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**Rural Depopulation:
A Closer Look at Nebraska's Counties and Communities**

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September 19, 2005

Rural Depopulation: A Closer Look at Nebraska's Counties and Communities

There is no question about it; rural population loss and Metropolitan concentration continue to be important factors in shaping social and economic conditions in much of America's Great Plains region. Despite widespread population increases throughout much of nonmetropolitan America during the 1990s, the rural Great Plains has remained an area of persistent decline (Johnson and Beale, 1998 and 2001). Declining populations have characterized many Great Plains counties since the early 1900s, and the trend has continued with few exceptions through the most recent census in 2000. In fact, for some Great Plains counties, the rate of population decline has actually accelerated in recent years.¹

Declining rural populations and low population densities have been themes of recurring interest for demographers, sociologists, economists, policy analysts and journalists. The causal sequence leading to the current state of decline in the rural Great Plains is broadly accepted. Changes in agricultural technology have led to increased farm size and, thus, the number of farms and related businesses. Declining farm numbers have led to declining farm populations and out-migration of young people. Declining populations and out-migration result in reduced demand for goods and services, diminished job opportunities, and still more out-migration. Since the propensity to migrate tends to decline with age, out-migration from rural areas is highest among the young. Out-migration of young people results in declining birth rates and a residual elderly population, both of which further contribute to population decline (Johansen, 1993; Coffman and Anthan, 2005).

Logically, the inescapable outcome of depopulation is what Walser and Anderlik (2004) have termed the "vicious cycle of decline." In their analysis, they argue that:

"...many [rural] counties may face a self-reinforcing cycle of decline: declining populations lead to decreased economic

vitality, and both lead to higher per capita costs [for public services]; the higher costs provide incentives for continued out-migration – and the downwardly spiraling quality of life and of the supporting infrastructure in these counties makes it increasingly difficult for the counties to attract new businesses to the area."

While shrinking populations are characteristic of much of rural America, especially in those areas that lack recreational amenities, the phenomenon has been especially evident in the Great Plains (defined by Rowley, 1998, to include all of North Dakota, most of South Dakota, Nebraska and Kansas, large portions of Montana, Wyoming, Colorado, and Oklahoma, along with Minnesota's Red River Valley, Eastern New Mexico and the Texas Panhandle). Nearly three-quarters (72%) of the rural counties in the Great Plains have lost population over the last thirty years (a total of 304 counties), and more than a third of those counties saw the rate of population decline accelerate between 1990 and 2000 (Walser and Anderlik, 2005).

For a number of reasons, Nebraska has become something of the poster child for rural decline. Located near the center of the decline-prone Great Plains, 94% of Nebraska's land is dedicated to agriculture (USDA, 2002). Seventy-one of Nebraska's 93 counties reached their historical population peak in 1940 or earlier, and 29 of those peaked prior to 1920. Twenty-eight Nebraska counties have population densities below six persons per square mile (the historical definition of the frontier). Between 2000 and 2004, the Census Bureau estimates 76 Nebraska counties experienced net out-migration, while 46 experienced more deaths than births (Bureau of the Census, 2005).

Such statistics must surely indicate that Nebraska, or at least the rural portion of the state, is caught up in a sort of social and economic death spiral. In this paper, however, we will suggest that this is not universally true. The county level analyses and

aggregate population data that are so popular with most social scientists do not tell a complete story. To demonstrate that, we will examine both county- and community-level data and we will disaggregate demographic and economic indicators. In doing so, we will draw a picture of Nebraska's population and economy that is, in many ways, more complex and, in some ways, more positive than the Nebraska of popular social science and journalism.

A Typology of Counties

Before beginning an examination of Nebraska's population trends, it will be useful to develop a classification scheme describing counties in the various regions of the state. Walser and Anderlik (2005) opted to classify counties according to their Metropolitan status, then to further classify non-Metropolitan counties by their level of agricultural activity. This scheme is reasonable if one's goal is to demonstrate the relationship between agriculture and population trends. However, a Metro/non-Metro definition is somewhat limiting as a classification scheme for most analytical purposes, and tends to understate the diversity of regional systems and the resulting complexity of population trends. A more sophisticated classification scheme is required.

There have been many such typologies created by demographers, the best known being those devised by Brown, Hines and Zimmer (1975), and later popularized by USDA demographer Calvin Beale. The so called "Beale Codes" have spawned numerous variations as researchers have attempted to fit the scheme to the unique conditions of states and regions. For instance, in Minnesota's Twin Cities region, Metro fringe areas tend to appear as a theme in rural demographic studies, and are often uniquely identified. There are only a handful of such counties in Nebraska, and their population characteristics have only just begun to emerge as important.

In Nebraska, while the Metro areas are important, their population spheres are relatively concentrated. Population densities and the presence of trade centers of various sizes appear to be more informative characteristics for describing the state's rural population trends. In this paper, we will utilize a variation of the Beale Codes that classifies counties according to those three important themes: Metro status, size of trade center, and population density. As seen in Figure 1, Metro counties are

those meeting the federal Office of Management and Budget (OMB) Metropolitan definition. Large Trade Center counties contain a population center of 7,500 or more. Small Trade Center counties contain a place of 2,500 or more. Both Small Town and Frontier counties include no place of 2,500 persons, and Frontier counties have population densities of less than six persons per square mile.

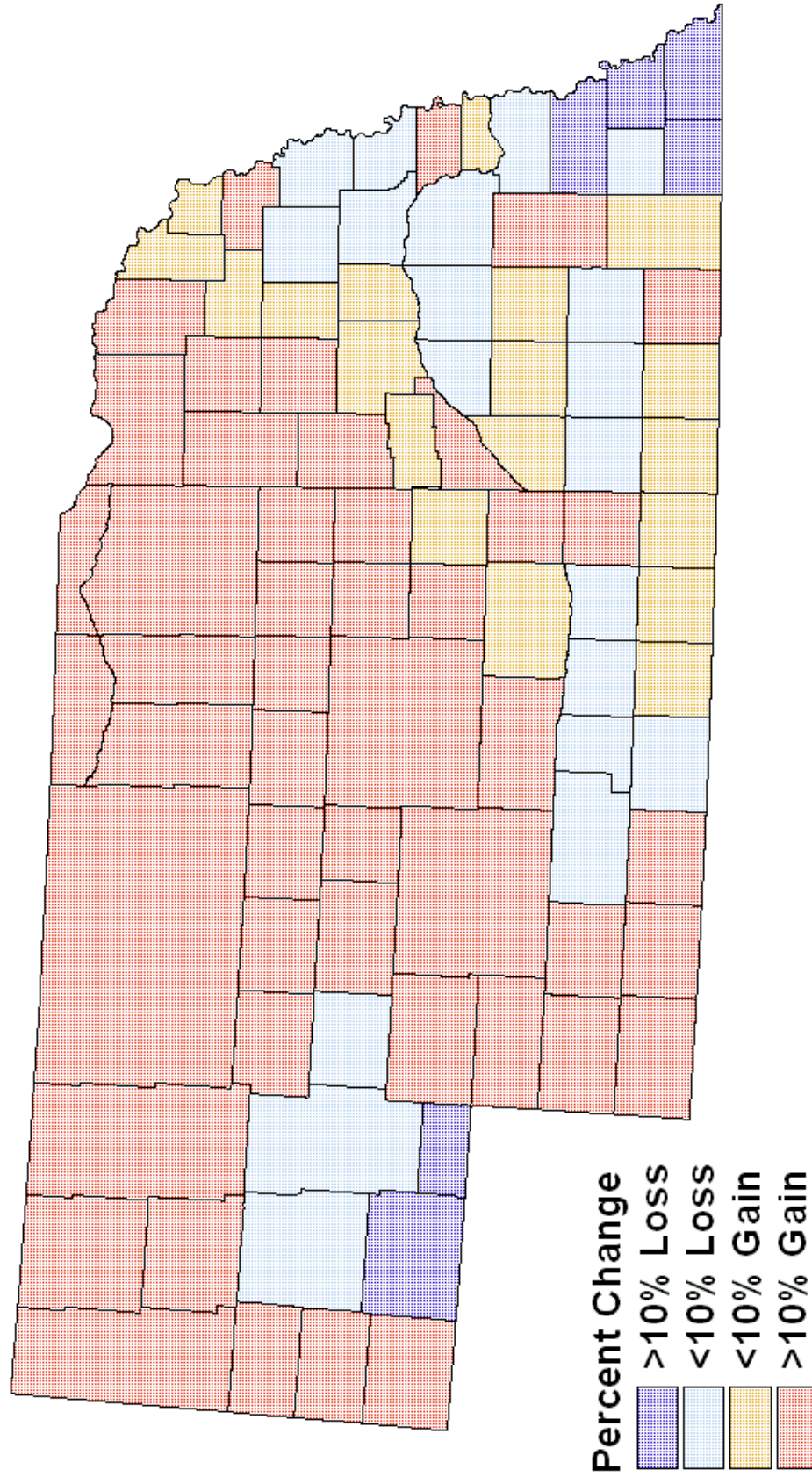
Frontier Nebraska

Much of Nebraska's demographic history has been shaped by the fact that it was settled relatively late in America's frontier history. In fact, the Great Plains are, in some ways, the last frontier in the lower 48 states. Declared a hunter's paradise, but of little agricultural value by Lewis and Clark and termed an "uninhabitable desert" by Zebulon Pike and Stephen Long (Dick, 1975) the Great Plains were seen as an inhospitable barrier to the more fertile and inviting West during the first phase of American westward expansion. Thus, the early (and colorful) history of Nebraska is largely a story of trails — the Oregon and Mormon Trails taking settlers to California, Oregon, Washington and Utah, and the Pony Express Trails carrying mail to those western population centers. The first Nebraska settlements were either staging areas for an arduous westward journey, or service centers for those passing through. It required the advent of rails and mechanized agriculture to change that.

In 1860, Nebraska was home to a population of only 28,000. By 1870 that population had quadrupled. It nearly quadrupled again between 1870 and 1890 and doubled between 1890 and 1900. Following 1900, population growth slowed markedly, and more importantly, shifted to the west. By 1910, counties located near the state's southeastern border with Missouri, which had been part of the initial rush of settlement, had already begun an epic of population decline that continues through this day. For example, Gage County, located in the southeastern corner of Nebraska, was home to the third largest population among Nebraska Counties in 1890, but by 1900 was losing population, and has never again seen its 1890 peak. As seen in Figures 2 and 3, the early 20th Century saw a population of pioneers rolling across the state from east to west.

Between 1910 and 1920 (Figure 3), Nebraska's population growth shifted still further to the west. While most western counties saw relatively rapid

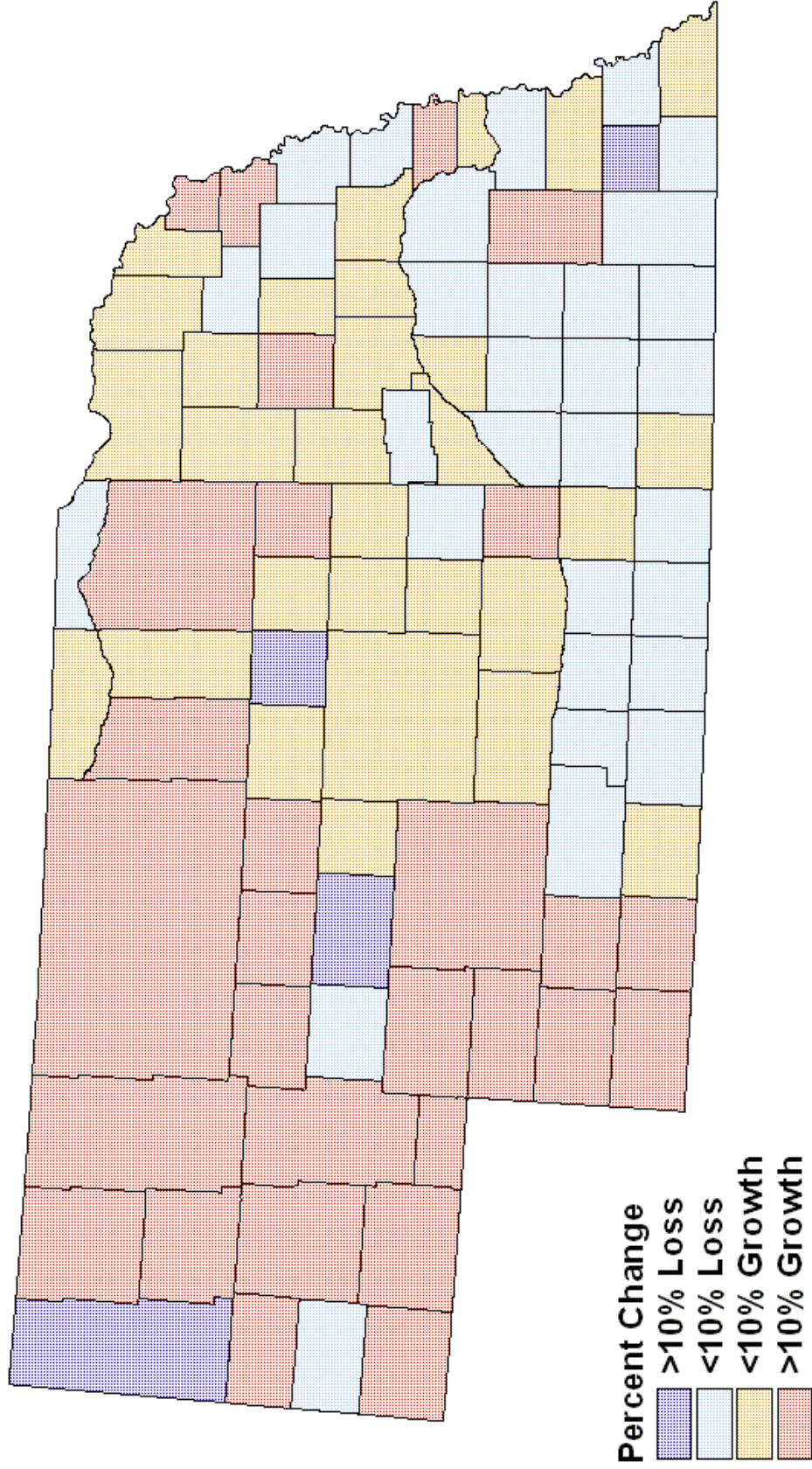
Change in Population 1900 - 1910



Source: Bureau of the Census
Map prepared by the Nebraska Rural Initiative

Figure 2. By 1910, the earliest Nebraska settlements were already showing signs of depopulation.

Change in Population 1910 - 1920



Source: Bureau of the Census
Map prepared by the Nebraska Rural Initiative

Figure 3. The early history of Nebraska was characterized by westward migration.

population growth during that decade, much of the east was in decline (exceptions being counties containing what would become metropolitan class cities and large trade centers). The movement of Nebraska's population across the state from east to west culminated in the 1930s (with the advent of gasoline-powered agricultural implements), when 77 of the state's 93 counties lost population. The rapid growth and nearly immediate decline of the population in much of rural Nebraska during the early 20th Century means that many of the state's counties and communities reached their historical population peak decades ago. In fact (as seen in Figure 4), 29 of Nebraska's 93 counties experienced their largest population size in or before 1910. Another 42 counties reached their peak population in either 1920 or 1930. Indeed, all but five of Nebraska's frontier and small town counties saw their largest populations prior to 1930. Looked at in another way, only 14 Nebraska counties were home to their historically largest population in the most recent census year, 2000.

New Trails of the Late Twentieth Century

The last fifty years of the Twentieth Century saw a continuation of trails as a dominant theme in shaping the demographic characteristics of Nebraska. Unlike the wagon trails and rail corridors of earlier decades, the trails of the later Twentieth Century were paved four-lane highways, as exemplified by Interstate 80.

Figure 5 depicts aggregate population change for Nebraska's 93 counties between 1950 and 2000. The pattern of growing counties that appears in this map is known within the Nebraska development community as "The Fishhook." The barb of the hook is comprised of two counties (Madison and Platte) containing successful trade centers (Norfolk and Columbus). The curve of the hook includes both the Lincoln and Omaha Metropolitan areas. The length of the hook stretches along the Interstate 80 highway corridor.

It is instructive to compare Figure 5 to Figures 1 and 4. The fishhook pattern found in Figure 5 is more or less replicated in both. Clearly, there is a close correspondence between those Nebraska counties that have seen sustained growth in the latter half of the Twentieth Century and those counties that are either Metropolitan, contain larger trade centers, or are located on the Interstate corridor.

However, when one examines Figure 4, there are discrepancies in the pattern. Not all counties located along the fishhook have been able to reach their 1910 population peak.² This is true despite 50 years of net growth, Interstate access, the presence of a larger trade center, or even inclusion in a Metropolitan area. Other such apparent anomalies are scattered about the state, and can be found by comparing the three maps (Figures 1, 4 and 5).

These counties give testimony to the size of the pioneer populations that passed through them in the early part of the Twentieth Century.

A similar pattern holds for Nebraska's current 531 incorporated communities. Only 91 (17%) of these places reached their population peak in the most recent census year, and that number is dominated by larger places. Nebraska today is home to only 18 communities with populations of 10,000 or more, and 16 of those are currently growing. By contrast, of Nebraska's 422 communities with fewer than 2,500 residents, none were found at their historical largest by the last census, and 147 (34%) of these were home to less than one-half the number of residents found there at their peak.

As seen in Figure 6, those communities that were found to be at their peak population in the most recent census tend to be located in counties that have demonstrated sustained growth, especially in Metropolitan areas and along the I-80 corridor. A small number of exceptions to this rule can be found, but those are generally associated with nearby trade centers, or are located along highways that connect major trade centers.³ Thus, they can be described as suburban phenomena.

So, are these historical trends evidence of the vicious cycle of decline predicted by Walser and Anderlik? If they are, then we should be able to observe the "self-reinforcing cycle of decline" that they describe: declining populations, decreased economic vitality, continued out-migration, and increasing difficulty in attracting new business. The answer to the question, we will see, is mixed.

Recent Population Trends

Demographically speaking, the last decade of the Twentieth Century was a good one for Nebraska. During that decade the state grew

Census Year of Peak Population Through 2000

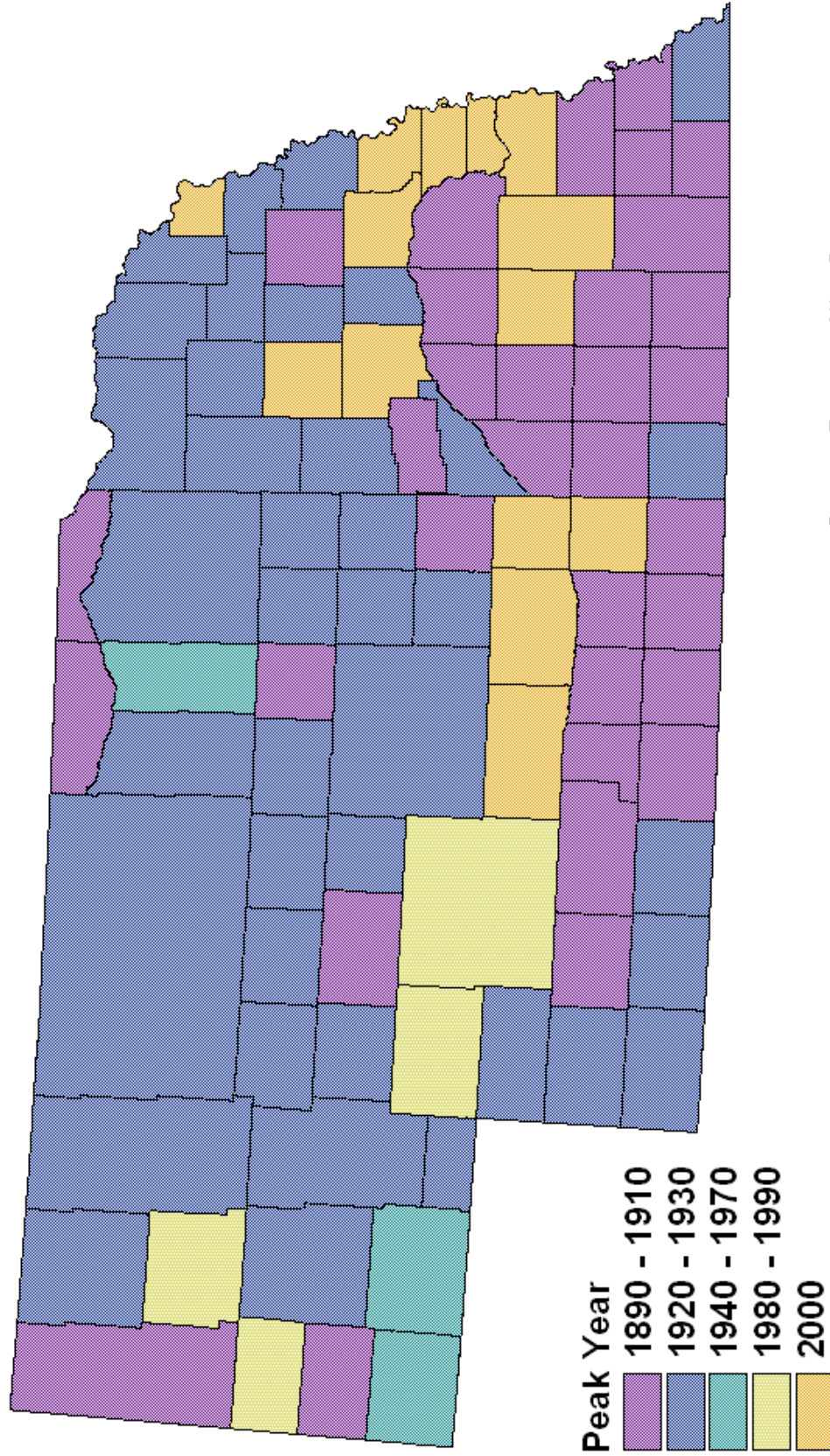
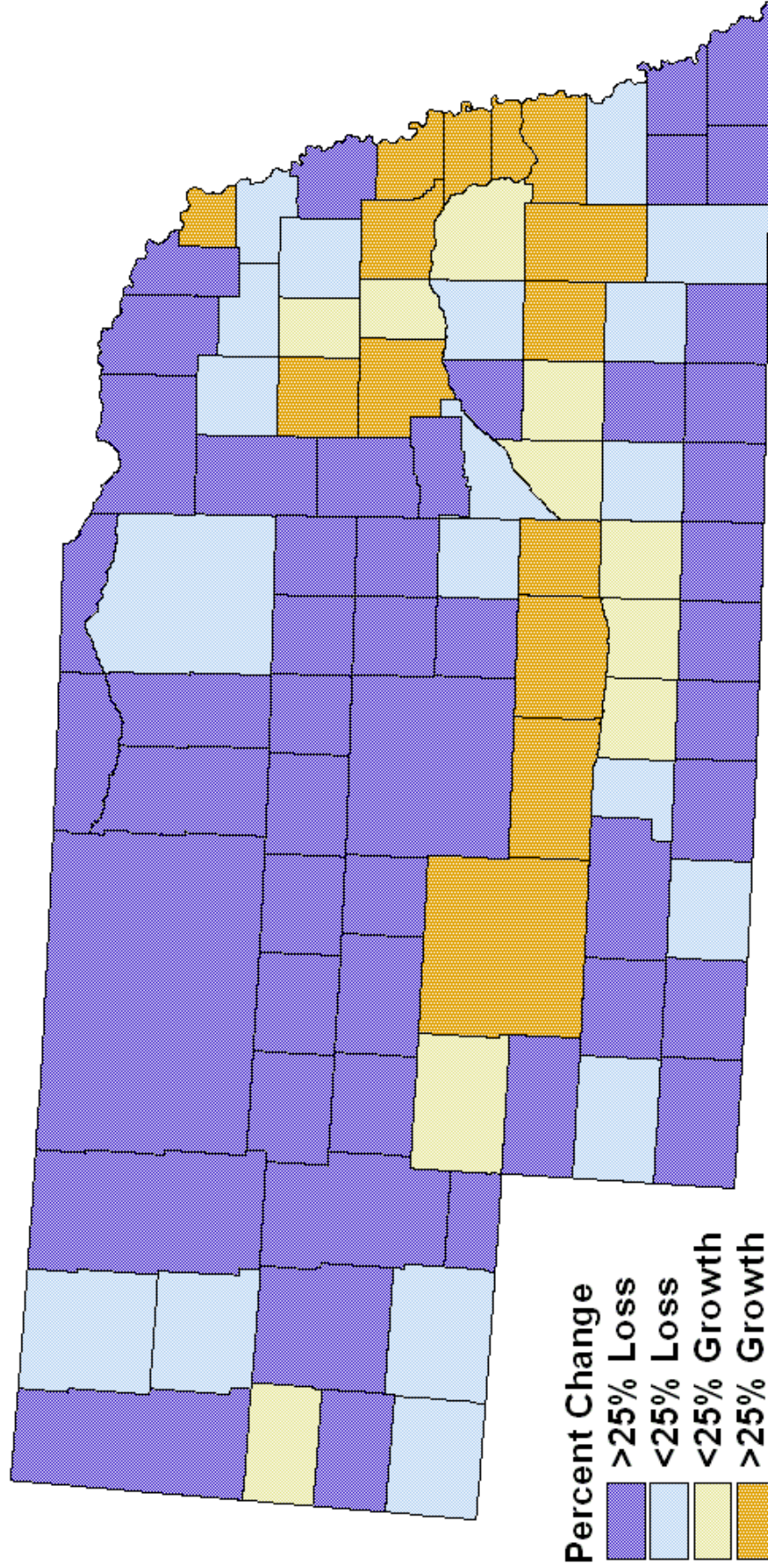


Figure 4. Many Nebraska counties reached their historical population peak early in the Twentieth Century.

Change in Population 1950 to 2000



Source: Bureau of the Census
Map prepared by Nebraska Rural Initiative

Figure 5. Growing Metropolitan and Interstate 80 corridor counties define Nebraska's "fishhook" of development over the last fifty years.

Peak Population Year for Communities, and Population Change for Counties: 1950 - 2000

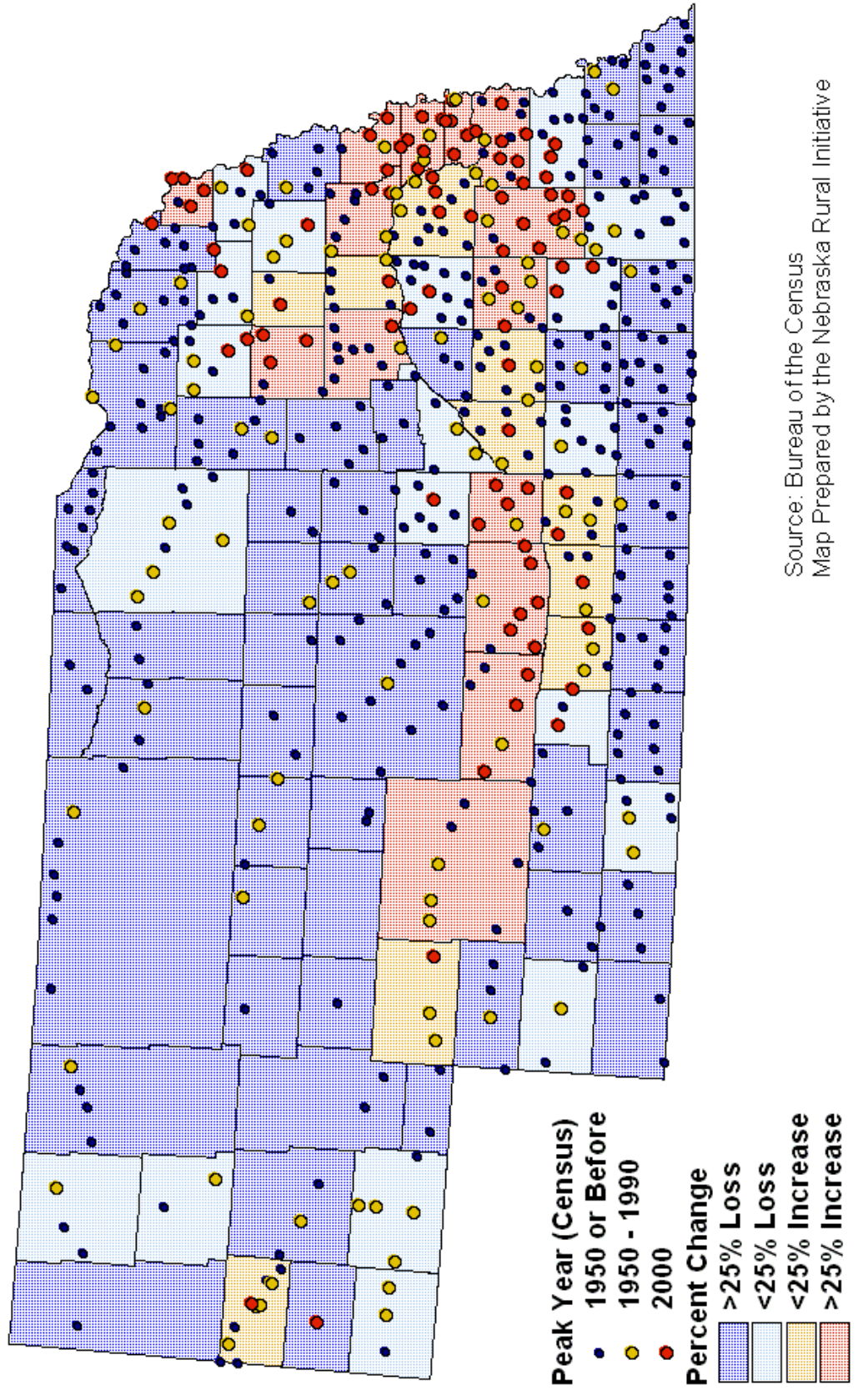


Figure 6. In general, sustained growth in Nebraska's communities is associated with the "fishhook."

by 8.4% (12.3% within its incorporated communities). This was the highest proportional growth rate for the state in the past 80 years, and slightly more than one-third of this growth was the result of in-migration. More importantly, that growth was relatively widespread when compared to previous decades. As seen in Figure 7, the population increased in 40 counties, and in 288 incorporated places.

To be sure, 40 counties represent less than half of the state. Moreover, the list of growing counties was heavily concentrated in the east, and excluded 85% of all Small Town and Frontier counties. Indeed those 53 smallest counties collectively lost 3.7% of their population, with 45 declining and only 8 growing. However, among the 45 declining, 90% saw smaller declines than had been measured in the previous decade. That is, their rate of decline had slowed between decades.

Incorporated communities actually fared slightly better than counties in terms of population change. Between the 1990 and 2000 censuses, 290 (53%) of such places recorded an increase in population, and 130 experienced growth in excess of 10%. Certainly, growing communities were more likely to be found in growing counties, but such was not exclusively true, as can be seen in Figure 7.⁴

Larger places were more likely to grow, but the list of growing communities included a large number of small places. Growth was recorded in 68% of all places with more than 1,000 inhabitants, and exactly half of places with fewer than 1,000. During the 1990s, Nebraska's growing communities included a total of 252 places with populations of fewer than 2,500. In 131 of these places, the increase in population exceeded that of the state as a whole. Such communities were found in 77 counties, and 99 of them were outside of the state's Metropolitan areas.

In the context of the trade center typology with which this paper was introduced, growth occurred in 18 (86%) of 21 of large trade centers, 18 (67%) of 27 of small trade centers, and 252 (52%) of 488 small towns. Even frontier counties with total population losses of over 10% saw double digit growth in some of their communities. Statewide,

population losses were more commonly seen within the open country population than within communities. Where Nebraska as a whole grew by 8.4% during the '90s and incorporated communities grew by 12.3%, the state's open country population decreased by 3.2%. The decline in Nebraska's open country population occurred despite the rapid development of acreages and open country residences in and around the state's Metropolitan areas. In general, the more rural the area, the more likely was the loss of open country population.

Depopulation and Age Structure: Nebraska, 2000

Population changes consist of only four dimensions: birth, death, in-migration, and out-migration. If a population grows, it is because more people are born than die, and/or because more people move in than move out. If a population declines, the reverse must be true.

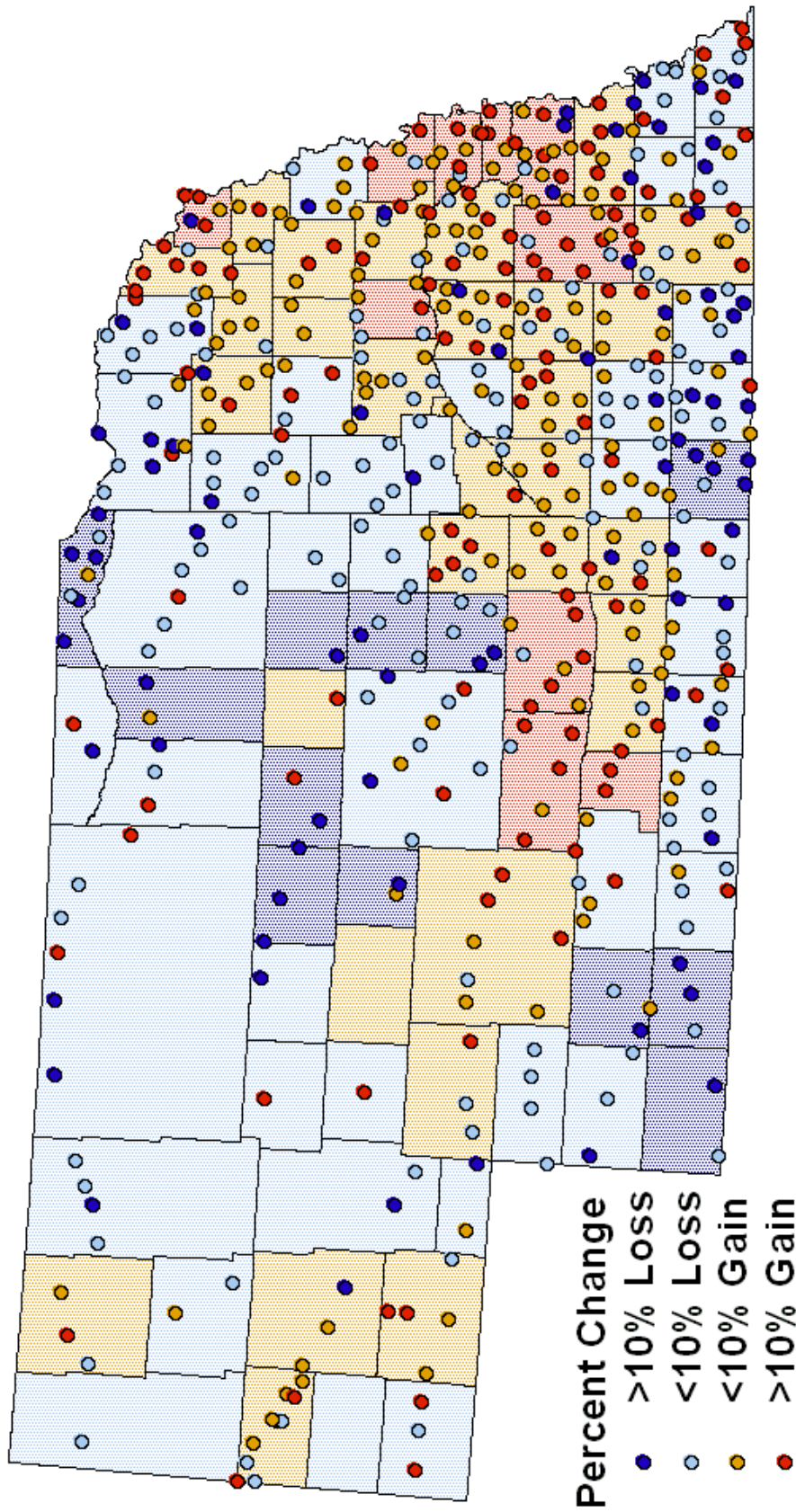
Walser and Anderlik (2004) correctly point out that rural counties in the Great Plains are losing population due to declining birth rates and higher death rates resulting from a disproportionately large population of elderly residents. Indeed, between 1990 and 2000, deaths exceeded births in 41 Nebraska counties (Figure 8).

In addition, fifty Nebraska counties experienced net migration losses during the '90s (Figure 9). In terms of total population change, out-migration is a two-edged sword. Migration for work or education is significantly more likely to be attractive to the young, since they stand to benefit more from improved earnings over time. If residents of child bearing age leave a community they not only leave older residents to "age in place," but also reduce the number of children born into their community of origin. Coupled with a nationwide (in fact global among industrialized nations) trend of declining fertility rates, this tends to result in a rapid reduction in the number of children found in the community.

Ultimately, one would expect the two trends to be mutually reinforcing. This has indeed been the case in much of Nebraska, where 23 counties experienced both net out-migration and natural population decreases during the last decade.

Given the migration trends in rural America, Walser and Anderlik (2004) are led to conclude that:

Change in Population: 1990 - 2000 Nebraska Counties and Communities



Source: Bureau of the Census
Prepared by Nebraska Rural Initiative

Figure 7. Some communities in very rural regions grew at rates faster than the state during the 1990s.

Natural Population Change Nebraska: 1990 - 2000

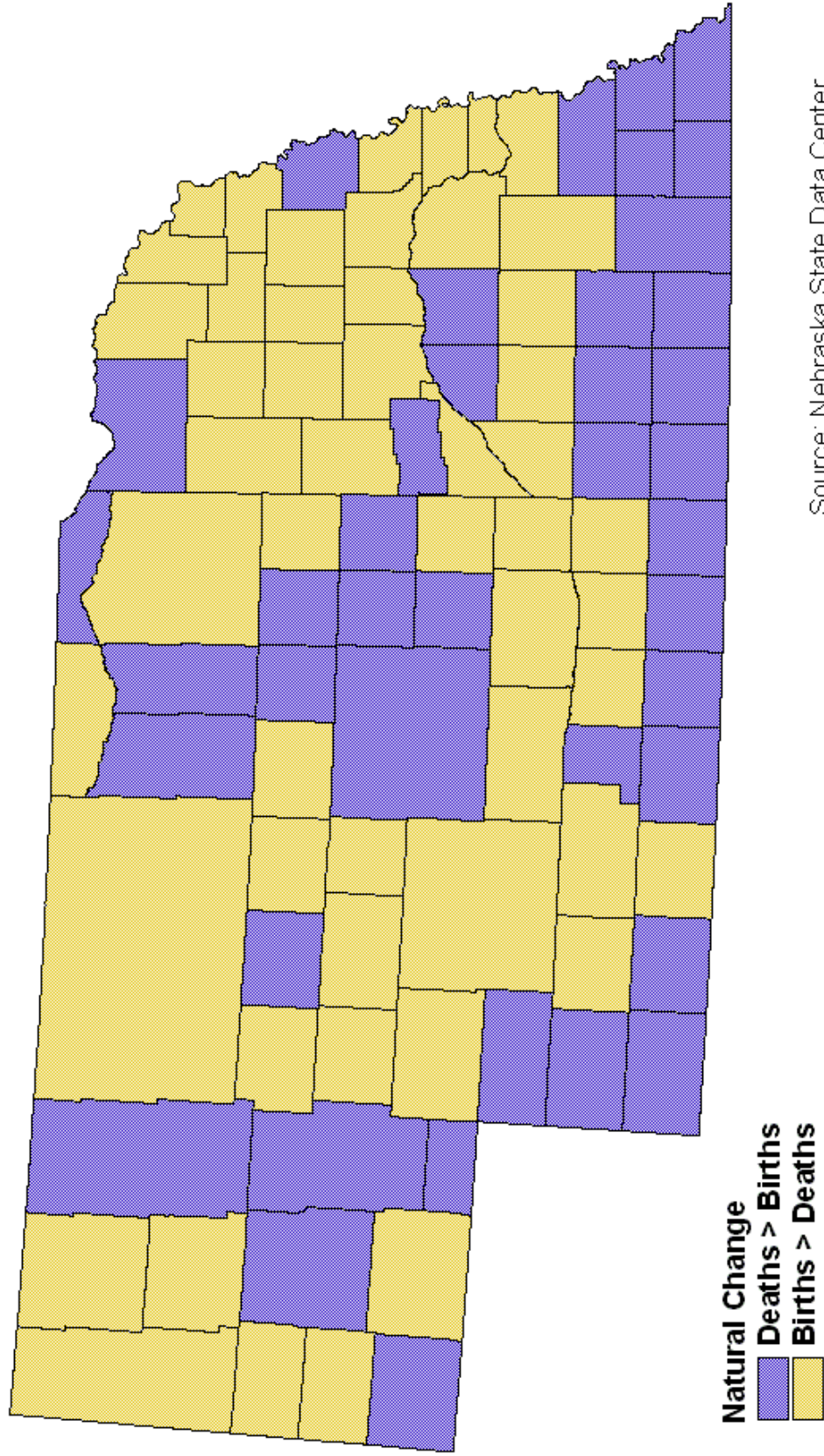


Figure 8. During the 1990s, deaths exceeded births in 41 Nebraska counties.

“... depopulating counties – especially those in the Great Plains – are losing an important demographic battle on two fronts. First, they have a disproportionate number of elderly people. Second, they are rapidly losing well-educated people of working age.”

The first point is undeniable. In Nebraska, non-Metropolitan counties are home to less than 50% of the total population, but contain nearly two-thirds of the population age 65-years and older. Persons over the age of 65 comprise 21% of the population of Nebraska’s small (under 2,500) communities, compared to 14% of the state. In 52 of those communities, seniors make up over 30% of the population.

The second point, however, deserves additional consideration. To be sure, many Nebraska counties and communities have lost population. Whether or not that represents a loss of “well-educated people of working age” may be debatable. Gross population changes are less informative in this regard than are changes within specific age cohorts.

A Profile of the Population: 2000

Looking at the current age distribution of a county or community begins to demonstrate the causes of population change. Figure 10 is a population pyramid for the state of Nebraska. The bars represent 5-year age groups, with the final category representing persons age 85 and older.

Several important characteristics of the Nebraska population are displayed in Figure 10. The first of these is the declining birth rate seen in the four bottom bars. The 2000 Census found 13% fewer Nebraska children under the age of 5-years than were identified in the 1980 Census. Declining birth rates are not unique to Nebraska. Indeed they are common to much of the industrialized world. These declines are the result of reduced fertility rates (fewer births per woman), smaller birth cohorts entering reproductive years (fewer women of reproductive age), and in some areas out-migration of persons of reproductive age.

In Nebraska, the actual effect of declining fertility has been fairly minimal. Between 1980 and 2000, the average number of children (under age 18) per family with children present has declined from 2.0 to 1.9 statewide. In the non-Metropolitan portion of

the state, it has remained stable at 2.0. Of greater importance has been the decrease in the number of people having children.

Since 1980, the number of Nebraska families with children declined by 1%. More importantly, in non-Metropolitan areas it declined by 12%, while increasing by 10% in Metropolitan counties. Only four of the state’s 84 non-Metropolitan counties experienced an actual increase in the number of families with children over the last 20 years. In Nebraska’s 28 very rural Frontier counties, the number of families with children under age 18 declined by 28% between 1980 and 2000. In tiny Keya Paha County (population 983), the decline in families with children was an amazing 43%.

The next three bars, representing the ages 20-through 34-years, demonstrate both the reduced numbers of the post-baby boom generation (a national phenomenon), and out-migration of young adults as they leave home for military service, education, and jobs.

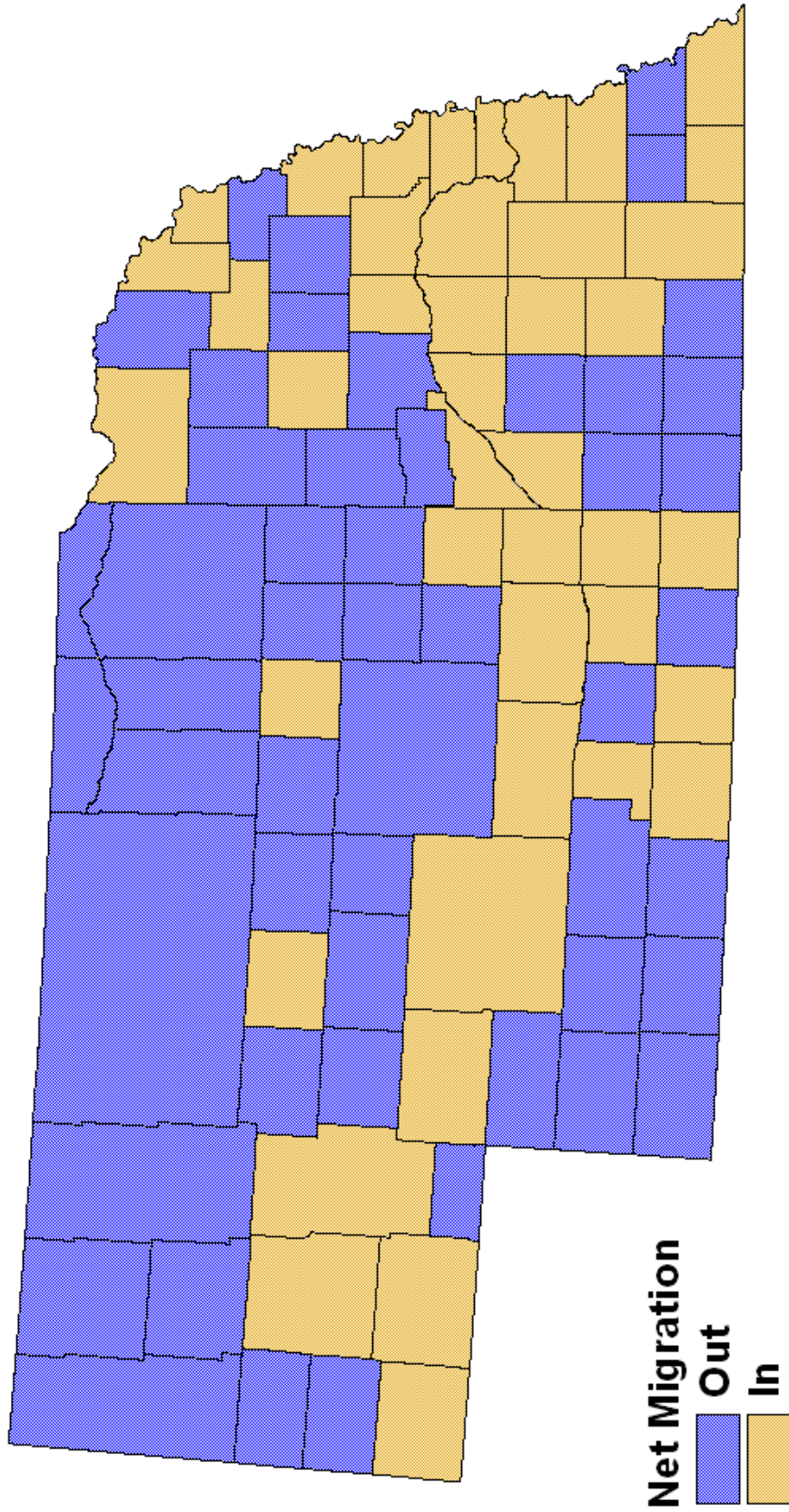
Returning to Figure 10, the next three bars (ages 35-to 54-years) represent the baby boom. Nationally this has long been, and still is, the largest age cohort. In the last census, the age group 35- to 39-years was, in fact, the largest national five-year birth cohort. In Nebraska, that census found the baby boom cohort to be out-numbered by 15- to 19-year-olds. This is primarily the result of baby boomers having left Nebraska.

Finally, the remaining bars illustrate the effects of the smaller depression era, pre-war and wartime birth cohorts, out-migration, and death. Notable in these older groups is the over-representation of women, who outlive men in significant numbers. They have their own unique and important role in the economy and society of rural Nebraska, and deserve their own discussion at some later date.

For purposes of comparison, Figures 11 and 12 depict the same population profile for Nebraska’s Open Country population and for the population of incorporated communities.

It is in the Open Country where the demographic trends described by Walser and Anderlik (2004) are most apparent. Each of the statewide characteristics described earlier are dramatically accentuated

Net Migration Nebraska: 1990 - 2000



Source: Nebraska State Data Center
Map prepared by the Nebraska Rural Initiative

Figure 9. Fifty Nebraska counties experienced net out-migration during the 1990s.

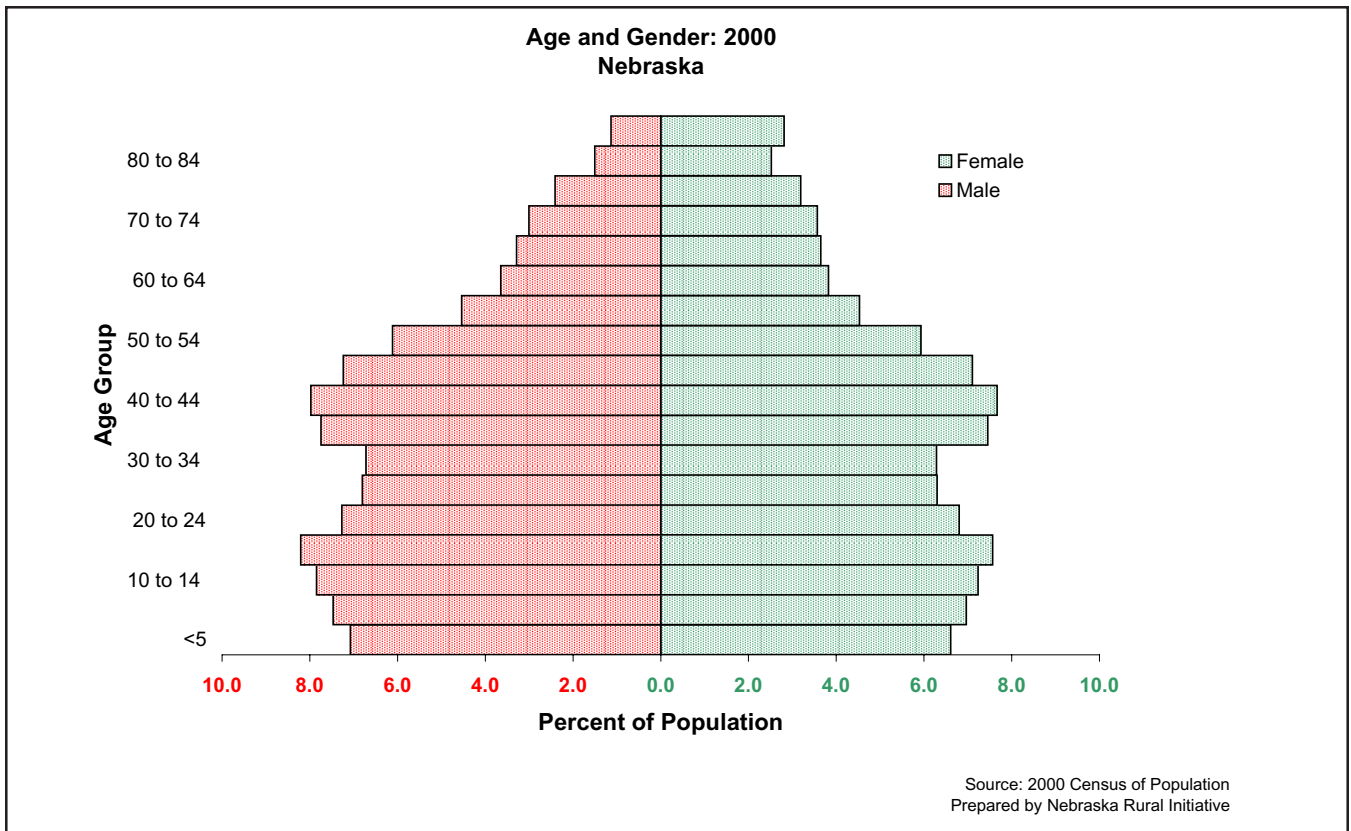


Figure 10. Nebraska's population is characterized by declining birth rates and out-migration of young adults.

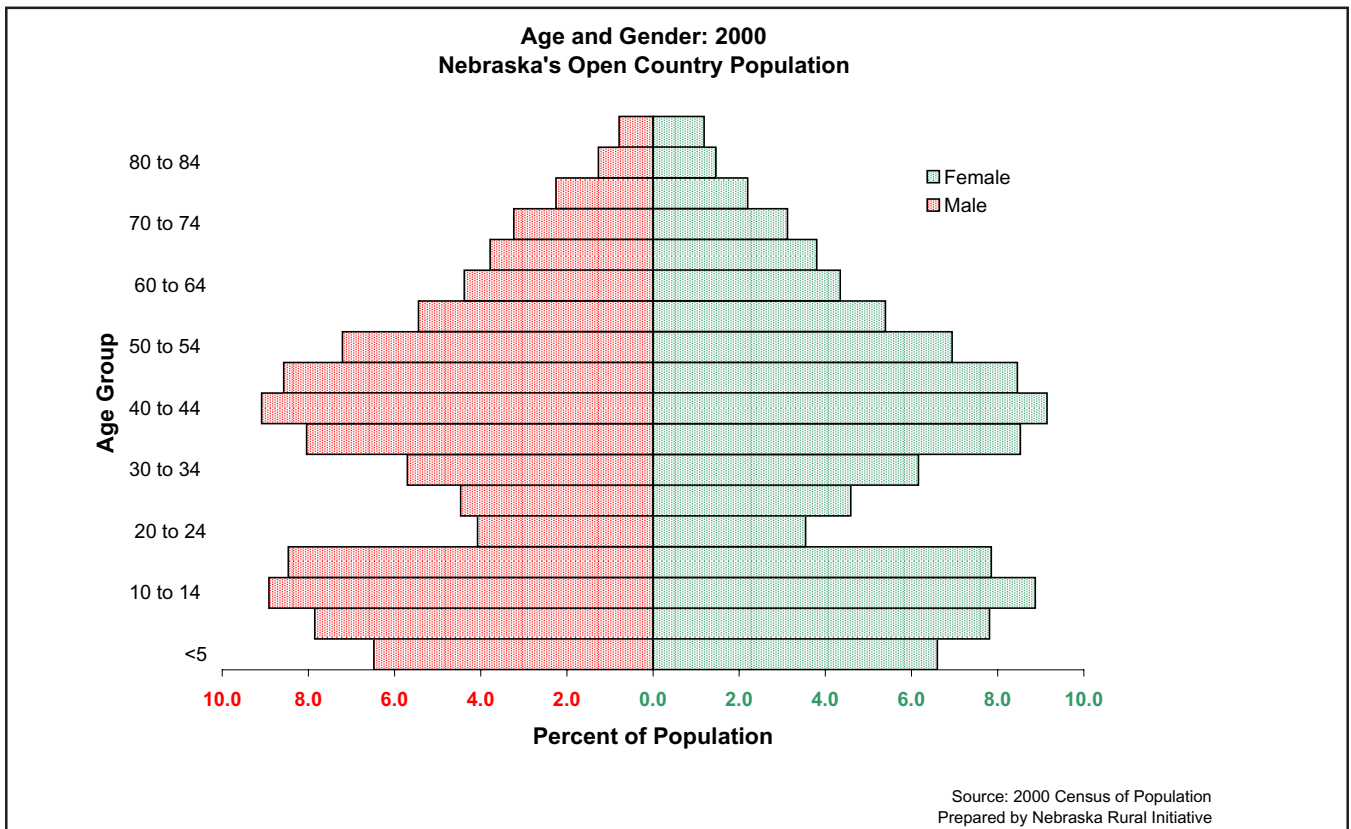


Figure 11. Out-migration of young adults is especially pronounced within Nebraska's Open Country population.

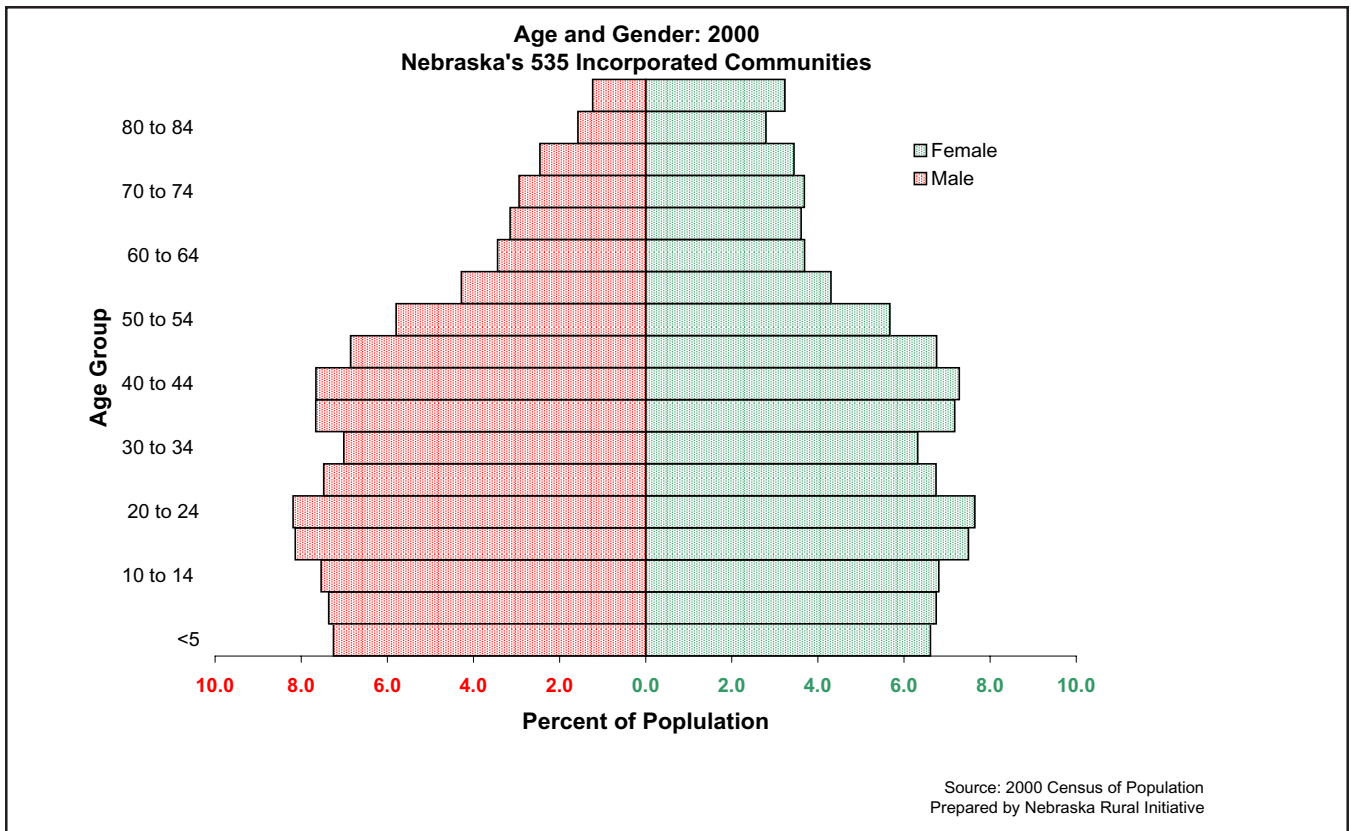


Figure 12. Incorporated places are better able to retain young adults and exhibit less pronounced declines in birth rates.

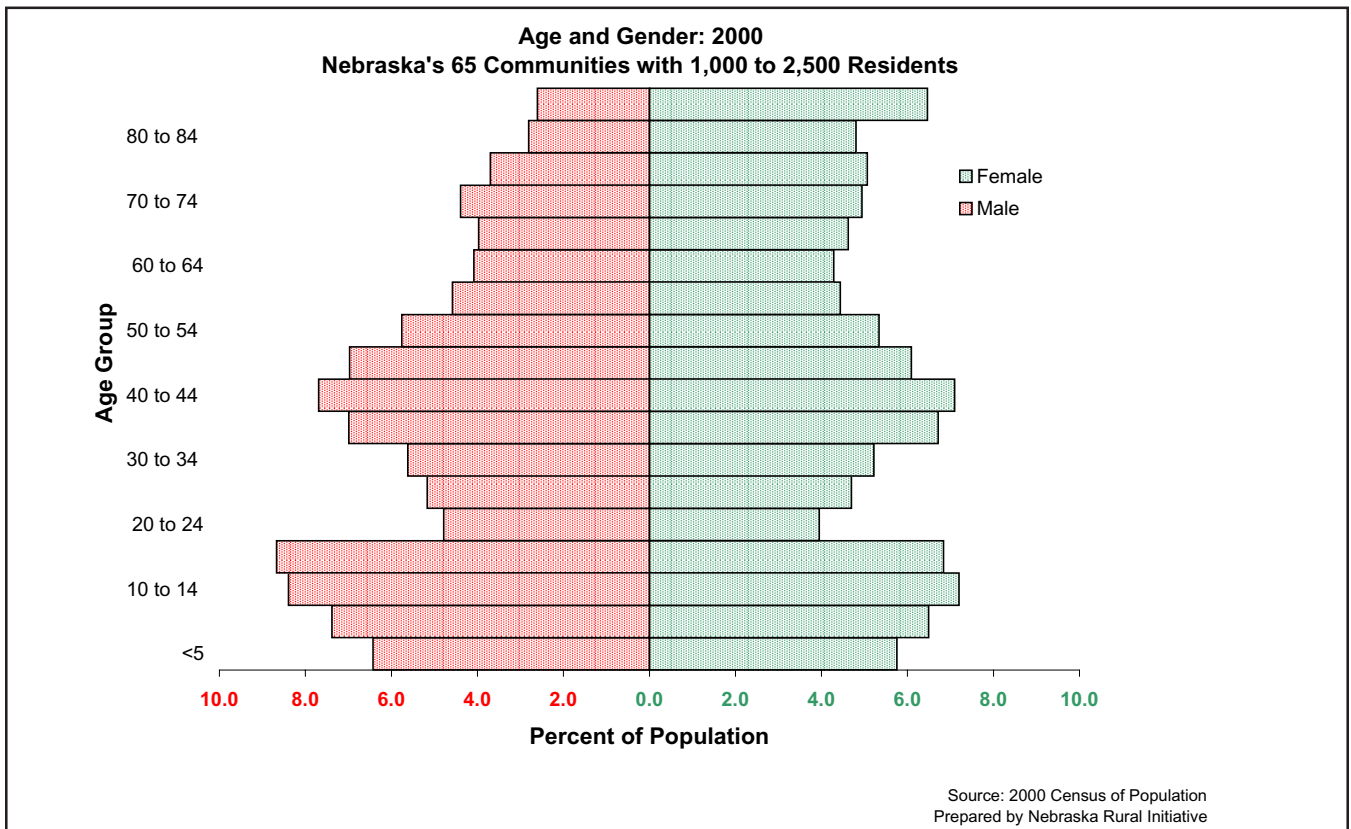


Figure 13. Small Nebraska communities are characterized by large senior citizen population cohorts.

within the Open Country population. There we find nearly one-third fewer children in the birth to five-year cohort than in the 10- to 15-year cohort. The 20- to 24-year age group represents an out-migration of over one-half of the cohort following high school. After age 60, even the senior population is smaller than that of the state, as seniors leave the Open Country and migrate to incorporated communities where services and especially health care are more readily accessible.

The impact of that movement upon age structure in smaller communities can be clearly seen in Figure 13. In Nebraska communities of 1,000 to 2,500 residents, the decline in cohort size after age 59 is much slower than is seen in the Open Country, and even slower than the state average. Indeed, for women, the pattern is actually reversed. This pattern is, in part, explained by the in-migration of young retirees from the countryside. In such communities, seniors, and especially senior women, generally become the dominant age group and the largest market segment.

In these small communities, the declining birth rate loss of young adults (age 20- to 35-years) are seen to be much like the trends found in the Open Country, if not quite so dramatic. However, as demographic snapshots, these patterns still do not tell the full story of population change in rural Nebraska. To fully understand the operative trends we must look at the population as it has changed over time.

Depopulation and Age Cohorts

Demographic change is most often described at the aggregate level; the population either grew or declined. In general, we define growth as demographic success and decline as failure. Thus, to say that a rural county is losing population leads to the logical conclusion that it is failing economically and socially as well as demographically. However, we have already demonstrated that the demographic trends that have characterized Nebraska's Open Country population are not necessarily repeated in all of its communities, or even its smaller communities.

Similarly, within communities, it is helpful to look more closely at demographic and economic trends before writing their epitaph. Changes within birth cohorts are especially informative. A birth cohort is

simply all of the people born in a given time frame. Figure 14 is a graph depicting the movement of Nebraskans in ten-year birth cohorts over the last twenty years. Birth cohorts are shown in three bar groupings.

An example will be useful. The three bars on the left of Figure 14 represent the cohort of persons born between 1966 and 1975 as they were counted in the 1980, 1990 and 2000 Censuses. In 1980, that cohort was age 5 to 14 years and numbered about 240,000. In 1990, when between the ages of 15 and 24 years, cohort numbers had declined by about 15,000, representing both death and out-migration over the decade. By the year 2000, the cohort was age 25 to 34 years, and had grown by 1,000 or so persons, indicating a small in-migration.

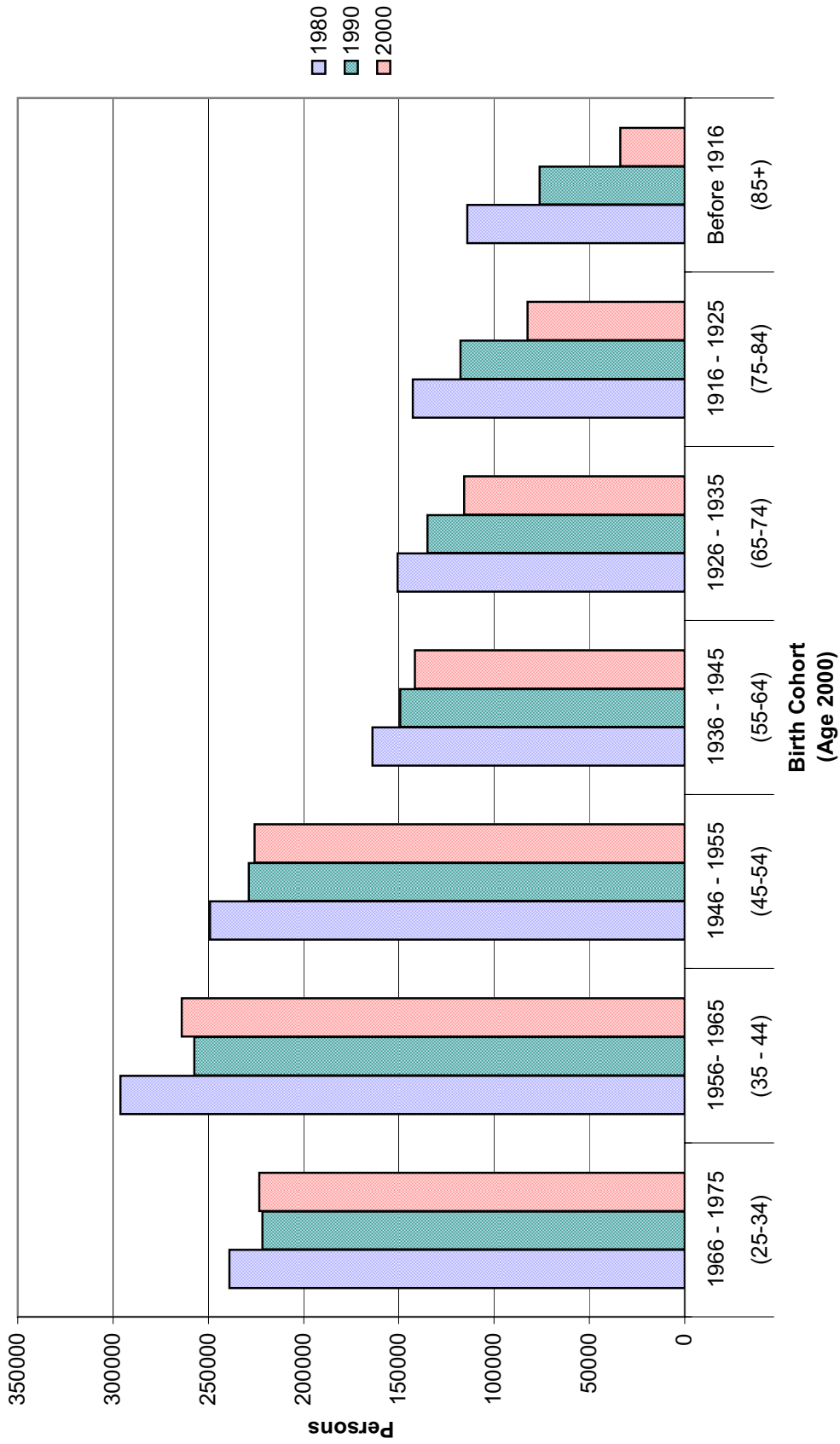
Moving from left to right in Figure 14, the pattern of out-migration in the 1980s and a small return migration during the 1990s is repeated for the birth cohort of 1956 to 1965. After that, each birth cohort is characterized by a slow decline. The decline accelerates among older cohorts as death becomes an increasingly important factor in determining population numbers.

The two left-hand bar sets also demonstrate the effect of declining birth rates. The cohort that was age 5- to 14-years in 1980 was found to be some 20% smaller than the cohort age 15- to 24-years in the same census. The actual decline in birth rate would be still greater as the 15- to 24-year old group would have also experienced some out-migration.

Compare the pattern seen in Nebraska as a whole (Figure 14) with that seen in the state's Open Country population (Figure 15). The pattern is very similar, but the outcome is more extreme. About half of the youngest cohort disappeared between 1980 and 1990, and while considerably slower, decline in that cohort continued during the 1990s. The small return migration for the 1956 to 1965 birth cohort is repeated. Also repeated is the decline among each of the older cohorts; however, the rate of decline is again seen to be much faster than that of the state as a whole.

Finally, compare the state and Open Country populations to that of Nebraska's small towns, as depicted in Figure 16. Perhaps surprisingly, towns with populations of between 1,000 and 2,500

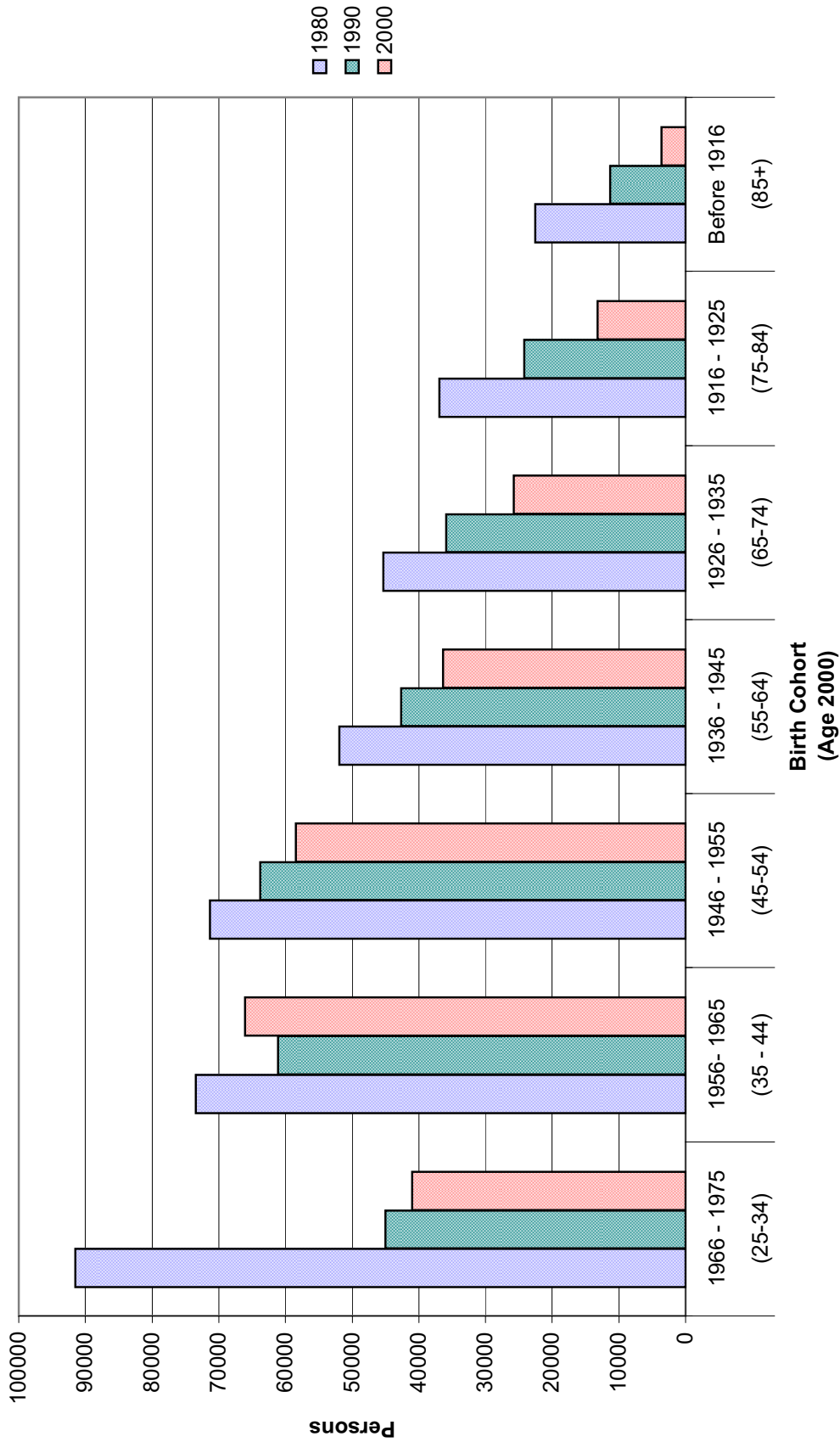
Cohort Movement by Decade: 1980 - 2000
State of Nebraska



Source: 1980, 1990, 2000 Census of Population SF1
 Prepared for Nebraska Rural Initiative
 Center for Applied Rural Innovation

Figure 14. Nebraska has tended to see losses in all age cohorts over the last 20 years.

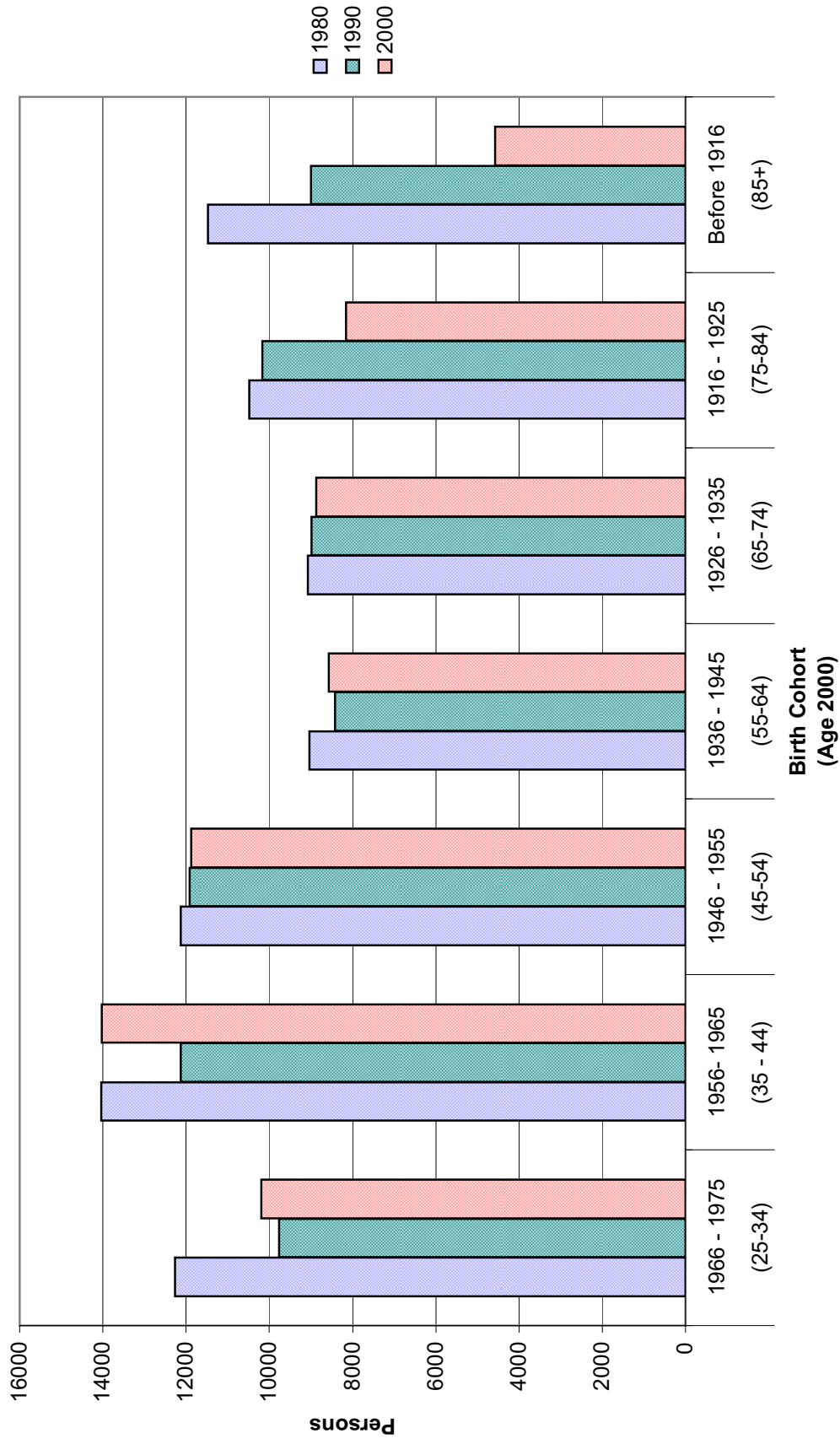
**Cohort Movement by Decade: 1980 - 2000
Nebraska Open Country Population**



Source: 1980, 1990, 2000 Census of Population SF1
Prepared for Nebraska Rural Initiative
Center for Applied Rural Innovation

Figure 15. Out-migration of the young has been most pronounced in Open Country areas.

Cohort Movement by Decade: 1980 - 2000
Nebraska Communities Between 1,000 and 2,500 Population in 2000



Source: 1980, 1990, 2000 Census of Population SF1
 Prepared for Nebraska Rural Initiative
 Center for Applied Rural Innovation

Figure 16. Smaller Nebraska communities have done relatively well in attracting and retaining people in their prime earning years.

persons have done relatively better than the state as a whole at recovering members of the 1956 to 1965 birth cohort, and have also done better than the state at retaining older birth cohorts. The relatively large losses in the oldest birth cohort during the 1990s can be explained as deaths among the large concentration of the most elderly found in these communities (see Figure 13).

Between 1990 and 2000, Nebraska's smaller communities significantly outperformed larger communities in their ability to attract persons in their prime earning years. On average, communities with populations of fewer than 2,500 saw an increase of nearly 25% in the population age 30 to 39 years during the 1990s. In that same decade, Nebraska communities with populations larger than 5,000 persons saw a decrease of over 6% among members of that age group. This phenomenon is depicted in Figure 17.

The loss of this particular cohort in larger communities can be explained in large part as the out-migration of persons completing their higher education (the cohort would have been age 20 to 29 years in the 1980s), since virtually all such institutions in Nebraska are located in communities with more than 5,000 residents. However, the fact that rather a large percentage of these Nebraskans selected smaller communities in which to reside is the more salient point for the purposes of this paper. The question to be answered is: Will they choose to have children?

Job Creation and the Growth of Small Rural Communities

During the 1990s, many small communities in rural Nebraska saw an increase in population among persons in their prime earning years (30- to 45-years of age). While the movement of these people to rural areas was not sufficient to fully replace the population losses among the cohort experienced during the 1980s, it was in many cases still a substantial return migration. Why would such a movement occur? Perhaps people who spend their childhood in small communities or maintain kinship relationships with such places tend to look favorably on such places as locations in which to raise their own children (Cordes, et. al., 1997; Vogt, Allen and Cordes, 2003). However, it is also likely that these people migrated to rural areas because of the availability of employment.

According to the Bureau of Economic Analysis, 41 Nebraska counties saw increases in total wage and salary jobs of more than 10% during the 1990s. Among these counties, 35 were non-Metropolitan. Overall, 63 of Nebraska's 93 counties saw an increase in total wage and salary jobs during the decade. The spatial relationship between job increases and population growth for rural communities can be seen in Figure 18.

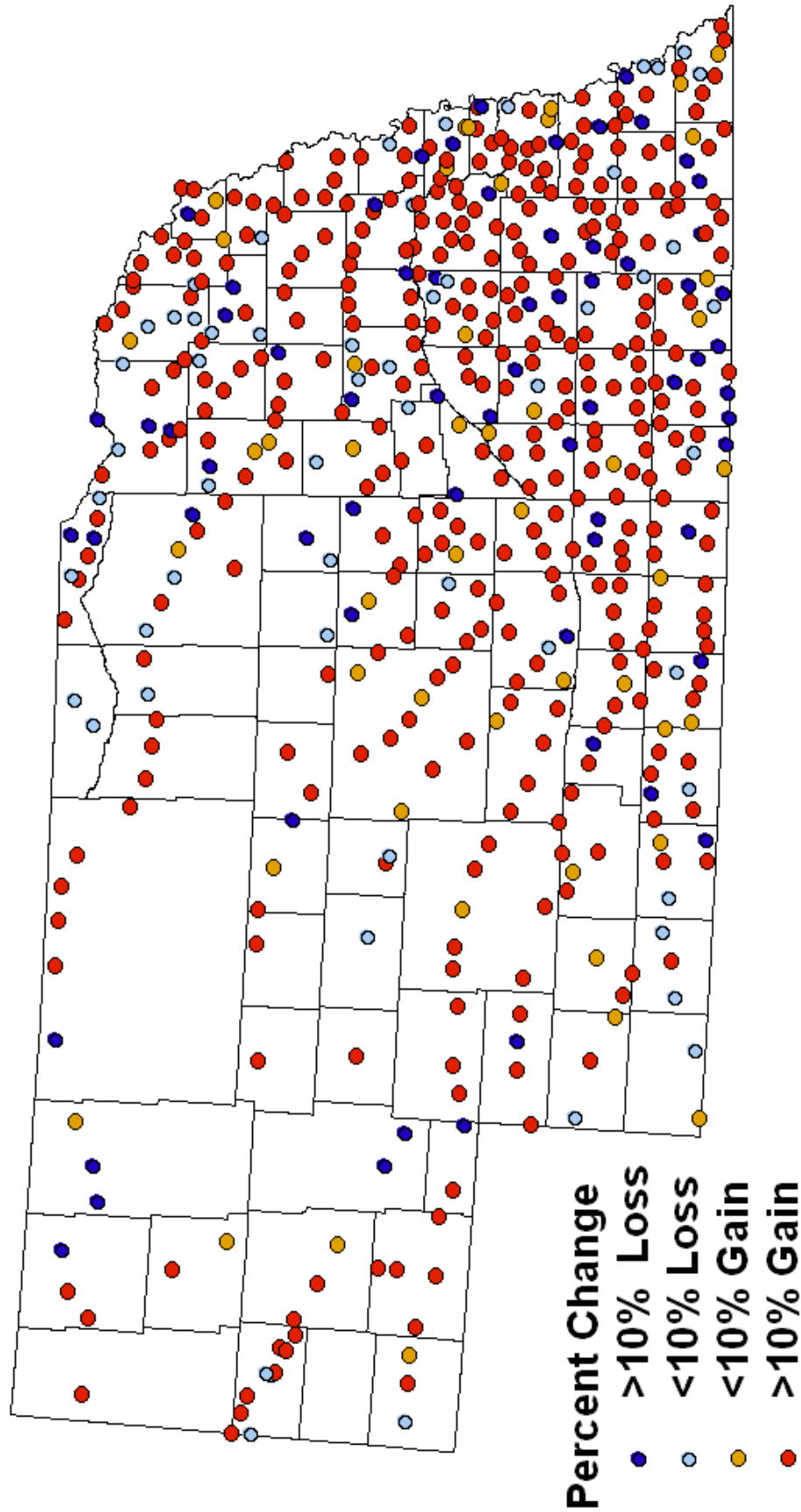
Adding wage and salary jobs, as measured here, is not necessarily synonymous with a vibrant economy. That is because we are not able to distinguish between full-time and part-time jobs. If, as a result of decreased demand, an economy is converting full-time jobs to part-time jobs, it is theoretically possible to see the total number of jobs increase, while the total number of available working hours actually decreases. There are, however, indications that this was not (or at least not universally) the case in rural Nebraska during the 1990s.

Figure 19 depicts change in total job numbers for counties and change in the size of the labor force for communities. In general, counties that saw an increase in total wage and salary employment were also likely to see labor force growth on a community level. Both commuting and migration patterns complicate this picture, and we do see labor force growth occur in some communities that are imbedded in job-loss counties. This is likely either the result of commuting to other counties or of Open Country populations moving into incorporated communities as economic activity is consolidated in towns. We also see some communities that are characterized by labor force declines even though they are located in job-growth counties. This can be explained, in part, as the result of an aging population migrating to rural service centers.

Finally, Figure 20 depicts the same county level change in wage and salary jobs, and changes in the proportion of work that was full-time for workers residing in communities. In this case we have used a fairly strict definition of "full-time" employment; 35 or more hours for 50 or more weeks.

Again, as seen in the depiction of labor force changes, there are anomalies in the pattern of job growth and change in full-time employment. However, it appears to be the case that communities

Change in the Population Cohort Born Between 1960 and 1969 Nebraska Communities: 1990 and 2000



Source: Census of Population, 1990 - 2000
Map prepared by the Nebraska Rural Initiative

Figure 17. Smaller Nebraska communities were most likely to see growth in the population age 30- to 40-years during the 1990s.

Population Change for Communities, and Change in Wage and Salary Jobs for Counties 1990 - 2000

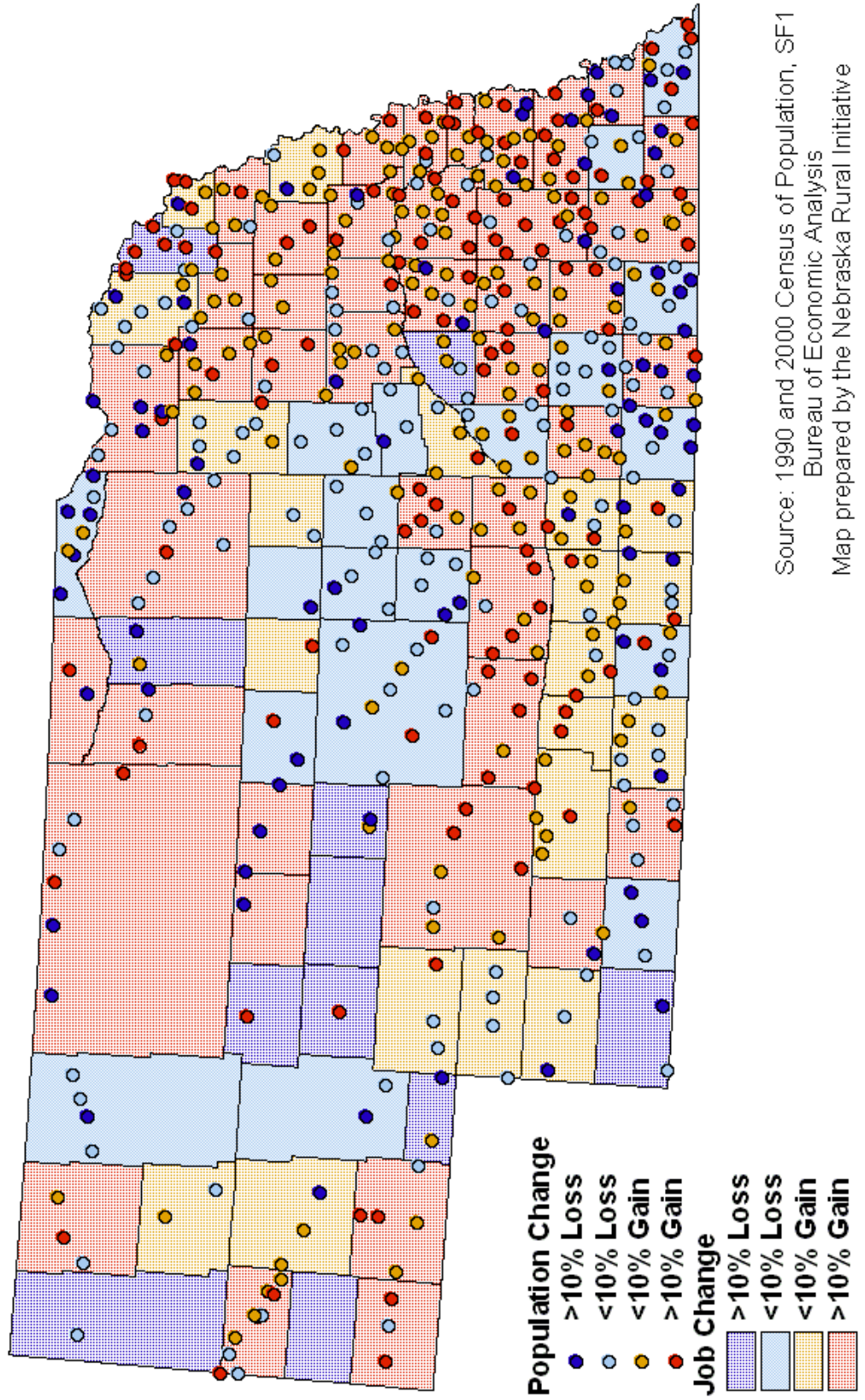
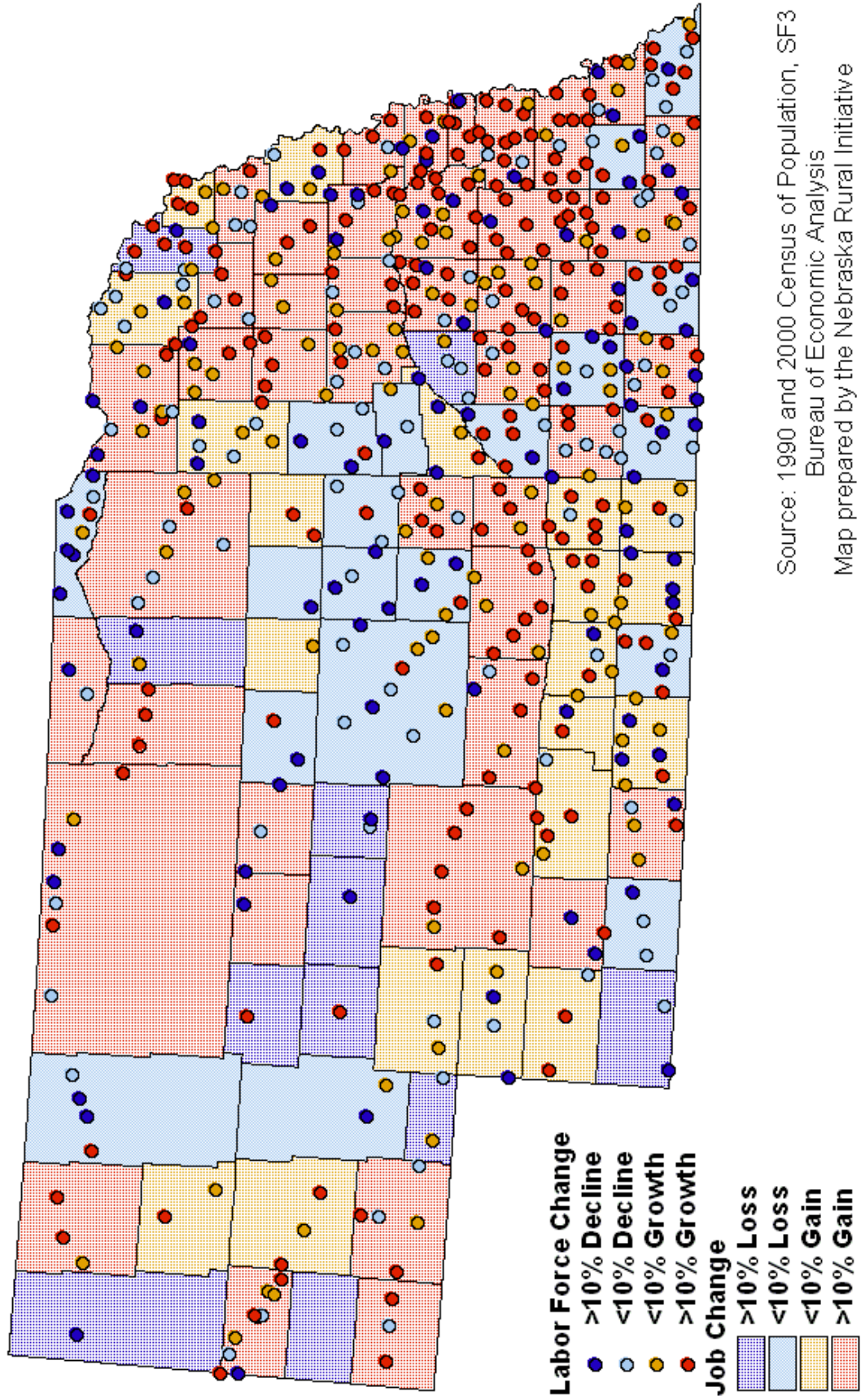


Figure 18. Job growth and population change are related, but not synonymous.

Change in Size of Labor Force for Communities and Change in Total Number of Wage and Salary Jobs for Counties 1990 - 2000



Source: 1990 and 2000 Census of Population, SF3
Bureau of Economic Analysis
Map prepared by the Nebraska Rural Initiative

Figure 19. Many smaller Nebraska communities saw growth in their labor force during the 1990s.

located in counties with increasing numbers of wage and salary jobs were more likely to see increases in the proportion of workers with full-time employment. It then seems apparent that even if the jobs being created in rural areas are part-time, they are being created in sufficient numbers to allow even a growing labor force to locate, or at least to piece together, full-time work.

The North Dakota State Data Center (2005) estimates that Nebraska ranks second in the nation in the proportion of the labor force that holds multiple jobs (9.4%). The importance of holding multiple jobs increases in rural areas, and it is often entrepreneurial in nature. In a series of case studies in Western Nebraska, Edgcomb and Thetford (2004) found 28 part-time entrepreneurs operating 39 varied businesses, most in an informal manner. While it is not possible to precisely estimate how widespread this phenomenon is in rural Nebraska, it seems probable that such activity constitutes at least a portion of the increase in full-time employment.

Educational Attainment

If, as the data indicate, not all rural communities are rapidly losing people of working age, are they, as Walser and Anderlik suggest, losing their well educated population? Again, as depicted in Figure 21, the county- and community-level data provide us with a mixed and complex picture.

Certainly most of Nebraska's rural counties lag behind the state in terms of the proportion of their population holding an advanced degree (defined here as an Associate's or higher). In fact, only five non-Metropolitan counties (three of which are Frontier counties) exceed the state in the relative size of their degree-holding population. However, it is also true that nearly half of Nebraska's incorporated communities saw increases in their degree-holding population between 1990 and 2000 that exceeded the increase seen statewide. More importantly, 178 of these communities were found outside of the Nebraska's Metropolitan areas. While somewhat concentrated in the more densely populated eastern portions of the state, these communities are found in all regions and are located within all county types. They are no more likely to be located along the Interstate or in the vicinity of large trade centers than they are to be anywhere else.

Retail Trade and a Note on Wal-Mart

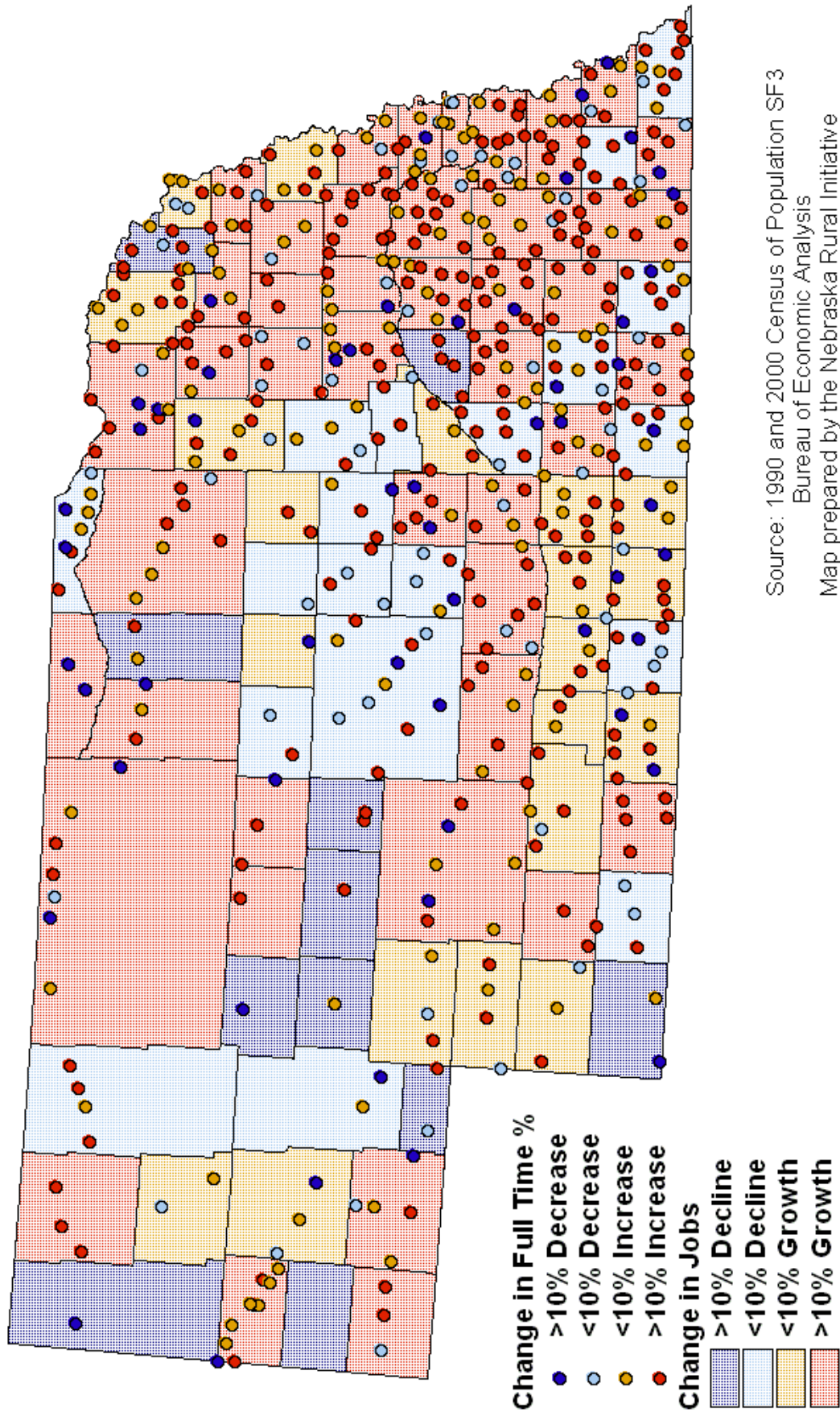
Walser and Anderlik (2004) chose Nebraska to exemplify the impact of big box discounters, and Wal-Mart in particular, on local commercial activity. Those authors point out the well-established relationship (found in central place theory) between farm size and business. Simply put, as farm size increases and the farm population declines the number and complexity of businesses in smaller places tends to decline in proportion. As they decline, such places become less important as destinations for the surrounding population, and ultimately will be able to provide only the most basic of goods and services. This pattern is reinforced by the tendency of shoppers who travel to larger markets for higher order items to also acquire basic items as part of the trip.

Using county-level data, Walser and Anderlik demonstrate that Wal-Mart stores are most likely to be located in growing areas. In fact, of the 23 Wal-Mart stores in Nebraska, 19 are to be found in growing counties. More importantly, Wal-Mart locations are closely associated with the largest markets in the state. Every Nebraska community with more than \$100-million in total taxable retail sales (excluding autos) is home to not just a Wal-Mart, but a Wal-Mart Super Center.

Wal-Mart's logistical advantage notwithstanding, the last three years (2000 to 2003) of available retail sales data have demonstrated an interesting phenomenon. Of the 176 Nebraska communities that saw taxable retail sales grow by more than 20% over those years, only one was home to a Wal-Mart (the Omaha suburb of Bellevue). Moreover, more than two-thirds of the fast growing retail communities were located neither in a Metropolitan county, nor along the Interstate.

These data, which are depicted in Figure 22, may be merely an anomaly, but they are interesting in that they are somewhat counter-intuitive. In addition, they represent a pattern that is repeated when looking at changes in pull factors for the same period. That is, the Nebraska communities that experienced the fastest growth in retail pull factors between 2000 and 2003 were not Wal-Mart locations. They were, however, for the most part nearby.

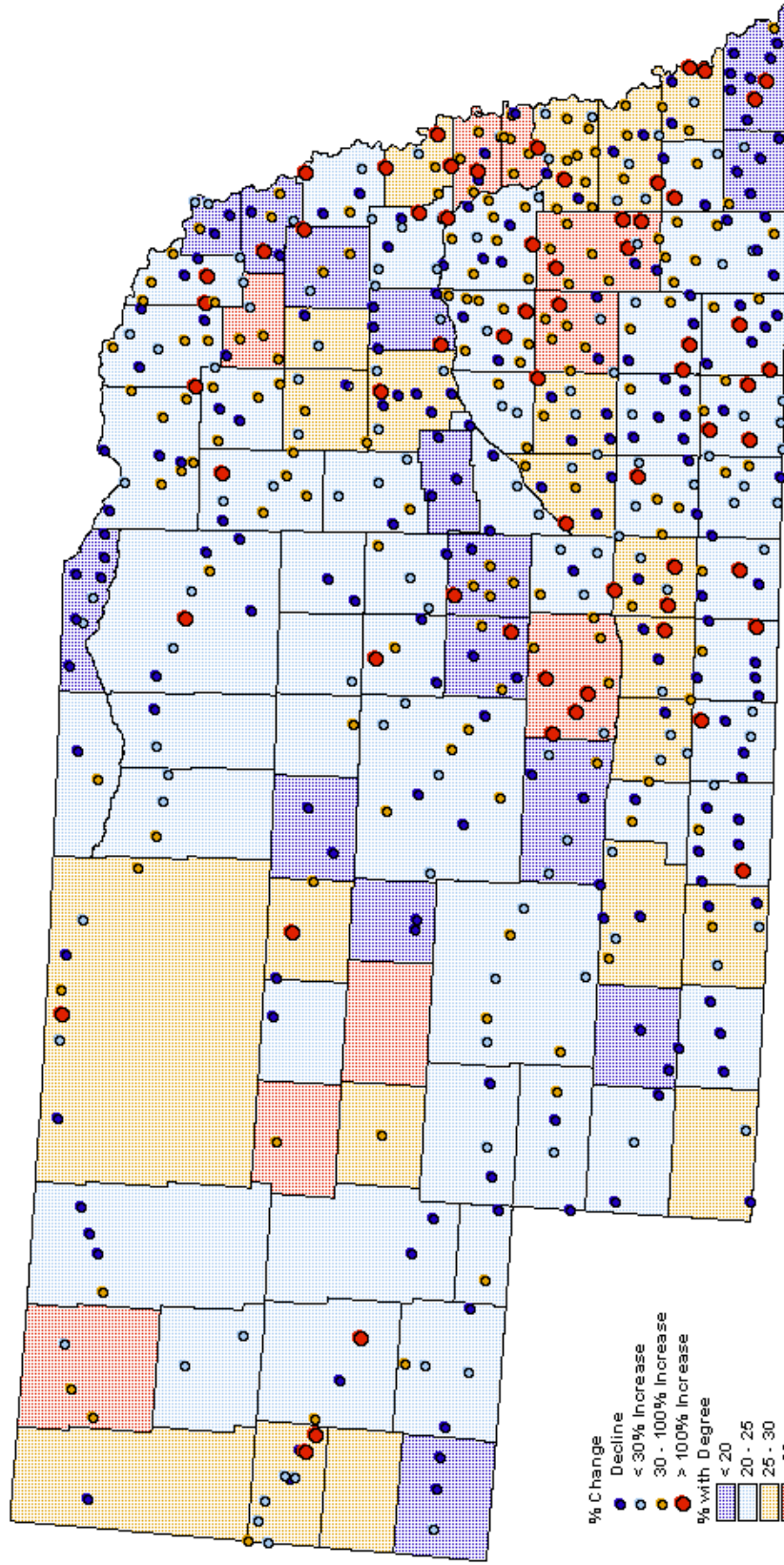
Change in Proportion of Employment that is Full Time for Communities and Change in Total Number of Wage and Salary Jobs for Counties Nebraska: 1990 - 2000



Source: 1990 and 2000 Census of Population SF3
Bureau of Economic Analysis
Map prepared by the Nebraska Rural Initiative

Figure 20. Growth in total job numbers is associated with growth in the proportion of employment that is full-time.

Proportion of Population* with Associates Degree or Above for Counties: 2000 Change in Population* with Associates Degree or Above for Places: 1990 - 2000



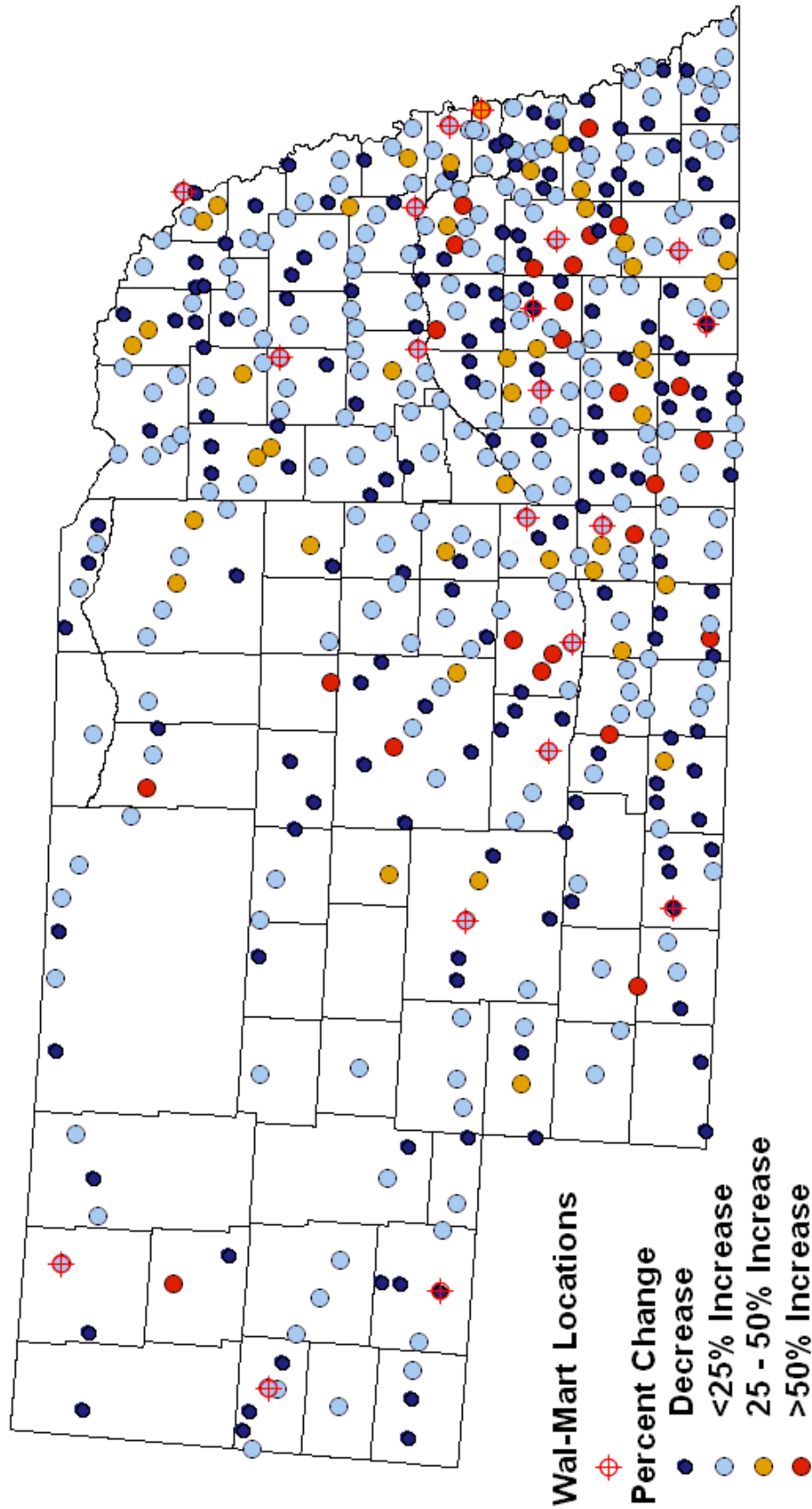
State % change = 30
State % w/degree = 31

*Persons age 25-years and over

Source: 1990 - 2000 Census of Population
Map prepared by the Nebraska Rural Initiative

Figure 21. On average, rural communities saw more rapid growth in persons with advanced degrees than did the state as a whole.

Wal-Mart Locations and Change in Taxable Retail Sales: 2000 - 2003



Source: Nebraska Department of Revenue
Map prepared by the Nebraska Rural Initiative

Figure 22. The most rapid growth in taxable retail sales has recently been found in smaller trade centers.

These data in no way negate the economic dominance of large trade centers in Nebraska. Among Nebraska's 531 communities, the 21 Wal-Mart locations were home to 73% of the total population in 2003, but accounted for 84% of total taxable retail sales, and 86% of the total increase in sales (even though this represented only a 0.1% increase in total market share over that which they held in 2000). When Metropolitan communities are excluded, the remaining 16 Wal-Mart communities contained 42% of the community-based population and accounted for 59% of taxable retail activity. However, the total retail market share for those 16 places decreased by 0.1% between 2000 and 2003. In fact, those 16 communities (in aggregate) underperformed the state in terms of growth in taxable sales by 1.3%.

Certainly Wal-Mart does not intentionally locate in communities that demonstrate limited potential for growth in sales. However, recent research has concluded that the overall economic impact of big box retail, in general, and Wal-Mart, in particular, may actually be to limit the reduction of poverty in their home communities (Goetz and Swaminathan, 2004). If that is so, the presence of mega-retailing may in fact depress retail growth potential over time. This will be a topic of research interest among economic developers and policy analysts for years to come.

Considerations for the Future of Rural Nebraska

As it turns out, there are in fact communities in rural Nebraska that are growing in population, that are adding jobs, that are increasing the size of their labor force, improving the average worker's prospects for full-time employment, increasing in their level of educational attainment and improving their retail market position.

This paper is not meant to suggest that all is well on the rural Great Plains, or even that there has been any significant change in the overall trends that have been so well documented by so many authors. Certainly the declining numbers of rural families with children is a matter of grave concern for the future. There are, however, a couple of other points that seem to be worth consideration by those interested in documenting the condition of this or any rural region.

First, county level data don't necessarily provide a complete picture of everything that is going on within rural social and economic systems.

Undeniably, population declines in the countryside have had an impact upon rural communities. Still, it may be that some communities have found ways to adapt to these changes, and it does appear that counter-trends, albeit small, are starting to emerge.

Second, aggregate population numbers tell an important but again an incomplete story. The declining population in rural Nebraska is being fueled by essentially three things: Declining birth numbers, death among a large senior population and out-migration by young people following their secondary school education. It is also apparently being mitigated in some communities by the return of working age people. Nebraska studies have shown a strong attachment to place that would motivate return migration among working age persons with rural origins (Nebraska Rural Poll 1995 – 2004). It seems likely that at least some rural communities have found a way to either generate or maintain enough economic activity to support that migration, and one must at least entertain the possibility that sustainable population equilibrium can be achieved.

Finally, if any state were likely to collapse into a small series of economic black holes, it would be Nebraska. While the state is home to 531 incorporated communities, only 32 of these have populations greater than 5,000, and half of those are either located in Metropolitan counties or along the Interstate. Yet these, for the most part, are not the communities that have most recently seen the highest levels of growth in retail sales or in their retail market capture. Perhaps one or more businesses in these small communities have found a way to market themselves as an alternative to large centers, have engaged in the sale of highly specialized products that will draw a regional or tourist type clientele, or have found ways to profitably utilize new technologies. It is also possible that their apparent success is associated with some of the population trends that we have explored earlier in this paper.

Theoretically one supposes that it is possible for the rural Great Plains to end up as a great, empty buffalo commons. But such an outcome seems unlikely. If nothing else, there are those people who,

for whatever reason, will simply refuse to live in a large urban concentration, and will define large as whatever it means to them. For these people, the valuation of place is higher than the likely reward of out-migration (Cordes, et al. 2003). In the meantime, there are certainly some rural communities that are thriving, by at least some standards, and where there is an investment in manufacturing, service, market and public infrastructure which is unlikely to be abandoned.

Wouldn't students of rural America be at least as well served by looking for rural counter trends and analyzing what they find as they are by restating the well-documented relationship between changes in agricultural scale and rural decline? If there is to be a change in the economic and social direction of rural America, it will start somewhere, and indeed may already have begun. If that is true, it will stand a greater chance of success if we take note of it.

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End Notes

¹ Nebraska counties in which the rate of population loss increased between the 1980/1990 and 1990/2000 censuses include: Box Butte, Dundy, Garfield, Hayes, Hitchcock, Holt, Logan, Thomas and Valley.

² “Fishhook” counties that were smaller in 2000 than they were in 1920 include: Colfax, Hamilton, Saunders and York.

³ Examples of non-Metropolitan communities not located on the Interstate that reached their peak population in the 2000 Census include: St. Paul, Stanton, West Point, Crete, Minden and Elwood.

⁴ Examples of communities that grew by 10% or more between 1990 and 2000 despite being located in counties with declining populations include: Battle Creek, Bushnell, Brock Johnstown, Callaway, Danbury, Dawson, Dix, Hubbell, Rulo, Stockville, and Wood Lake.

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