent (18.79 percent) of the total sample are in their 20s; a little more than 59 percent (59.32 percent) are of typical working ages to include the 30s, 40s, and 50s, and almost 22 percent (21.89 percent) are aged 60 and above. Of the entire Nevada sample, 50.35 percent of the population have a high school education or less, with close to 17 percent (16.71 percent) having completed a bachelor's degree or higher. In regards to sex, males and females are virtually evenly distributed with males slightly outnumbering females by less than 0.5 of a percent. Slightly more than 58 percent are married. White respondents constitute almost 69 percent (68.96 percent) of the total sample. Hispanic respondents are the largest minority group making up over 16 percent (16.48 percent). Black respondents account for almost 6 percent (5.71 percent), Asian respondents close to 5 percent (4.84 percent) and the Other respondents (there are mainly American Indians and Native Alaskans) slightly more than 4 percent (4.01 percent).

Table 11 Nevada Sample Frequencies

	Frequency	Percentage
Dependent Variable		
native resident	3203	4.48%
distant migrant	19556	27.35%
recent migrant	44810	62.68%
return migrant	3926	5.49%
Total	71495	100.00%
Independent Variables		
Age		
20s	13434	18.79%
30s	15948	22.31%
40s	14688	20.54%
50s	11776	16.47%
60s	7735	10.82%
70s	5518	7.72%
80+	2396	3.35%
Education		
less than high school diploma	14945	20.90%
high school diploma/GED	21053	29.45%
some college/associate's degree	23551	32.94%
bachelor's degree	8134	11.38%
graduate degree or higher	3812	5.33%
Sex		
male	35826	50.11%
female	35669	49.89%
Marital Status		
not Married	29942	41.88%
married	41553	58.12%
Race/Ethnicity		
White	49302	68.96
Hispanic	11782	16.48
Black	4083	5.71
Asian	3462	4.84
Other	2866	4.01
Total	71495	100%

Source: Ruggles et al. (2010)

Dependent Variable

With regard to my dependent variable of migration, I have categorized the sample into native residents, distant migrants, recent migrants, and return migrants; this will allow for a determination of the differences between those who chose to migrate and those that do not, that is, the native born population. For the purpose of this sample, native born refers those born in Nevada and still residing there in 1995 and 2000; distant migrants were not born in the state of Nevada but were residing in Nevada in 1995 and 2000; recent migrants were not born in Nevada, did not reside in Nevada in 1995, but do reside in Nevada in the year 2000; and return migrants were born in Nevada, did not live in Nevada in 1995 but have returned to live in Nevada in 2000.

The majority of the residents of the state of Nevada are recent migrants, totaling almost 63 percent (62.68 percent) of the sample population. Distant migrants total a little more than 27 percent (27.35 percent), and return migrants make up 5.49 percent. Native residents account for only 4.48 percent of the total population of the state of Nevada. The fact that there are so very few residents who are native to Nevada underscores the importance of studying migration patterns in this area. The large percentage of recent migrants brings life to the surge in migration to the New West.

Independent Variables

Length of residence is expected to be affected by age, level of educational attainment, sex, marital status, and race/ethnicity. Age has been shown to be a powerful predictor of migration choices. Of the 3,203 individuals native born to Nevada, 45.99

percent are in their 20's, 32.06 percent are in their 30's, leaving 21.95 percent of ages 40 and above.   Of the 19,556 who are distant migrants, 20. 32 percent are in their 20s, 64.18 percent are between 30 and 59, with those ranging from age 60 and above making up the remaining 15.5 percent. Of the 44,810 who are recent migrants, 70.18 range in age from 20 to 49, leaving 29.81 percent age 50 and above. Among the recent migrants, the largest proportion is in their 40s which seems to counter the arguments posed against migration occurring during the working years. However, recent migrants also had the largest proportion of migrants ages 60 and above which supports individuals being more likely to migrate after retirement.

Education has been shown to have a positive relationship with education (see my earlier discussions in Chapter II). My data support this in showing that recent migrants, of all the groups of persons, tend to have the highest percent of college degrees, with 17.83 percent obtaining a bachelor's degree or higher. Native residents, distant migrants and return migrants holding a bachelor's degree or higher total 12.58 percent, 15.18 percent, and 14.93 respectively. The percentages of those having a high school diploma or less were close to 50 percent for native residents (49.80 percent), distant migrants (51.64 percent), recent migrants (49.9 percent), and return migrants (49.44 percent).

The difference in migration patterns for males and females across the continuum is close to 50 percent for both, with males slightly outnumbered by females among the native born (49.08 percent), recent migrants (49.87 percent), and return migrants (49.82 percent). Males slightly outnumber females among recent migrants (50.89 percent).

Married respondents account for approximately 50 percent each for native residents (44.83 percent), distant migrants (54.97 percent), and return migrants (52.29 percent). For return migrants, married respondents constitute 60.96 percent. Recent migrants having the largest portion of married respondents; this seems to contradict what I expected in that individuals who are married are thought to be less likely to migrate than their single counterparts.

In relation to race, of the 3,203 native residents, 71.37 percent are White, 8.49 percent are Hispanic, 11.18 percent are Black, 0.66 percent is Asian, and 8.30 percent are considered Other. Of the 19,556 distant migrants, 68.04 percent are White, 18.64 percent Hispanic, 5.96 percent Black, 4.43 percent Asian, and 2.93 percent Other. Of the recent migrants to Nevada, 69.18 percent are White, 17.02 percent are Hispanic, 5.01 percent are Black, 5.69 percent are Asian, leaving 3.10 percent classified as Other. With the number of return migrants at 3,926, the state of Nevada has a sample made up of 69.03 percent White, 6.06 percent Hispanic, 8.02 percent Black, 0.64 percent Asian, and 17.20 percent Other.

Table 12 Nevada Sample Frequencies by Migrant Status (n=71495)

	Native Residents	Distant Migrants	Recent Migrants	Return Migrants
	3203	19556	44810	3926
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Age				
20s	1473 (45.99%)	3974 (20.32%)	7093 (15.83%)	894 (22.77%)
30s	1027 (32.06%)	5211 (26.65%)	8716 (19.45%)	994 (25.32%)
40s	401 (12.52%)	4378 (22.39%)	9043 (20.18%)	866 (22.06%)
50s	157 (4.90)	2961 (15.14%)	8117 (18.11%)	541 (13.78%)
60s	56 (1.75%)	1588 (8.12%)	5783 (12.91%)	308 (7.85%)
70s	50 (1.56%)	989 (5.06%)	4258 (9.50%)	221 (5.63%)
80+	39 (1.22%)	455 (2.33%)	1800 (4.02%)	102 (2.60%)
Education				
less than HS diploma	504(15.74%)	4317 (22.08%)	9506 (21.21%)	618 (15.74%)
HS diploma/GED	1091 (34.06%)	5781 (29.56%)	12858 (28.69%)	1323 (33.70%)
some college/ associate's degree	1205 (37.62%)	6490 (33.19%)	14457 (32.26%)	1399 (35.63%)
bachelor's degree	306 (9.55%)	2092 (10.70%)	5327 (11.89%)	409 (10.42%)
graduate degree or higher	97 (3.03%)	876 (4.48%)	2662 (5.94%)	177 (4.51%)
Sex				
male	1572 (49.08%)	9952 (50.89%)	22346 (49.87%)	1956 (49.82%)
female	1631 (50.92%)	9604 (49.11%)	22464 (50.13%)	1970 (50.18%)
Marital Status				
not Married	1767 (55.17%)	8806 (45.03%)	17496 (39.04%)	1873 (47.71%)
married	1436 (44.83%)	10750 (54.97%)	27314 (60.96%)	2053 (52.29%)
Race/Ethnicity				
White	2286 (71.37%)	13305 (68.04%)	31001 (69.18%)	2710 (69.03%)
Hispanic	272 (8.49%)	3646 (18.64%)	7626 (17.02%)	238 (6.06%)
Black	358 (11.18%)	1166 (5.96%)	2244 (5.01%)	315 (8.02%)
Asian	21 (0.66%)	866 (4.43%)	2550 (5.69%)	25 (0.64%)
Other	266 (8.30%)	573 (2.93%)	1389 (3.10%)	638 (17.20%)
Total	3203	19556	44810	3926

Source: Ruggles et al. (2010)

Summary statistics have been provided above in Table 12 for residents of the state of Nevada to measure individual characteristics that are expected to influence decisions to migrate. The main goal of this dissertation is to establish patterns of migration occurring throughout the New West. The following paragraphs discuss the

regression equations estimated for the nonmetropolitan counties of the New West, and

for the residents of the state of Nevada to allow for a deeper and more detailed analysis

of migration in the New West.

OLS Regression Results

The following regression equations have been estimated specifically for the 138

nonmetropolitan counties in the New West; they offer results relative to the effects of

sustenance organization and environmental characteristics. Three models have been

developed. The first model examines the effects of sustenance organization variables on

net migration rates. The second examines amenity-based characteristic variables and

their effects on net migration rates. The third model takes into consideration the effects

on net migration rates of both the sustenance organization and amenity-based

characteristic variables. Since all of my independent variables are not measured using

the same metrics, to enable a comparison of the magnitude of the effects of the

independent variables, regression coefficients are presented as standardized values. This

is a standardized version of the regression coefficients produced in OLS modeling and is

done so that the reader may be able to understand the effects of each independent

variable relative to the other independent variables. In other words, one can use the

standardized coefficients among the independent variables to assess the relative strength

of each independent variable on the dependent variable of net migration.

OLS regression results are presented in Tables 13-15. Column one presents the

results expressed as unstandardized regression coefficients. This value tells the average

amount of change in net migration rates based on a one unit change in each independent variable. It provides the independent effect of each X variable on net migration, controlling for the effects on migration of the other independent variables. For example, the unstandardized regression coefficient of -2.24 (see Table 13) for the farming measure means that for every one unit increase in the percentage of the population identified as living on a farm, there will be a corresponding decrease of 2.24 in net migration independent of the effects on migration of mining status, manufacturing status, percent of total personal income from retail, and the percent of employees in the accommodations and foodservices industries. Column two reports the standard error. Column three reports the standardized regression coefficient. These allow for a comparison of the relative strength of each independent variable on net migration. To illustrate, the retail standardized coefficient of .35 means that for every one standard deviation increase in the percent of total income derived from retail, there will be a standard deviation increase of .35 in net migration rates, independent of the effects of the other measures of sustenance organization. The value of the coefficient of determination, R^2, explains the proportion of the variance in net migration rates explained by the independent variables presented in each of the models. The R^2 value of .17 means that sustenance organization measures explain 17 percent of the variance in net migration rates for the nonmetropolitan counties of the New West. Each model is discussed below.

Table 13 OLS Regression Results: Sustenance Organization Measures (N=138)

Model 1	Coef	Standard Error	Standardized Coef
Sustenance Organization			
farming	**-2.24***	.88	-0.23
mining	8.29	16.10	0.04
manufacturing	-10.44	28.85	-0.03
retail	**6.63***	1.69	0.35
accommodations and foodservices	-1.67	.98	-0.16
R^2	0.17		

*significant at .05, **significant at .01

Table 14 OLS Regression Results: Amenity-based Characteristics Measures (N=138)

Model 2	Coef	Standard Error	Standardized Coef
Amenity-based Characteristics			
natural amenities	**18.62***	6.18	.25
recreation	**25.59***	13.00	.17
retirement	**65.65***	16.10	.31
R^2	.27		

*significant at .05, **significant at .01

Table 15 OLS Regression Results: Sustenance Organization and Amenity-based Characteristics Measures (N=138)

	Coef	Standard Error	Standardized Coef
Sustenance Organization			
farming	-.63	.85	-0.07
mining	18.73	14.75	0.10
manufacturing	6.12	26.09	0.02
retail	**4.41****	1.58	0.23
accommodations and foodservice	-2.41	.93	-0.23
Amenity-based Characteristics			
natural amenities	**17.89****	6.51	.24
recreation	**25.72***	13.94	.17
retirement	**60.94****	16.32	.29
R^2	.35		
N	138		

*significant at .05, **significant at .01

Model 1

Model 1 (Table 13) depicts the effects of the sustenance organization variables

on net migration among the 138 nonmetropolitan counties in the New West. An OLS

regression was estimated to determine the effects of sustenance organization on net

migration rates. To ensure that no multicollinearity exists among the independent

variables in my model, I next checked tolerance levels. The commonly accepted value is

that of 0.4 or greater. The tolerance levels for all my independent variables were above

0.4 in this model. In fact, the lowest tolerance was .71 for the accommodations and

foodservices variable. This means that 71 percent of the variation in the accommodations and foodservices measure is independent of the other sustenance organization variables in the model.

Table 13 reports the R^2 value for model 1, which relates the total amount of variance in net migration rates as explained by the sustenance organization measures. For this model, the value of .17 indicates that the sustenance organization variables explain a little more than 17 percent of the variance in net migration rates among the nonmetropolitan counties in the New West. The unstandardized coefficients in Table 13 reveal the following; (a) for every unit increase in the percentage of individuals classified as living on a farm, independent of other sustenance organization measures, there is a 2.24 person decrease per 1,000 in net migration; (b) holding all variables constant, nonmetropolitan counties in the New West that are classified as mining-dependent experience, on average, a net migration rate that is 8.29 per 1,000 higher than counties that are not mining-dependent, albeit the relationship is not significant; (c) independent of the other variables, nonmetropolitan counties in the New West that are manufacturing-dependent experience net migration rates that are 10.44 lower per 1,000 than nonmining-dependent counties; however this is not significant; (d) for every unit increase in the percentage of income from retail, holding all other sustenance measures constant, there is an increase of 6.63 per 1,000 in net migration rates; and (e) for every unit increase in the percentage of employees in the accommodations and foodservices industries, there is a 1.67 decrease per 1,000 in the net migration rate.

Of the significant relationships, the standardized coefficients show that the relative effect of retail is stronger than that of farming. For every one standard deviation increase in the percentage of income from retail, independent of the other variables, there is a 0.35 standard deviation increase in net migration rates. For every one standard deviation increase in the percentage of individuals classified as living on a farm, holding constant the other variables, there is a .23 standard deviation decrease per 1,000 in net migration rates. The findings are generally consistent with prior research which reveals that an increase in the percentage of the population in farming results in a significant decrease in net migration and higher percentages of total income derived from retail result in higher net migration rates.

Model 2

Model 2 (Table 14) shows the effects of the amenity-based characteristic measures on net migration in the 138 nonmetropolitan counties in the New West. An OLS regression equation was calculated to determine the effects of level of natural amenities, recreation, and retirement on net migration rates. Multicolloinearity was not an issue in this model as all tolerance values were well above the 0.4 minimum. The recreation measure was the lowest and the retirement measure the highest, with 71 percent and 89 percent of the variance in each variable respectively, independent of the other independent variables.

Table 14 reports the results for the environmental characteristic measures. The R^2 value of .27 indicates that amenity-based characteristic measures explain 27 percent

of the variance in net migration rates. The effects on migration of all of the amenity-based characteristics were in the predicted directions, with the recreation measure significant at the .05 level, and natural amenities and retirement measures both significant at the .01 level. By examining the unstandardized coefficients, the following is determined in regards to nonmetropolitan counties in the New West; (a) for every one unit increase in the level of natural amenities, independent of the other environmental characteristic measures, there is an increase of 18.62 persons per 1,000 in the net migration rate; (b) holding all variables constant, nonmetropolitan counties that are recreation-focused have net migration rates 25.59 higher per 1,000 than counties that are not recreation-focused; and (c) nonmetropolitan counties that are retirement-focused, independent of the other variables, experience net migration rates 65.65 higher per 1,000 than nonretirement-focused counties.

Comparisons based on the standardized coefficients show that the retirement variable exerts the strongest relative effect on migration of all the environmental characteristic measures followed by level of natural amenities and recreation measures. My findings coincide with emerging research and reveal that amenity-based characteristics positively affect migration.

Model 3

Model 3 (Table 15) represents a combination of the effects on migration of both the sustenance organization and environmental characteristic measures. As with the two previous models, all tolerance levels were above 0.4 indicating an absence of severe

multicolinearity, with the lowest tolerance value of .62 for the recreation variable and the highest of .94 for the manufacturing variable. As shown on Table 15, the R^2 value of .35 indicates that when both sustenance organization measures and environmental characteristic measures are modeled together, collectively they explain 35 percent of the variance in net migration rates among the nonmetropolitan counties in the New West. This model also shows the measures for retail, natural amenities, and retirement to be statistically significant at the .01 level and the recreation measure is significant at the .05 level. An examination of the unstandardized coefficients in Table 15 yields the following results; (a) with every unit increase in the percentage of individuals classified as living on a farm, there is a decrease of 0.63 per 1,000 in the net migration rate, holding constant all variables; (b) if a nonmetropolitan county in the New West is classified as mining-dependent, independent of the effects of the other variables, that county will have a net migration rate that is 18.73 per 1,000 higher than a county that is not mining-dependent, however the relationship was not found to be significant; (c) holding all variables constant, manufacturing-dependent counties will experience net migration rates 6.12 higher per 1,000 when compared to counties that are not manufacturing-dependent, however this is not significant; (d) with every unit increase in the percentage of income from retail trade, there will be an increase of 4.41 per 1,000 in net migration rates, all held constant; (e) each unit increase in the percentage of employees in the accommodations and food services industries, independent of other variables, corresponds with a 2.41 decrease per 1,000 in the net migration rate, albeit not statistically significant; (f) holding all variables constant, each one unit increase in the

level of natural amenities results in 17.89 per 1,000 in the net migration rate; (g) among nonmetropolitan counties in the New West, recreation-focused counties will have net migration rates 25.72 per 1,000 higher than nonrecreation-focused counties; and (h) retirement-focused counties will have net migration rates 60.94 higher per 1,000 than counties that are not retirement-focused, independent of all other variables.

The standardized coefficients found on Table 15 show that even when sustenance organization measures and environmental characteristic measures are modeled together, retirement continues to have the strongest relative effect holding all variables constant. Next, for every one standard deviation increase in level of natural amenities rank, independent of the effects of the other variables, net migration rates per 1,000 increase 0.24 standard deviations.

It is clear that migration patterns in the New West vary based on the characteristics of each county. These findings observed for the nonmetropolitan counties certainly necessitate further investigation. I turn now to an individual-level analysis of the migration behavior of the residents of the state of Nevada.

Multinomial Logit Regression Models

The following multinomial logit equations have been estimated for my sample of residents of the state of Nevada. To account for clustering and stratification that occurs with United States Census data (see Chapter I), sample weights (the "svy" suite of commands in Stata-11) are used in my analyses to provide more accurate and nonbiased

results[1]. The first model assesses the effect of levels of human capital on the decision to engage in an interstate migration. The second model controls for the effects of sex and marital status and the third model adds additional control variables to account for racial/ethnic differences. My dependent variable has 4 nominal migration/non-migration categories as follows: native residents (hence non-migrants), distant migrants, recent migrants and return migrants I have designated native residents as the reference category and will estimate a multinomial logit model with three equations, one for each outcome category of distant migrant, recent migrant and return migrant. Logit coefficients are generated for each pair and the exponentiation of each coefficient will be presented as an odds ratio to allow for a more understandable comparison. As with the independent variables in my OLS models, the independent variables for the multinomial logit models are measured with different metrics. To gauge the relative effects of each independent variable in relation to the other independent variables, percent changes in the standardized odds ratios will be calculated.

Multinomial logit regression results are presented in Tables 16-18. The first column shows the logit coefficients. This value reports the log odds of each independent variable being in the migrant classification versus being a native resident. For example, the logit coefficient for distant migrants in regards to age of .5489 (Table 16) means that all else equal, for every increase in one category of age, there is an increase of .55 in the log odds of a respondent being a distant migrant compared to a native resident. The second column presents the odds ratio which is an exponentiation of the corresponding

[1] Multinomial Logit model results are obtained by STATA's *svy* command and provide weighted regression coefficients.

logit coefficient. Odds ratio values report factor changes in the odds for a one unit increase in the control variable. For example, the odds ratio value of .9641 for recent migrants in regards to education means that each increase in level of educational attainment, multiplies the odds, by a factor of 0.96 (that is, they decrease) for a respondent being a recent migrant versus a native resident, holding age constant. In other words, the odds decline by almost 4 percent (see column 3 for the percent changes in the odds ratios). The fourth column reports the percent change in the standardized odds ratios which allows for a measurement of the relative effects of the control variable on the various migrant categories. This value is obtained by subtracting 1 from the exponentiation of the semi-standardized logit coefficient and multiplying by 100. For example, for distant migrants for the age variable, 147.6 means that holding level of educational attainment constant, with every one standard deviation increase in category of age, the odds of a respondent being a distant migrant increases 147.6 percent compared to a native resident. Each model is discussed below.

Table 16 Multinomial Logistic Regression Results: Age and Education (n=71495; population = 1438561)

Migrant	Coef	e^b	%	%StdX
native (base outcome)				
Distant				
Age	**.54****	1.73	73.1	147.6
education	**-.10****	.91	-9.1	-10.0
Recent				
age	**.73****	2.07	106.8	232.1
education	**-.04***	.96	-3.6	-3.9
Return				
Age	**.49****	1.63	63.5	125.3
education	.00	1.00	.4	0.4

*significant at .05, **significant at .01
Results are weighted and were obtained via "svy" using PERWT

Table 17 Multinomial Logistic Regression Results: Sex and Marital Status (n=71495; population = 1438561)

Migrant	Coef	e^b	%	%StdX
native (base outcome)				
distant				
age	**.53****	1.70	69.8	139.8
education	**-.09****	.91	-8.9	-9.8
sex	**.10***	1.10	10.4	5.1
marriage	**.19****	1.21	21.0	9.9
recent				
age	**.70****	2.02	101.8	219.0
education	**-.04***	.96	-3.8	-4.2
sex	.08	1.08	8.3	4.1
marriage	**.39**	1.48	47.9	21.3
return				
age	**.47**	1.61	60.8	119.1
education	.01	1.01	.6	0.7
sex	**.13**	1.14	14.0	6.8
marriage	**.15**	1.16	16.0	7.6

*significant at .05, **significant at .01
Results are weighted and were obtained via "svy" using PERWT

Table 18 Multinomial Logistic Regression Results: Race/Ethnicity (n=71495; population = 1438561)

Migrant	Coef	e^b	%	%StdX
native (base outcome)				
distant				
age	**.5910***	1.8058	80.6	165.5
education	.0236	1.0239	2.4	2.6
sex	**.0884***	1.0925	9.2	4.5
marriage	.0836	1.0872	8.7	4.2
Hispanic	**1.3772***	3.9639	296.4	66.2
Black	**-.4391***	.6446	-35.5	-9.9
Asian	**2.2248***	9.2513	825.1	62.4
Other	**-.3729***	.6888	-31.1	-6.4
recent				
age	**.7750***	2.1706	117.1	259.7
education	**.0925***	1.0970	9.7	10.7
sex	.0724	1.0751	7.5	3.7
marriage	**.2736***	1.3146	31.5	14.5
Hispanic	**1.5480***	4.7019	370.2	77.0
Black	**-.5236***	.5924	-40.8	-11.7
Asian	**2.5721***	13.0935	1209.3	75.2
Other	**-.2167***	.8052	-19.5	-3.8
return				
age	**.4922***	1.6359	63.6	125.5
education	.0426	1.0436	4.4	4.8
sex	**.1297***	1.1385	13.8	6.7
marriage	**.1147***	1.1216	12.2	5.8
Hispanic	.2132	1.2377	23.8	8.2
Black	**-.1894***	.8275	-17.3	-4.4
Asian	.3700	1.4478	44.8	8.4
Other	**.4989***	1.6468	64.7	9.3

*significant at .05, **significant at .01
Results are weighted and were obtained via "svy" using PERWT

Model 1

Model 1 (Table 16) examines the effects on migration of the human capital held

by respondents by measuring each respondent's age and level of educational attainment.

The first issue to be investigated is that of multicollinearity. Tolerance values of 0 .4 or

greater do not indicate any cause for concern. Values were all well above the 0.4 level, indicating no presence of serious multicollinearity.

This model represents the findings associated with levels of human capital in relation to migration choices. The percent change in the odds ratios in column three indicate that with every category increase in level of age, all else equal, the odds of a respondent being a distant, recent, or a return migrant increases 73.1 percent, 106.8 percent, and 63.5 percent respectively compared to native residents, all else equal. For each additional increase in level of education, in comparison to native residents, all else equal, the odds decrease 9.1 percent for a respondent to be a distant migrant, 3.6 percent for recent migrants, and 0.4 percent for return migrants versus, albeit the relationship for return migrants was not significant. The standardized percent change in odds for a standard deviation increase, as in column four, shows that for distant, recent and return migrants, the relative effects of age are considerably higher than the effects of education. The strongest relative effect is 232.1 for recent migrants indicating that all else equal, with every standard deviation in category of age, a respondent is 232.1 percent more likely to be a recent migrant compared to a native resident. These findings are inconsistent with the original hypothesis and warrant the exploration of additional factors.

Model 2

Model 2 (Table 17) examines the effects on migration of the human capital variables, as well as the lifecycle variables of sex and marital status. Tolerance values

were all found to be above the 0.4 level indicating no serious multicollinearity among any of the independent variables. When comparing distant migrants to native residents, a respondent's age, level of educational attainment and marital status were all found to be statistically significant at the .01 level, while sex was significant at the .05 level. All else equal, with every one unit increase in category of age and level of educational attainment, the odds of a respondent being a distant migrant compared to a native resident increase 69.8 percent and decrease 8.9 percent respectively. The odds of respondents being distant migrants compared to native residents are 10.4 percent higher for males than females and 21 percent higher for the married than the unmarried, everything else equal. As shown in column four of Table 15, the standardized percent change in odds for a standard deviation increase indicates that age exerts the strongest relative strength, followed by marital status. For every one standard deviation increase in category of age, a respondent is 139.8 percent more likely to be a recent distant migrant compared to a native resident.

In regards to recent migrants versus native residents, the effects of a respondent's age and marital status were statistically significant at the .01 level and a respondent's level of educational attainment was significant at the .05 level. With each increase in category of age, the odds of a respondent being a recent migrant in comparison to a native resident increase 101.8 percent and with every one unit increase in level of educational attainment the odds decrease 3.8 percent, all else equal. The odds are higher for the respondent being a distant migrant for males versus females and for respondents that are married versus those who are not married, all else equal. However, the sex

relationship was not found to be statistically significant. As indicated by the standardized percent change in odds for a standard deviation increase, age and marital status have the strongest influence, though the influence of age is more heavily weighted. For every one standard deviation increase in category of age, a respondent is 219 percent more likely to be a recent distant migrant compared to a native resident.

Lastly, return migrants were found to be statistically different at the .01 level from native residents in regards to age and marital status and at the .05 level for sex. In comparison with native residents, everything equal, with each increase in category of age, the odds increase 60.8 percent for a respondent to be a return migrant. All else equal, with each level of educational attainment, the odds of a respondent being a return migrant increase 0.6 percent compared to native residents, albeit not statistically significant. Male respondents are more likely than females and married respondents more likely than the unmarried to be a return migrant versus a native resident, everything equal. The relative effect of age, followed by marital status, for recent migrants have the strongest relative strength as indicated by the standardized percent change in odds for a standard deviation increase. With every one standard deviation increase in the category of age, a respondent is 119.1 percent more likely to be a return migrant compared to a native resident.

Model 3

Model 3 (Table 18) represents the findings associated with the addition of the independent variables for racial and ethnic identification. Multicollinearity was not an

issue with this model as all tolerance values were 0.4 or higher indicating no cause for concern. When comparing distant migrants to native residents, the independent variables for age, Hispanic, Black, Asian and Other were all significant at the .01 level and sex at the .05 level. For each additional increase in category of age, the odds of the respondent being a distant migrant compared to a native resident increase 80.6 percent, all else equal. Additionally, the odds are 9.2 percent higher for males of being a distant migrant versus a native resident than females, other things equal. The odds of a respondent being a distant migrant versus a native resident, when compared to respondents who were identified as White are 296.4 percent higher for Hispanics, 35.5 percent lower for Blacks, 825.1 percent higher for Asians and 31.1 percent less for those classified as Other, all else equal. In regards to the relative strength of these variables, age stands out as being significantly more influential than the rest of the independent variables. All else equal, with each standard deviation increase in age, the odds that a respondent is a distant migrant compared to a native resident increase by 165.5 percent. Hispanic invokes the second highest strength followed by Asian.

For recent migrants, all variables except sex were significant at the .01 level. Each increase in category of age increases the odds by 117.1 percent, and every increase in the level of educational attainment increases the odds 9.7 percent, all else equal, of the respondent being a recent migrant compared to a native resident. All else equal, the odds of a respondent being a recent migrant are 31.5 percent higher for those that are married than the unmarried. Furthermore, the odds of being a recent migrant versus a native resident, all things equal, are 370.2 percent higher for Hispanics, 40.8 percent

lower for Blacks, 1209.3 percent higher for Asians, and 19.5 percent lower for Others when compared to Whites. The relative strength of the age variable once again stands out as having the strongest influence. All else equal, with each standard deviation increase in category of age, a respondent is 259.7 percent more likely to be a recent migrant versus a native resident. Among the remaining variables, Hispanic has the second strongest influence followed closely by Asian.

For return migrants, the measures for age and Other are significant at the .01 level, and sex, marital status, and Black are significant at the .05 level. All else equal, with every category increase in age, the odds of a respondent being a return migrant versus a native resident increase 63.6 percent. The odds are 13.8 percent higher for males than females, and 12.2 percent higher for the married than the unmarried, all else equal. Additionally, compared to White respondents, a 17.3 percent decrease in the odds of a respondent being a return migrant versus a native resident is experienced for Black respondent and a 64.7 percent increase is experienced for Other respondents, all else equal. The relative strength of these variables assessed through the standardized percent change shows that age, followed by Other exert the most significance. With each standard deviation increase in category of age, everything equal, a respondent is 125.5 percent more likely to be a return migrant compared to a native resident.

Discussion

I will now discuss the county level characteristics of the New West and the degree to which my hypotheses are supported by the results found in the models. Overall

the substantive findings that pertain to migration patterns in the New West at both the county-level and individual-level made available beneficial information about migration patterns in the New West. The county-level analyses were informative and offer much in the way of discovery. An area having prosperous sustenance producing activities is more likely to experience an increase in net migration. This is due in part to its ability to provide opportunities for individuals seeking to enhance their lifestyle.

Sustenance organization measures were posited to determine their effects on net migration rates among nonmetropolitan counties in the New West. It was expected that counties with higher percentages of individuals classified as living on a farm will experience lower rates of net migration. It was observed that as the presence of farming increased (in the cross-section), net migration rates decreased at statistically significant levels. Mining dependence was hypothesized to have a negative effect on net migration. My analysis indicated that counties identified as mining-dependent were actually more likely to experience higher rates of net migration. Manufacturing was also expected to negatively impact net migration rates. My results confirmed this hypothesis, as counties labeled as manufacturing-dependent experienced net migration rates lower than counties that are not manufacturing-dependent. However, the effects on migration of the mining and manufacturing variables were not statistically significant.

When looking at retail and accommodations and food services, the influences of both were hypothesized to be positive with net migration. While counties with higher percentages of total income derived from retail were found to have higher rates of net migration, the effects of accommodations and food services were negative. As the

percentage of employees in accommodations and foodservices increased, net migration rates decreased. The relationship was not statistically significant. The retail measure exerted the strongest relative strength of all the sustenance organization measures.

Amenity based migrants appear to be drawn to areas they find to be physically and aesthetically pleasing. The amenity-based characteristics of a county were found to positively influence net migration rates. Counties with higher levels of natural amenities were expected to have higher rates of net migration than counties with fewer natural amenities. My research revealed support for this hypothesis at statistically significant levels. Counties that are recreation and retirement-focused are also expected to have higher net migration rates. Both recreation and retirement measures were found to be statistically significant and to positively influence net migration. The retirement variable had the strongest relative effect on net migration rates among the nonmetropolitan counties in the New West.

To tie in ecological factors and amenity-based migration, a regression equation was next estimated to take into account the sustenance organization measures of farming, mining, manufacturing, retail, and accommodations and foodservices along with the amenity-based characteristic measures of level of natural amenities, recreation-focus, and retirement focus. Interestingly, when sustenance organization and amenity-based characteristics are modeled together, the amenity-based characteristic measures had more important effects on migration than the sustenance organization measures. Natural amenities, recreation, and retirement all remained statistically significant in their predicted directions. While the effect of farming remained negative, the addition of

environment characteristics severely depleted its significance. Manufacturing remained

negative but insignificant. This supports the notion that the demand for labor occurring

in farming and manufacturing industries has decreased due to advancements in

technology giving way to man being replaced by machinery. Mining has a positive effect

on net migration, but not at a statistically significant level. The dichotomous nature of

this measure does not allow for different levels of mining to be taken into consideration

and as such could affect its significance. Retail was the only sustenance organization

measure to retain significance; however its effects were lessened. The percentage of

employees in the accommodations and food services industries continued to perform

negatively and would have been statistically significant had it been predicted to lower

net migration rates. Of all the independent variables, both sustenance organization

measures and environmental characteristics measures, the retirement variable exerted the

strongest relative strength.

The results of the analyses of nonmetropolitan counties have provided much

support for the economic restructuring that is transforming natural resources from Old

West land extractions to New West land attractions. Amenity based migrants are drawn

into the New West. And the analyses of the residents of Nevada proved a more precise

understanding of the individual characteristics that influence migration patterns.

The multinomial logit regression equation modeling the effects of human capital

and current lifecycle location on migration choices found that age and levels of

educational attainment play large roles in an individual's decision to migrate. As an

individual ages, I hypothesized that the chances of engaging in an interstate migration

into the state of Nevada will decrease due to established personal and career based ties. Surprisingly, my results found that as a respondent's age increased, it was more likely that he or she had engaged in a migration into Nevada. Distant migrants, recent migrants, and return migrants, were all more likely to be significantly older than native residents. These results would seem to indicate that as a person ages, their ties to community and career are not necessarily deterrents for migration. Level of educational attainment was predicted to have a positive effect on migration. However, this was found to be negative. In fact, those with higher levels of educational attainment were more likely to be native residents of Nevada.

The relationship between one's sex and marital status considerably impacts the decision to migrate. It was expected that males would be more likely than females, and those who are not married more likely than those who are married, to migrate into Nevada. My results indicate that sex is a significant predictor for distant and return migrants in comparison with native residents. Recent migrants were more likely to be male, but this relationship was not significant. Married respondents were more likely than non-married respondents to have migrated into Nevada. Sex, marital status, age and level of education performed opposite of what was expected. The older the respondent the greater the chance this individual has migrated into Nevada. Level of educational attainment remained negative for distant and recent migrants. The relationship for return migrants was positive but not significant. These results mirror the human capital controls in that the more highly educated respondents are not migrants but instead native residents of Nevada.

When biological and social constructs of race and ethnicity are introduced, with the exception of age, all the other variables move in their predicted directions. Age continued to be positively associated with migration and exerted the strongest relative effect. As age increased, the chances of engaging in an interstate migration into the state of Nevada increased. Distant migrants, recent migrants and return migrants were all found to be older than native residents. The effects of level of educational attainment were positive for all comparison groups, although the relationship was not significant for return migrants. Males were statistically more likely to have migrated than females for distant and return migrants. Males were also more likely to be recent migrants than females, but the relationship was not significant. Married respondents were more likely than non- married respondents to be distant, recent and return migrants, but this was not significant for distant migrants. These results indicate that the effects on migration for each variable are in some way affected by a person's race or ethnic background.

In comparison to White respondents, Hispanic respondents are more likely to be both distant and recent migrants to Nevada. Black respondents were less likely across all comparison groups to have migrated into Nevada. Asians were less likely to be native to Nevada and more likely to be distant migrants or recent migrants. Respondents classified as Other yield interesting results. They are less likely to be native residents, distant, or recent migrants. However, they are more likely to be return migrants to the state of Nevada. When comparing distant migrants, recent migrants, and return migrants, the relative effects of age, levels of educational attainment, marital status, and the race/ethnicity variables of Hispanic, Black, and Asian are strongest for recent migrants.

While the relative effects of sex and classification as other are strongest for return migrants.

Summary

My dissertation reflects the importance of how migration affects many aspects of population change in the New West. The New West, particularly Nevada, has recently experienced a boom in population.   My research focused primarily on the source of growth in the New West and how it relates to the overall potential for sustainability. Analyses revealed natural resources to be transformed from economic extraction to a basis of migrant attraction. The New West is now a popular migration destination due to its natural amenities, the offering of employment derived from services and recreation, as well as it being an optimal retirement destination. Ecologically speaking, the circumstances such as type of sustenance organization or amenity-based characteristics under which a migration is likely to occur are an important area of analysis; however, individual characteristics also influence migration choices. Often an individual will weigh the benefits before proceeding with a move and characteristics such as education, age, and race/ethnicity, will determine where, when, or if a migration will ensue. The large inflow of migrants into Nevada provided an accounting of such characteristics to offer more information about the people that collectively make up the New West. In the next and final chapter, I explore some of the implications of my research.

CHAPTER V

CONCLUSION

A westward trend of migration has always been a prominent aspect of American history. When the first European settlers landed on the eastern seaboard, they quickly headed toward the west in search of a better life. These migrants traversed vast, dangerous terrain in wagons pulled by horses. Their journey was dangerous as they crossed the vast mountainous territory. It was a path of hardship that many did not survive. Yet, the path of westward migration continued and grew larger. The lure of natural resources proved to be a constant source of sustainability sought after by many. When gold was discovered in the west, the number of people moving into the area rapidly increased. For many, the chance to make a quick fortune was worth any risk to be faced along the way. As technology became more advanced and methods of transportation improved, the numbers of westward migrants steadily increased. The invention of the steam engine and the expansion of the railroad allowed more people to more easily move to the west with greatly reduced risk. Today, the abundance of natural resources in the west continues to attract people into the area. Modern technology now allows migrants to drive to, fly into, and even telecommute from the west. It is no longer necessary for individuals to be confined to a cubical in a high-rise to be productive. Many are choosing to work from remote areas that offer a less stressful, family oriented environment.

Advancements in technology, including transportation, telecommunications, and industry, have allowed for a shift in migration patterns from the Old West to the New

West. When looking at migration into the Old West, cowboys or those seeking to get rich quick from the gold rush, we see a very different perspective. The cause for migration to the Old West was based on resource exploration stemming from the need for rich fertile soil and a viable water source on which an individual could rely for survival. Communities organized and built up around natural amenities. Land extractions characterized the Old West while today the New West has evolved into an area of amenity based migration, characterized by migrants that move to specific locations based on natural amenities or recreational opportunities. Patterns of migration in the New West are shaped not only by the economic, social, and physical characteristics of the area but also by the unique features of the individuals within communities. Booming service industries are being fueled by tourism, which stems from an abundance of recreational opportunities and attractive natural resources offering a better quality of life to residents. As this area develops and transforms, new qualifications and indicators emerge to capture that which constitutes the New West. This in turn, compounds the complexity of the characterization of what embodies the New West and its migrants.

Migration Theories

General approaches to the study of migration tend to stress either individual or structural level factors. The neoclassical approach focuses on individual-level factors. For example, the cost-benefit perspective posits that migration is based on a cost-benefit analysis. Cost-benefit factors include much more than the out-of-pocket expenses that

are incurred as a part of moving oneself or family from one area to another. There is a psychological aspect that must be factored in as well. Specifically, when individuals move they leave behind ties to their old community, such as family, friends, church, schools, and a home to which they have become accustomed. Leaving what is familiar and safe is often mentally stressful and therefore the move must be something that will be beneficial in aspects that transcend solely economical gain. Evaluating such risks is a large part of determining whether the benefits will outweigh the cost of a migration (Massey et. al 2005).

Another neoclassical perspective – the distance theory of migration – focuses on the barriers that are in place between a migrant's place of origin and ultimate place of destination. The greater the distance, the more barriers one must encounter (Lee 1966). Again one must consider whether the benefits of migrating will outweigh the cost. Obviously the greater the distance one travels, the more obstacles there will be resulting in a greater cost. While these theories highlight individual factors that influence migration choices, they do not account for migration that occurs at the structural-contextual level.

Migration to the New West requires attention to the structural context, such as the environment. One such theory, human ecology, emphasizes that the circumstances under which a migration is likely to occur. It is a theory based on why a population increases or decreases in size based on the characteristics of the aggregate population. Human ecology posits that populations must organize and redistribute themselves to maintain a balance that is needed to ensure survival. Because the study of the New West

underscores the ecological context as it evolves from Old to New, I use a human ecology framework to study its migration patterns.

My interest in human ecology and how a population is transformed by migration, whether it be in- or out-migration, gave way to my constructing a representation of the recent in pouring of migrants to the New West. The New West encompasses the eight states of Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, and Wyoming. Migration to the New West from a human ecology perspective suggests that it is based, in part, on the appreciation of natural resources for their physical beauty and leisure time possibilities. This newly developed area harbors many characteristics that have led to an increase in population and redevelopment of land use in the last decade. This rapidly growing area consists of many natural amenities offered to those seeking to fulfill their need for a pleasing climate, beautiful landforms, and recreational possibilities. Whether young or beginning retirement, age has no bearing on the possibilities afforded to migrants to the New West, especially with regard to industry or leisure. The New West seems to offer something for everyone.

Research Goals

The main goal of my dissertation was to construct a representation of the recent in pouring of migrants to the New West. Under the auspice of human ecology, I examined the circumstances under which migration is likely to occur. In considering the traditional theories posited to account for the surge in migration to the New West, I found it compelling that most were focused solely on amenity-based characteristics. I

wanted to combine the traditional understanding of migration based on sustenance organization with the more modern understanding of migration based on amenity-based characteristics. By examining the relationship between ecological factors, amenity-based migration, and net migration I was able to measure the changes and adaptabilities of select nonmetropolitan counties in the New West.

Since the heavy streams of migrants flowing into the New West are disproportionately channeling into the state of Nevada, I conducted a separate analysis of the residents currently living in that state to capture the personal attributes that influence migration choices. Migrant streams are collectively made up of individual movers. Each migration begins with an initial choice made by each specific person to relocate to a new place of residence. It is important to understand which specific traits compel one person to move and another person to continue to live in the same place; the Nevada analysis contributes to this discussion.

Summary of County-level Results

Human ecology predicts that populations must change and make adaptations to maintain the equilibrium that is needed to survive and grow. My analysis of migration patterns in the New West was framed by differences in rates of migration for nonmetropolitan counties that were influenced by sustenance organization measures and amenity-based characteristic measures. Counties that have transitioned and restructured themselves to meet the needs of amenity-based migrants of the New West are indeed the ones experiencing prosperous growth. To determine which counties experienced

increases in population and which counties experienced decreases in population, each county's net migration rate between the years 2000 and 2006 was calculated. Additionally, sustenance organization measures and amenity-based measures were modeled to determine their effects on migration patterns.

OLS regression was used to determine the effects of sustenance organization measures of farming, mining, manufacturing, retail, accommodations and food services industries, as well as the amenity-based measures of level of natural amenities, recreation-focus, and retirement-focus on net migration rates for the 138 nonmetropolitan counties of the New West. Overall, counties with higher levels of net migration had on average, a lower prevalence of farming, a higher prevalence of retail, higher levels of natural amenities, more recreational opportunities, and more retirement aged residents. These findings are consistent with the theory of human ecology, because the organization and structuring of each county directly affected its level of growth. Areas with prosperous sustenance producing activities experienced higher levels of in-migration. Nonmetropolitan counties that have not adapted and changed to make the transition beyond an economic base of Old West land extraction are not growing. They are instead decreasing in size.

Sustenance Organization Measures

It was hypothesized that traditional land extraction industries such as farming, mining, and manufacturing would negatively impact net migration rates. As modern technology has become increasingly efficient, the machinery now commonly used in

these industries is far less labor intensive. The effects of farming were found to cause significant decreases in rates of net migration among the nonmetropolitan counties of the New West. Counties with higher percentages of individuals identified as living on a farm experienced significantly lower migration rates than counties with a lower prevalence of farming. This finding lends support to advancements in technology and the use of modern farming equipment causing a need for fewer laborers to yield a successful harvest. As a result a lower pull for potential migrants is created, thus reducing migration rates for counties where sustenance organization is based on traditional land extraction industries. Manufacturing-dependent counties also experienced lower rates of net migration and surprisingly, counties identified as mining-dependent were found to have higher levels of net migration. However, neither of these relationships proved to be of significance. Perhaps this is due in part to the dichotomy of how each measure was defined. A county was either identified as being dependent, yes or no. This did not allow for an accounting of variances in the level of dependence relevant to the mining or manufacturing industries that could have possibly resulted in significant effects on net migration rates that were not detected in my analysis.

The rapidly increasing population growth in the New West that is likely attributable to amenity-based migration has caused service industries to flourish. As predicted, increases in the percentage of personal income derived from the retail industry resulted in higher rates of net migration. Although a growing presence of employees in the accommodations and food services industries was predicted to increase rates of net migration, I was surprised to find that increases in the prevalence of these two industries

resulted in decreased migration rates. This negative relationship invites questions as to why this particular aspect of services negatively affects migration while counties with more of a presence in retail were positively affected.

Amenity-based Measures

Results for amenity-based measures confirmed the growing trend of amenity-based migration. All of the hypothesized relationships were in their positively predicted directions. Regression equations revealed higher levels of natural amenities, more recreational opportunities, and large numbers of retirees significantly increased net migration rates for nonmetropolitan counties in the New West. As levels of tourism increase, a simultaneous economic stimulation occurs. Natural amenities and the availability of recreational opportunities are drawing not only amenity-based migrants but also retirees to the New West. Recreation activities will typically utilize natural resources and promote tourism. As the number of retirees into a county increases, and visitors due to tourism, the demands for additional services and local jobs are created. Individuals who otherwise would have been forced to leave a particular area to secure the employment needed to support themselves are now able to stay.

Sustenance Organization and Amenity-based Measures

To connect ecological factors with amenity-based migration a regression equation was calculated for the sustenance organization measures of farming, mining, manufacturing, retail, and accommodations and food services industries, in conjunction

with the amenity-based characteristic measures of level of natural amenities, recreation-focus and retirement-focus. This analysis allowed me to determine why some counties in the New West experienced gains in populations while others lost and to identify the circumstances and driving forces behind these migrational moves. My results showed that net migration was significantly impacted by amenity-based migration. Counties that embody the New West, by allowing for ample employment opportunities, possessing appealing land characteristics and recreational benefits in addition to beautiful surroundings, are the ones that gained in population. The analysis revealed that the significant effects of sustenance organization were no longer significant once the amenity-based characteristic measures were added to the analysis. In particular, the significant effect of farming was completely negated and the significance of the retail industry was greatly reduced. This gives credence that amenity-based factors influence net migration to the New West. Henceforth, more people will make decisions as to where they live not solely based on economic considerations but on the characteristics of the environment as well. This is even more so the case as technology enables us to work from almost any place other than the proverbial office setting or plant based factory. Real location decisions are no longer strictly affected by the physical location of a job. Work as a basis of migration is no longer salient because technology has caused it to become ubiquitous, allowing it to be done from anywhere. It brings the office into your home.

Nevada Results at the Individual-level

Residents of the state of Nevada were divided into four groups based on length of residence. Individuals born in Nevada and still living in Nevada in the years 1995 and 2000 were classified as native residents. The fact that their state of residence has remained the same, infers they have not moved and are not considered to be migrants. Residents that were not born in Nevada but were living in Nevada in the years 1995 and 2000 were classified as distant migrants. They have lived in Nevada for a considerable period of time but are not native to the area. This implies in the distant past, they migrated into Nevada. Residents that were not born in Nevada nor did they live there in the year 1995 were classified as recent migrants. This group relocated to Nevada at some point between the years of 1995 and 2000. Return migrants are residents that were born in Nevada but were not living in Nevada in the year 1995. Return migrants returned to live in Nevada between the years 1995 and 2000.

Findings provide evidence that physical distance does not appear to inhibit migrational moves. Specifically, the majority of individuals living in Nevada are recent migrants. Recent migrants, and to a lesser extent return migrants, are the main subgroups that drive the rapidly increasing population growth of the New West.

Each individual living in the New West is unique. Levels of human capital and current lifecycle position play a leading part in one's decision to migrate. Factors such as age, educational background, and a person's sex, marital status, and racial/ethnic identification all affect the propensity of that individual to engage in migration. Native residents were compared to distant migrants, recent migrants, and return migrants based

on the aforementioned variables, each proving to be a significant predictor in the likelihood of an individual's decision to engage in a migration. Based on length of residence, prior to 1995, migrants to Nevada were typically older, more likely to be male, and of Hispanic or Asian origin. Residents originally from Nevada that left at some point but have recently returned are older, male, married and identify racially/ethnically as Other, to include American Indian or Alaska Native, Chinese, Japanese, Other Asian or Pacific Islander, other race, two major races, or three or more races. Migrants relocating to Nevada more recently are older, more highly educated, and are of Hispanic or Asian descent.

It was hypothesized that as the age of a respondent increased, the chances of that person migrating into Nevada would decrease. As people grow older, they become more established both socially and economically. These personal and occupational network connections are thought to firmly establish an individual to a permanent community. If a decision is made to migrate, these ties must be severed and reestablished within a new community and also a new place of employment, thus serving as a deterrent to moving. However, my findings revealed age to be positively associated with migration. This signifies that distant migrants, recent migrants, and return migrants are all significantly older than native residents. In other words, the people moving into Nevada are typically older than the people who are native to the area never having moved.

A major aspect of human capital can be assessed with a consideration of the educational background of each respondent. It was hypothesized that with increased levels of educational attainment acquired by an individual, the chances of migration

increase. Education expands knowledge and opens doors for better employment opportunities not available to the less educated. My results were not found to be consistent with this logic. Native residents of Nevada were significantly more educated than any migrant group. It was only after the addition of controls for racial and ethnic identification that the education variable behaved in its predicted direction.

The fact that neither the age variable nor the education variable performed as expected suggested the need to account for possible explanations. The effects on migration by each respondent's sex and marital status offered more insight into the differences among residents of Nevada. Distant migrants were found to be significantly older and less educated than native residents and they were also more likely to be male and married. Recent migrants were significantly older and less educated than native residents and were more likely to be married. Interestingly, there were no significant differences by gender. Return migrants were also significantly older than native residents but levels of educational attainment, even though not at a significant level, were not positive. Return migrants were significantly more likely to be male and married.

Many of the findings, when controls for racial and ethnic identification were added to the model, were confirmed and several notable results emerged. Age was the only variable not affected by a respondent's racial or ethnic identification. Native residents remained significantly younger than distant migrants, recent migrants, and return migrants. These results suggest that the networking ties that have been established, both personally and professionally, do not prevent or deter individuals from

engaging in migration. Recent migrants to the state of Nevada are significantly more educated than native residents. Distant and return migrants continue to be significantly more likely to be male and recent migrants and return migrants significantly more likely to be married. Moreover, racial/ethnic differences were assessed using White respondents as a comparison group for Hispanic, Black, Asian, and Other respondents. Hispanic and Asian respondents were significantly more likely to have migrated to Nevada more recently or in the distant past. It was not likely respondents from either of these groups were native to Nevada. Of all racial/ethnic groups, Blacks were the least likely to be members of any migrant group. They are instead more likely to be native residents. Respondents classified as "Other" were less likely to be distant migrants and recent migrants; however, they were significantly more likely to be return migrants. Across all identifications, individual's race/ethnicity significantly impacted the likelihood that person had migrated into the state of Nevada.

Both the characteristics of and the individuals living in the New West have revealed important information about migration patterns. However, there are aspects pertaining to migration that are not addressed within the scope of this dissertation. I turn now to a discussion of its limitations.

Limitations

There are several limitations of this research that deserve some attention. With the knowledge gained throughout this dissertation, there are some changes in the structuring of both county-level and individual-level analyses that I would implement to

make the analysis stronger. For example, one disadvantage of my analysis of differences in rates of net migration for the nonmetropolitan counties in the New West was the limited geographical location of my sample. Comparing nonmetropolitan counties from other regions of the United States might produce different results. Another method would be to include additional independent variables to measure dependency on government, percentages of federal land ownership, or adjacency to a metropolitan area, all of which could affect migration patterns.

At both the county-level and the individual-level, the measures used for age were highly significant and exerted the most relative strength in comparison with all other independent variables. As individuals become more established in their communities and careers, the networking ties that develop hinder one's chances of migrating. Surprisingly, my results determined that as individual's age, they are significantly more likely to migrate. A possible explanation might be drawn from the findings of my county-level analysis. The presence of retirement in a county was of more importance than the presence of any other amenity-based characteristic measure. Perhaps there is something more to the retirement variable that warrants further investigation at the individual-level. Grouping respondents into different age classifications based on their location in the workforce would allow for retirement to be used as a comparison against individuals that are of the age to still be an active part of the workforce.

The presence of children is an important consideration in the decision to migrate. Families with the means and resources to do so will relocate to areas that will provide the best educational opportunities and the safest social environment for their children.

Taking into account individuals that have children under the age of 18 and the total number of children per household would provide additional information that could potentially affect one's decision to migrate.

Ethnic and racial categories also proved to be significant in my analysis of residents of the state of Nevada. The Hispanic and Asian categories were of particular interest to me and I feel each deserves more attention and further exploration. A limitation to classification of members belonging to each of these racial/ethnic categories is that they both consist of the grouping together of very different cultures and ethnicities. The Hispanic and Asian categories do not take into account the individual's heritage and/or ancestral place of origin. Each of the subgroups that collectively makeup each category have distinct qualities and characteristics that differentiate it from others of the same classification. I would like to further expand the Hispanic and Asian measure by examining each of the major subgroups based on nationality. It would be interesting to see how the level of significance might vary when each distinct group can be taken into account versus results from a clustering of multiple ethnic identities.

Future Research

I would like to conduct a more in-depth qualitative analysis of the rural communities in the New West. This area is experiencing what researchers are calling a rural gentrification as individuals are moving from predominately urban areas to settle into rural areas (Ghose 2004). As Ghose maintains, "The rural gentrification process in America is motivated by the need for a slower life style among the small towns of the

Rockies, to raise one's family in the tradition of hearth and home in proximity to wilderness and away from the chaotic and violent urban cities" (Ghose 2004: 530). The driving factors behind rural gentrification deserve further attention.

What are the individual characteristics of newcomers and how do they differ from long-term residents? What impacts and consequences are newcomers having on local economies in areas such as housing development, cost of living, community cohesion, and the like? Studies that compare the characteristics of long-term residents of the New West with newcomers to the area have revealed fascinating differences and similarities that deserve further investigation. Newcomers tended to be female, more highly educated, and also more likely to have an urban background than long-term residents. Both newcomers and long-term residents possessed similar levels of environmental concern and shared uneasiness about the characteristics and qualities of the area that would be adversely affected by additional development. Newcomers were in general more affluent than long-term residents and as such were able to support local expansion of commercial, educational, health, and financial services (Jackson and Kuhlken 2006; Nelson 2002; Krannich et al.; Spain, 1993). It would be of great interest to further explore the characteristics of newcomers in comparison to long-term residents in terms of patterns of consumption and attitudes toward development, growth, and environmental concerns.

As the landscape of the New West transforms and assumes the economic role of an aesthetic resource for in-migration, the resulting demographic changes create the potential for "culture clash" between long-term residents and newcomers (Nelson 2002).

Individuals attach meaning to the physical and social environment that surrounds them. Those who have been long established in areas have created the traditions and the very way of life that initially attracts newcomers. With the arrival of new faces, the setting and atmosphere of the community changes and takes on a new meaning. If only a small number of migrants enter a community, they will likely be absorbed into it with little conflict. However, an arrival of large numbers of migrants will inevitably cause change, resulting in conflict between the long-term residents already living in the community and the newcomers moving into the community (Nelson 2002; Spain 1993).

Newcomers bring several benefits to the New West such as an infusion of capital in business, housing and social institutions. As economic development increases, a greater availability of jobs develops, land values increase, and the community becomes more financially stable. Newcomers increase human capital by bringing occupational, organizational, and leadership skills. Growth in population can potentially regenerate churches, civic organizations and interest groups. It can also stimulate the development and expansion of businesses and services (Jackson and Kuhlken 2006; Krannich et. al 2006). However, newcomers can also have detrimental effects on communities. The consequences of rapid community growth can be adverse to community character and livability. It can "lead to larger government, the reallocation of water rights, partitioning of crop and range lands, higher property taxes, and importantly, reduced control of traditional community decision making to outside investors and development corporations" (Jackson and Kuhlken 2006: 198). Newcomers with larger incomes want features on their homes that significantly increase the cost. This in turn, results in

developments that are not within the monetary grasp of individuals working in the local economy resulting in de facto residential segregation. The demand placed on town services by the newcomers can raise taxes to the point of creating political divisions between newcomers and local residents (Whitson 2001).

Through the process of rural gentrification, there arises a competition for space and resources. Towns are transforming to meet the needs of more affluent, urban newcomers. The resulting effects can leave some long term residents feeling as if they are marginalized strangers within their own community (Whitson 2001). A more thorough understanding and qualitative analysis of these differences and similarities between long-term residents and newcomers to the New West will complement and further enhance my explanation of the patterns of migration in the New West.

Significance of This Research

My research has shown that amenity-based characteristics are fueling migration into the New West. Vias (1999) argues that in the New West it is not jobs that are pulling people into the area but instead the people moving into the New West that are creating jobs. The large numbers of amenity-based migrants moving into the area are creating a wide variety of jobs. As population of the New West continues to grow, so will demands for services. Workers will be needed to fill the jobs created by increasing demands for services. This first wave of affluent migrants drawn to the New West by the allure of natural amenities will create demands for services that will potentially pull in a second wave of Hispanic migrants in need of employment into new destinations

within the New West. This is informative to New Destination studies of Hispanic migration.

Migration of Hispanics to areas beyond traditional destinations has become a popular area of focus for many researchers. Hispanics prior to 1995 typically settled in California, Texas, and Illinois. Since 1995, the percentage of Hispanics to these three traditional destination states has significantly decreased. Instead, these migrants are increasingly moving to other states, oftentimes to small towns or rural communities (Massey and Capoferro 2008). Migration of Hispanics to New Destinations has been shown to stem from various contributing factors. Massey and colleagues (2002) argue that New Destinations for Hispanic immigrants manifested as a latent function of the Immigration Reform and Control Act (IRCA) of 1986. Legalized immigrants were now free to seek better opportunities for a better life outside of traditional destinations. They further explain that at the same time IRCA was passed, security along the United States' border with Mexico was increased. The increase in security made it difficult for immigrants that would have returned to Mexico to leave the county for fear of not being able to return. Thus, more immigrants permanently stayed in the United States and brought their family members to eventually join them. The increasing numbers of individuals seeking employment pushed many migrants to new areas.

Another contributing factor to New Destinations migration is the restructuring of industries such as meat packing (Stull, et al. 1995). According to Stull and colleagues, in the 1990s the meat packing industry moved from its traditional locations, predominantly in the metropolitan Midwest. When offered land deal and tax breaks

many meat packing companies relocated to rural areas. No longer bound by union policy, labor demands intensified as the assembly line was restructured to more quickly process meat. This in turn created a demand for disposable labor. Even though the working conditions were dangerous, the income offered was substantially higher than the traditional agricultural jobs typically sought after by Hispanic migrants pulling them into rural areas to fill the newly created jobs. Poston and Bouvier (2010) point out that as more potential Hispanic migrants become aware of opportunities in new destinations, the proportion of Hispanics living in that area will continually increase. It is predicted that number of states that are a minority majority will increase.

This dissertation also makes an important contribution to the study of migration patterns occurring in the New West. I have shown amenity-based migrants to be the driving force that is fueling the transition from Old to New. It is clear from my research that amenity rich nonmetropolitan counties of the New West are experiencing both benefits and negative consequences. While more businesses create an increase in capital, there is a greater demand for public services. New migrants can regenerate a dwindling economy but at the same time increase property values and displaces local residents. City planners and local county leaders will need to work together to ensure that long-term growth does not adversely affect the aesthetic beauty of the natural resources and quality of life of the New West.

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