

REGIONAL SPRAWL IN THE NORTHERN COLORADO FRONT RANGE

By

Brian David Christens

Thesis

Submitted to the Faculty of the  
Graduate School of Vanderbilt University  
in partial fulfillment of the requirements

for the degree of

MASTER OF SCIENCE

in

Community Research & Action

August, 2004

Nashville, Tennessee

Approved:

Professor Paul W. Speer

Professor William L. Partridge

This thesis is dedicated to Daniel Christens

## ACKNOWLEDGEMENTS

The author would like to acknowledge Paul Speer, who provided many of the contacts, ideas and technical expertise necessary for this project. Thanks also go to William Partridge for reading and offering valuable criticism on each draft of this thesis. Thanks to Diana Jones for collaborations on elements of this project and for the use of data from qualitative interviews with residents. The Raskob Foundation's support has provided support for the study of the community organizing process. Elements of this document have been developed as parts of that study. Thanks also go to the community organization, CBC, for their collaboration – and for their hospitality in allowing the author to borrow a fantastic hybrid Toyota with satellite radio when he showed up in Colorado to do research, but was unable to rent a car due to the fact that his driver's license had long since expired.

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# CHAPTER I

## INTRODUCTION

### Overview

The Northern Colorado Front Range is the area north of Denver, along the Eastern edge of the Rocky Mountains. A local community organization is concerned with the effects of rapid population growth and sprawling development. This project has been developed through collaboration with the local organization. It is a descriptive study of the regional sprawl and several related concerns. It is also a piece of a larger action research project on community organizing.

This chapter will introduce the community organizing project and the impetus for this study. It will then briefly address action research as an epistemological orientation. An overview of Geographic Information Systems (GIS) methodology will also be included. Following this is a discussion of the potential relevance of this study to other locations, and U.S. community development research in general.

Chapter II tells the story of sprawl from a variety of viewpoints. The review is based on the literature of several disciplines. The idea of path dependence is then discussed as a useful tool for understanding why community development patterns currently tend toward sprawl.

Chapter III reviews the literature on the effects of sprawl. For the purposes of this study, these effects are divided into impact on the general population, and any additional impact on residents with lower incomes.

Next, this thesis examines the Northern Colorado region specifically by analyzing population and housing data in Chapter IV. Numeric and graphic representations of the factors identified in earlier sections come together in this section.

Chapter V is a documentation of the application of GIS to the issue of sprawl. Data are organized spatially and different methods are employed to visually and numerically interpret different dimensions of sprawl and to describe the demographics of the people living in the areas associated with the outward expansion.

Chapter VI builds on the analyses in Chapter V by looking more specifically at race, class, and migration. Population growth trends are analyzed at the county level

across the nation and in the state of Colorado. Segregation by income level is identified as a prominent concern, and an example of concerns of low-income residents in a mobile home park is included.

The final chapter (Chapter VII) synthesizes the analyses in the two preceding chapters with a discussion of their implications. Alternatives to sprawl are briefly discussed and sprawl is contrasted to smart growth or growth management.

### **Prelude: Individuals and the Community**

The tension between the individual and community cuts to the core of ideological differences in nearly every arena of contemporary thought and action. Philosophically and politically, the role (Etzioni, 1995) and the definition (Newbrough, 1995) of the community is up for debate. From a social science perspective, the question remains, should we first look to the individual or the community to understand individuals within systems? (Rappaport, 1977)

The physical developments that a culture chooses often reflect the dominant ideology of the time. Carter Wiseman ends his text on *Twentieth-Century American Architecture* (2000) by highlighting the current conflict between individual and community values. “But on the eve of the millennium, the future of community in the United States is far from certain. Every indicator suggests that the country will continue to fragment along lines of income, ethnicity, politics, and race” (pp. 333-334).

Sprawl, the dominant form of physical-environmental development over the past half century in the United States, is often understood as development that favors the concerns of the individual over the concerns of the community (Freeman, 2001). It maximizes the private and minimizes the public. As a result, “Americans may have the finest private realm in the developed world, but our public realm is brutal.” (Duany & Plater-Zybeck, 2000, pg. 41). Many agree (e.g. Rae, 2003) that this form of development contributes strongly to the relatively recent breakdown in social capital (Putnam, 2000) in the United States.

### **Local Community Organizing**

Community organizing (Alinsky, 1971) is a term that describes a process of leveraging power for change in democratic systems. There are a variety of approaches,

and a long history of successes and failures associated with different techniques. The long path from grass-roots recognition of issues to successful achievement of change is full of intricacies and peculiarities. For instance, Gaventa (1982) studied why community organizing was ineffective to non-existent in an oppressed mining community in the southern Appalachian Mountains. Conversely, Speer & Hughey (1995) analyzed the Pacific Institute of Community Organizing (PICO) and pointed out techniques that the organization used to be effective.

Beginning with the work of Saul Alinsky (1971), community organizing has facilitated widespread citizen participation and engagement, often leading to desired outcomes, including government accountability. Sanoff (2000) writes that, “Alinsky believed in *participatory democracy* and utilized various methods to make it reality rather than a trite phrase” (p. 3).

PICO is a national network of faith-based community organizations utilizing methods similar to Alinsky’s. No specific faith is advocated by the network itself, it simply organizes through or builds upon existing faith-based institutions, such as churches, mosques, or synagogues. The “Congregation-Community Model of Community Organizing” informs the techniques that the organizations in the network use to exercise power in the service of social change. Adherence to the following principles characterize the organization:

- Respect for Human Dignity
- Creation of a Just Society
- Development of the Whole Person

At the time of this writing, there are slightly less than 50 PICO affiliated organizations working for change in the U.S. The current project has grown out of a multi-year study of five of these sites. This project has been developed collaboratively with one organization in particular, Congregations Building Community (CBC). Located in the Northern Colorado Front Range, CBC is a coalition of congregations dedicated to working on the issues that surface through the process of one-on-one conversations between local leaders/organizers, and the active members of the organization.

Community organizing has also been identified as a source of personal psychological empowerment (Speer & Hughey, 1995). It is an organic community process that builds power at both the organizational and individual levels of analysis.

For researchers interested in using their work for the promotion of human wellness (i.e. Prilleltensky, 2003), community organizing is an important vehicle and source of empowerment. Those on both sides of divisive local and national political issues tend to agree that empowerment of the poor or oppressed is essential for social progress. They should also agree that community organizing is an important and essential process. The organizers involved with CBC have, as one of their stated goals, “building social capital”.

The area in which CBC is located is certainly fast growing. It has seen enormous physical, population, and economic growth since the 1940’s. The region has several small cities, but is largely comprised of suburbs and towns linked by a major interstate highway. The local understanding (as conveyed by newspapers and contacts within CBC) is that economic inequality and power differentials have been highlighted by the increasing value of the land as relatively powerless residents have been exploited and displaced by corporate entities. Renters and owners of mobile homes that sit on rented property have proved particularly vulnerable to the policy and market shifts associated with “sprawl”. Even those residents that have profited economically from the escalation of property values are concerned with what seems to be a dramatic reduction in quality of life as the region expands with suburban and low-density commercial development.

CBC has identified sprawl as a central concern in its quest for affordable home ownership and a higher quality of life. Although causal relationships between sprawl and affordable housing are difficult to impossible to tease out, there is some literature that points to interrelationships between physical design, policy, and housing affordability (National Neighborhood Coalition, 2001; Calthorpe & Fulton, 2000; Collins, Crowe, & Carliner, 2002). Sprawl, as discussed in the next chapter, is a multi-dimensional phenomenon, and a greater understanding of it may help lead to ideas for better community development practices and, ultimately, a higher quality of life.

Sprawl certainly effects and engages people differently. Few studies have looked specifically at sprawl’s effects on low-income residents. The residents involved with CBC are often members of the “primary work force” (construction, police, food service, minimum wage work). They are finding it increasingly difficult to continue to live in the region and maintain basic economic needs. The major changes that they have identified are growth and sprawl. This organic hypothesis that sprawl is damaging the community’s quality of life (low-income residents in particular) is the impetus for this

investigation. The desired result is to feed back relevant information to CBC so that their organizing efforts can take any relevant information into account. As mentioned, this proposed study is a piece of a larger action research project with this organization and others.

### **Research Orientation and Methods**

The membership of CBC believes that sprawl is playing a leading role in limiting access to affordable housing. As a Community Development researcher, the topic is interesting to me for a variety of reasons, including the underlying ideological conflict mentioned in the ‘Prelude’ at the beginning of this chapter. The topics related to sprawl, community development, and affordable housing are intricate. Even reviews of relevant literature like chapters 2 and 3 of this thesis still tend only to scratch the surface of the phenomena involved. Yet, we find the word “sprawl” increasingly in public debate (Kiefer, 2003).

It is important to point out that the methodological orientation for this project is *action research*. This orientation represents a departure from some of the more traditional positivist methods of conducting research. As such, the goals of this study differ from some mainstream empirical social science theses. One difference is that my bias as the researcher is acknowledged at the outset. While objectivity is desired to the degree that it is possible, the primary purpose of action research projects such as this one is to generate empirically valid information that will aid an entity that is engaged in action in its quest for local or societal change.

As the researcher, therefore, I believe that it is beneficial to acknowledge some of my biases. First, I am somewhat eager to help CBC identify information that will be useful. Additionally, having grown up in the suburbs of several notoriously sprawling cities, I am predisposed toward a personal dislike of many of the aspects of sprawl and its impact on communities as understood through my own lived experiences. My thoughts on community development could thus generally be labeled as *urbanist* (Jacobs, 1961). Having said this, however, I am intent on providing CBC with solid empirical evidence relevant to their concerns. Thus, my approach to the literature has been to gather and distill as many relevant publications as possible and I have made every effort to accurately represent reality in my data collection and analyses.

Since the goal of community action research is not only the production of new and interesting scientific studies of community phenomena, but informing people of action and actual processes in communities, it is important that the methods used to distill, analyze, and represent data be accessible to the general public. Effective ways of representing data to communities can and often should include complex statistical analyses, but it is important to adapt these analyses graphically, verbally, or geographically for palatability and easy consumption by the public (for an example of effective integration of adapted statistical analyses and geo-spatial analyses, see Speer, Gorman, Labouvie, & Ontkush, 1998).

This version of this project is being written for the scientific community and the shelves of a library. The same material is also being prepared as a report that will be sent to Colorado to help inform organizers and decision makers, and hopefully eventually contribute to processes of change. Thus, the centerpiece of this project will be a series of representations of data on human settlement patterns, housing trends, and population demographics. The next section of this chapter is a step toward locating this research within larger processes and current global trends.

### **Why Research Sprawl?**

Sprawl is a topic of current public debate, yet, as Chapter II explains, scientific research has not provided much in the way of understanding or insight. This contribution to the understanding of sprawl is primarily intended to inform locals making change. It is simultaneously a description of the phenomenon, and the spatial and population trends that it represents, causes, or accompanies. Sprawl, as a spatial reorganization is about power. This project attempts to illuminate these power dynamics. As Foucault wrote, “A whole history remains to be written of spaces – which would at the same time be a history of powers” (1977, p. 149).

While this is a descriptive case study of only one small region, the issues addressed are of potentially great interest to nearly every U.S. city. The relevance of community development studied in the U.S. is not even limited to North America, though. As Sassen (1994) points out, economics associated with globalization have transformed the functions of the city and the regions with which they have been associated. The mobility of information and capital suggests that in contrast to the

current inequalities between nations, we will continue to see more similarities in large urban areas, and greater inequalities between cities with global capital – as well as issues of rural deprivation.

The way that cities and regions develop throughout the world physically will have nuanced and long-lasting socioeconomic implications that will impact quality of life for generations. Shifting populations and development patterns tend to have economic and social winners and losers (Bartik, 1993). It is also possible that the majority of citizens suffer from development that is uncontrolled or sloppily or thoughtlessly designed.

As our understanding of sprawl increases, we see that it is not so much a product of the free market and consumer choice (as some suggest, i.e. Brooks, 2004) as it is a result of large, systemic factors. Government, in particular, is a contributor to sprawl. It provides the infrastructure and issues the rules for new outward expansion. It does so with the money that it collects in taxes. These practices need evaluation, just as any government expenditure does.

Some economists are unequivocally pro-sprawl because it implies economic growth. While there are economists who are arguing for greater attention to social and political variables in economic analyses (Mingione, 2000; Hirshman, 1977), they seem to be the exception. Conversely, environmentalists and social critics often argue that sprawl is unequivocally bad because of its “destruction” of the environment or more traditional notions of community. This descriptive analysis takes a specific region and details its growth trends. It takes available data and seeks to describe the results of rapid growth, and the population distribution that has accompanied it.

### **Synopsis**

This chapter has briefly covered the impetus for this project, its goals, methods, and epistemological orientation. The chapter has also placed the topics of interest broadly in the context of current philosophical and political currents.

The next chapter is a review of interdisciplinary literature on the phenomenon of sprawl, its definitions, dimensions, and causes. The review is intended to provide a basic understanding of sprawl for this project and future/related community research.



## CHAPTER II

### THE HISTORY OF SPRAWL

#### Introduction

While many problems have been popularly and politically attributed to sprawl (Hess et al. 2001), there are some who provide alternative views (e.g. Staley, 1999), making the case that sprawl is not an inherently negative phenomenon. Clapson (2003) points out that the vast majority of histories of suburbanization are intensely negative, beginning in earnest with Lewis Mumford's (1961) critique. As Hess et al. (2001) point out, however, some theorists did see potential benefits to decentralization, such as the fact that it acts as a natural defense against nuclear attack. These same historians and planners, though, typically preferred well-planned central nodes to the haphazard development that took place. The fact remains that the majority of U.S. residents, regardless of their opinions, continue to buy into the sprawl model with their personal and household choices.

Although suburbs existed before the Second World War, sprawling growth and development did not truly change the face of the United States until immediately after World War II. Unlike Europe, whose cities had a longer history and contained a larger proportion of the population, the U.S. was a predominantly rural country even well into the 20<sup>th</sup> century. A number of Federal programs passed post WWII had an unpredictable combined effect of fueling a massive consumption of land for development.

First, the Interstate Highway Act and other highway redevelopments linked most urban areas to each other and everything in-between with a roadway that provided unprecedented ease of automobile use. The creation of these highways remains the most expensive public works project in world history. Second, the creation of the Federal Housing Administration and the Veteran's Administration subsidies of housing loans made owning a house easier than ever and encouraged new, single family housing (Rohe, Van Zandt, & McCarthy, 2002). Third, as detailed by Kuntsler (1993), there was a successful and systematic campaign to destroy public transportation by those who believed in or stood to gain from increased automobile use.

No one could have predicted how greatly the confluence of these factors and the marketing of the “American Dream” (as home ownership in the suburbs) would impact the American physical, economic, and social landscape. What began as a generation of young veterans and professionals moving to small houses on the fringes of large cities spiraled into a controversial nation-wide system of development that constantly spreads out over previously rural areas and leaves cities as deteriorating low income areas interspersed with “business districts”. The importance and complexity of sprawl are now baffling. As Clapson (2003) points out, “suburbanization is intimately related to war, ethnicity, affluence, class and gender, and to party politics” (p. 1).

This chapter examines the available literature on sprawl and why the United States’ cities have sprawled so much by any measure. This examination is admittedly general, however, since sprawl has many causes and dimensions. The current writing is intended to examine sprawl as a concept, its causation and measurement sufficiently to justify this thesis’s various methods and usages of the term. This is necessary simply to make vast amounts of information manageable. Thus, the following section looks at previous attempts to define the term and attempts to find an appropriate definition for this paper.

### **Defining and Measuring Sprawl**

When attempting to find definitions or accepted measurements of sprawl, suburbanization, or other similar terms, one encounters discouraging lines such as “A survey of the literature yields no common definitions of sprawl, and relatively few attempts to define it operationally that would lead us to useful comparisons of urban areas to determine which of them has experienced greater or lesser degrees of sprawl” (Wolman et al. 2002, pg. 2).

Common definitions of sprawl include growth in urbanized areas, a lack of population density, distance from the city center (Downs, 1998), and previously open land consumption. Fulton et al. 2001 defined it as development that lacks density, continuity, concentration, clustering, centrality, nuclearity, proximity, and mixed use. Architects tend to define sprawl by its physical appearance (i.e. strip mall, suburban development, arterial roads) (Duany & Plater-Zyberk, 1998).

The word sprawl is admittedly loaded and vague. All who have joined the discussion on its benefits and drawbacks do not use one consistent definition or measurement. El Nasser & Overberg (2001) used growth in urbanized areas within metropolitan statistical areas, while the Sierra Club (1998) used a definition more focused on land consumption. Malpezzi (1999) uses fairly complex measures of sprawl involving population density and distance from the city center, and Galster et al. (2000) use a 6 part system dealing with elements of sprawl (a low score on any item would indicate the presence of sprawl):

1. Density, the average number of residential units per square mile.
2. Concentration, the degree to which development is located within relatively few square miles from the urbanized area.
3. Compactness, the degree to which development has been clustered.
4. Centrality, the degree to which development is located close to the central business district.
5. Nuclearity, the extent to which an urbanized area is characterized by a single center of development.
6. Proximity of land uses, the degree to which different land uses are located close to one another.

Freeman (2001) uses measures of automobile hegemony and density to measure sprawl. Yeh and Li (2001) use Geographical Information Systems and a statistical measure of dispersion within concentric circles of the city center. Hess et al (2001) provide a comprehensive review and comparison of all of these measures alongside their own. Interestingly, none of the measures of sprawl were significantly correlated in this test, suggesting that sprawl is an **extremely multi-dimensional** phenomenon. Its specific aspects are not always correlated in different cities, and much work remains to be done on providing meaningful operationalizations of these aspects, as will be discussed in the section on measurement in this chapter.

Since definitions used in the literature vary, as do measurements, we must examine some of the aspects of sprawl to understand its multi-dimensionality. The Colorado Sprawl Action Center (2002) provides a useful list of ten traits associated with sprawl. This list is not a checklist, but a description of the multiple phenomena associated with sprawl.

1. Unlimited outward expansion
2. Low-density residential and commercial settlements
3. Leapfrog development
4. Fragmentation of powers over land use among many small localities
5. Dominance of transportation by private automotive vehicles
6. No centralized planning or control of land use
7. Widespread strip commercial development
8. Great fiscal disparities among localities
9. Segregation of types of land uses in different zones
10. Reliance mainly on the trickle-down or filtering process to provide housing to low-income households

Aside from its comprehensive nature and inclusion of low-income affordability concerns, the Sprawl Action Center's list of traits is possibly more ecologically valid than other lists emanating from other states or regions. It is at least a good starting point for an understanding. Of course, the fact that it is a list of factors *associated* with sprawl prevents it from being a definition since these associations may be part of the process itself, causes of the process, effects of the process, or simply phenomena perceived to be related to the process.

For this study, then, how can sprawl be defined as an isolated process or state of being? Many of these factors that are associated with sprawl could be used only at a regional level, while others could be used from neighborhood to neighborhood, or even at an even smaller (geographical) level of analysis. Sprawl is, then, a multi-level phenomenon. Upon learning that sprawl is a multi-level, multi-dimensional phenomenon as understood by resident activists and social scientists alike, it makes sense to look at phenomena associated with sprawl and see if different analytic methods can aid us in understanding these relationships. In the end, the lack of a single, coherent definition and measurement may limit what we can scientifically say about sprawl. On the other hand, attempts to capture all that sprawl entails in a measurement or definition have fallen short so far, and the task is certainly not accomplished in a case study like this one.

While these ambiguities will resurface as we discuss the analyses of data, we will set them aside for now and look at sprawl as a process. The next section looks at

previous attempts to locate urban sprawl or suburbanization within multiple historical and cyclical processes. In conclusion, the concept of path dependence is offered as a tool for understanding the causation of such a baffling and large-scale phenomenon.

### **What Causes Sprawl?**

In the brief history of sprawl at the beginning of this chapter, several generally accepted historical causal factors of sprawl were discussed (the creation of the Federal Housing Administration and Veterans Administration loans, the Interstate Highway Act, and the maiming of systems of public transportation). Only the third of these three developments is entirely lamentable. For instance, the FHA has been one of the most successful Keynesian economic controls that the U.S. government has ever enacted. It has certainly contributed to increasing the population's homeownership. Examining the historical data, we see that in 1920, 20% of the U.S. population owned their home. In the 60 years leading up to 1980, due to the continuing evolution of the generalized housing market, that figure jumped to 66% (Knox, 1994).

Today, homeownership has become a near necessity economically for most lower to middle class families. The ability to build home equity is not only one of the most powerful determinants of the net worth of U.S. families, and homeownership has been shown to be associated with psychological and health benefits (Rohe, Van Zandt, & McCarthy, 2002). Many also write that home ownership boosts neighborhood social capital (Retsinas & Belsky, 2002). Empirical research has validated the link between home ownership and social capital (Perkins, & Long, 2002) and also showed that homeowners are more likely to participate in their communities and engage in neighboring behavior (Perkins, Brown, & Taylor, 1996).

The U.S. has had a somewhat atypical pattern of development with massive unhindered sprawl and constant demolition of existing structures and forms. Norton (1996) points out that the U.S., through its economic processes of creative destruction, has seen more than its share of urban change. Atkinson & Oleson (1996) illuminate the processes at play by arguing that sprawl, like many socioeconomic phenomena is a process of cumulative causation with reinforcing feedback loops. Thus, the "choosing" is not done by people operating rationally within a system, but the system itself which tends to reproduce itself in the absence of drastic intervention. In order to more fully

understand this process, we need to examine the early ideological and political groundwork that was laid as a precursor to the regional sprawl that is so pervasive today.

At the 1939 World's Fair, the General Motors exposition detailed the potential future of American cities (General Motors, 1939). For obvious reasons, most of the developments that they predicted involved dramatic increases in automobile usage. The presentation turned out to be eerily prophetic as cities rebuilt themselves after WWII with the industrial machinery that had been used to build tanks and planes. Eisenhower's Interstate Highway System and increased automobile ownership then made travel to suburban areas possible. Mass marketing and the passing of the G.I. Bill made housing a commodity that many people sought. Cities used tax dollars to finance massive expansions in infrastructure for this sort of development that was segregated by use (residential, industrial, commercial).

“At least since the end of World War II, our cities have been developing as low-density, land extensive settlements. This land use pattern has been encouraged by transportation and other technologies and by reinforcing public policies. The automobile has been designated as the major culprit in creating this pattern, but the automobile could not have had these effects without complimentary public policies and subsidies (pg. 611, Atkinson & Oleson (1996).”

As we can see, then, even suburbia's beginnings are a murky mix of historical events and partial influences. The sprawl model of development has taken on what seems to be a life of its own, and it has even changed along the way itself. Newer suburbs typically have much larger homes and sometimes contain gated entryways. Older “inner-ring” suburbs have often fallen victim to the same forms of urban blight that they are often blamed for creating. And, in the case of the Northern Colorado Front Range, sprawl has taken over massive amounts of land where there is virtually no city center.

Urbanized land in the United States has grown at a much faster rate than the population of the U.S. over the last few decades. Proscio (2002) showed that between

1982 and 1997, urbanization outpaced population growth by roughly three to one. Part of this growth in land consumption has been due to the continuing trend of rural-urban migration but much of it has been due to a dispersal of urban population density. With the aging and pseudo-urbanization of many older suburbs, though, U.S. suburbs have lost much of the homogenous quality that initially characterized them (Fishman, 1987). In some ways, many of yesterday's suburbs are urbanized today, and do not display as many of the racially and economically homogenous qualities for which they have often been criticized. Because of their design, however, they are still automobile and family centered, much to the detriment of community interaction and alternate forms of transportation.

Many consider suburbs to be made up of almost entirely unattractive physical environmental developments (Benfield, Raimi, & Chen, 1999). There are an increasing number of pro-suburban writings available, though. Blumin (1990), a historian, predicts that the tenor of critiques of suburbia will soften as an increasing number of younger historians have grown up in the suburbs themselves. As evidenced by the concerns of CBC, however, residents of sprawling areas are often their harshest critics. Comparative advantages of living in vital urban areas often embitter childhood residents of suburbs, as seen in Kuntsler's (1993) personal accounts.

As Clapson (2003), in his self-proclaimed "attempt to rescue suburbia from the enormous condescension of the rich, young and trendy" points out, U.S. music and television has been full of venom toward the suburbs. Regardless of these popular conceptions, debates, and writings, sprawl continues to move human settlements beyond their current extents throughout the United States. From a macroeconomic standpoint (at least in the short term), this is almost certainly a positive thing since it employs thousands and creates growth in economic indicators. Those focused on environmental concerns are much more likely to see sprawl as wasteful consumption of dwindling natural resources. Social science research and social history seem to be divided in their varied assessments.

### **Path Dependence**

In considering the prevalence of sprawl despite multiple criticisms, it is useful to understand the arguments of Atkinson & Oleson (1996) who point out the role of *path*

*dependence* in continuing urban sprawl. Path dependence is the continuation of a trend despite evidence that it may not be the best possible path. This phenomenon occurs through the reinforcing feedback loops that traditions like these create. Through repetition, the causes and effects typically become blurry and the condition known as cumulative causation tends to emerge. Once in place, the policies and market conditions that lead toward sprawl will remain unless confronted by a force that seems more difficult to overcome than the difficulty in establishing new patterns of development.

Since, as cultural individualists, it is often difficult to conceptualize community processes that utilize psychological insights (Rappaport, 1977), it is helpful to compare these processes to those that individuals may experience. In this case, a simple comparison would be that of habit formation. Many habits become entwined in entire systems of behavior that end up further solidifying the habit into patterns of behavior. It is often difficult to determine whether the actionable habit, or the supporting thoughts and actions are the impetus for the entire system. What is known, though, is that it requires an immense amount of energy to break these cycles of cumulative causation, for individuals – and communities.

Examples of the policies that reinforce sprawl can be seen in logging policies and state and federal level bureaucracies that are beholden to road builders' associations and contractors of public works. Infrastructure is built into farmland and property is seized and developed using public money. These actions are justified as producing growth, and are not often seen as being the alternative to upkeep of areas of town that are suffering from disinvestment by the government, and therefore private capital. The desirability of suburbia is thereby enhanced through the use of public dollars, as older areas of cities are gradually made less appealing through an inequitable use of tax money. The resultant shift in private investment only furthers consumer preference until the combined effect makes some areas seriously blighted. The individual searching for a place to locate homes, businesses, or new developments is therefore deterred from areas that are almost exclusively inhabited by the poor and are desperately in need of government aid.

An even more insidious aspect of this process is that it has the effect of concentrating poverty (which is usually associated with race) in these disinvested areas.



Those with economic power often relocate quickly when neighborhood decline is perceived. Those who are left behind are often those with the least influence and information on local policies, so it is easy to ignore them when resources are being distributed. Poverty and race are strongly related. There is also an entire sector of the U.S.'s increasingly service oriented economy that provides ameliorative services these populations, who are often at much greater risk for an array of social problems and health and psychological disorders due to their environments (Stokols, 1992; Shinn & Toohey, 2003). McKnight (1995) argues that these services are increasingly impersonal, that they are designed to reemphasize the power differentials between recipient and professional, and that a prominent "service" that is provided to these disinvested communities is the criminal justice system.

All of this geographic movement of capital and development leads to an enormous amount of economic activity that would not take place in cities or towns that have been much more consistent over the years. The task of maintaining the urban areas that already exist is not nearly as profitable as placing improvements and developments for hundreds of miles along every highway around them. Then, the eventually necessary act of demolishing condemned buildings or "renewing" blighted areas also comes with a price tag. Understandably, then, there are many who are economically dependent on this highly wasteful system. Although a glaring misuse of public money, it is strongly supported by those who it has made powerful.

This spiraling trajectory of reinforcing causes and effects may have initially been based on very logical ideas. The idea of promoting home ownership was one. The beautification of cities was another. Freedom of movement across large areas was another. At some point, however, these ideals became illogically inflated and took on a life of their own. Sprawl, which was highlighted as development that favors individual concerns over those of the collective, is the unappealing manifestation of a path dependent process that is giving multiple indications of having gone too far.

The most striking examples of sprawl seem to be in areas with enormous recent growth where there had been little development in the pre-sprawl era. With no strong city center to anchor its growth, sprawl engulfs a region until place and boundaries are difficult to discern. This is the case in the Northern Colorado Front Range. The small cities of Fort Collins, Greeley, and Loveland have grown rapidly outward until

development has connected them to each other. It is in this context that residents are asking if sprawl is to blame for their various affordable housing crises. This case study is a collection of demographic, cartographic, and social analyses of data on the factors associated with sprawl. Before addressing the case study directly, though, the next chapter reviews the literature on the effects of sprawl.

While there have been many claims about the effects of sprawl, some are more substantiated than others. Difficulties in defining a concept make measuring its effects more difficult still.

## CHAPTER III

### EFFECTS OF SPRAWL

#### **General Effects of Sprawl**

The last chapter addressed popularly held beliefs about sprawl and its causation, attempts to quantify and define sprawl as a phenomenon, and reviewed the scientific literature on the forces that drive or are associated with sprawl. This chapter looks at papers that have tried to draw a causal link or correlation between sprawl and other phenomena.

“Sprawl bothers me, not only because of the way it eats up the farmland, but also because it consumes so much time that could be spent with the family (pg 9)”. This quote is part of a report on regional sprawl published by the Chester County (PA) Community Foundation (Keene & Mohr, 2003). The report combines qualitative data from residents with broad analysis and proposals for action. Although many quotes point to the reasons why the residents moved to the suburbs to begin with, a constant theme is a growing discontent with the effects of sprawl. “[New people moving to the suburbs] also want to close the gates as soon as they arrive, not let anyone else in. Their use of the word “sprawl” is to fight against others doing what they have done (pg. 12).” “Community is a valuable commodity (pg. 44).”

While much of the concern over sprawl has been focused on the nation’s larger metropolises, there have often been inordinate effects on the smaller towns and cities. These areas in which sprawl is not focused around an old city center are increasingly common.

It is easy to see the conflicting desires of the residents in Chester County and elsewhere. The desire exists to be surrounded by nature and its beauty, but the process of millions of people simultaneously moving there at once has caused severe disruption and chaos. From a public health perspective, it has been a disaster because of air pollution and the associated breathing disorders (Gersch & Congdon, 1999). Also, studies have linked sprawling metropolitan regions to driving and pedestrian fatalities (Ewing, Schieber, & Zegeer, 2003).

Some point out that proponents and critics of sprawl often differ politically and with respect to their desires concerning diversity (Keene & Mohr, 2003). An example of this politically charged element of sprawl is David Brooks' (2004) article, "Our sprawling, supersize utopia" for the *New York Times Magazine*. A conservative, Brooks writes, "in the age of the great dispersal, it becomes much easier to search out and congregate with people who are basically like yourself (pg. 48). His descriptions of suburbia are part of an overall vision of America that contends that things are getting better, naturally, even as we sprawl. "Crime rates drop, teen pregnancy declines, teen-suicide rates fall, along with divorce rates" (pg. 50).

Brooks' article admits, however, "suburban America is a bourgeois place" (pg. 51), and that "the philosopher George Santayana once suggested that Americans don't solve problems, we just leave them behind" (pg. 49). Thus, while some Americans are free to enjoy "living in the cultural shadow of golf" (pg. 49), many others are in the disinvested areas that sprawl has left behind. Still others, like some of the residents of Northern Colorado, find themselves precariously in the intended path of sprawl. And many more, like the residents that make up the community organization and the residents of Chester County, PA, dislike sprawl and suspect that it is playing a role in lowering their collective quality of life. Thus, while many studies about the effects of sprawl have focused on environmental, aesthetic, and cultural effects, less have looked at the impact on those who are not able to buy the new suburban homes that are springing up across the country. The next section looks specifically at the literature on sprawl's effects on low-income residents.

### **Effects on Low Income Residents**

Typically, lower income residents are left behind or pushed around by sprawl. This is one way that sprawl reflects the power imbalances in society. Those with the lowest incomes often remain in the central city areas that receive no public investment since the outer suburbs require enormous infrastructural financing. Atlanta's regional sprawl is an excellent example of this. "The 1970's brought harsh economic realities to these [Atlanta's] inner city neighborhoods: blue-collar jobs disappeared, real wages fell, and people sought lower-paying service jobs. With limited resources to invest in upkeep, the housing stock fell into obsolescence and disrepair" (Stewart, 1999, pg. 137).

Much of this inner city depression had to do with money and influence fleeing to the outer regions of cities.

This is an insidious aspect of sprawl. Sprawl must be financed by public development of infrastructure (sewers, electrical, plumbing, roads). Much of this money is collected from inner city residents that receive none of the benefits as sprawl continues to leap-frog farther and farther from the city center. Panfichi (2002) shows the opposite pattern in Latin America where a ring of concentrated poverty tends to surround central cities in the form of shantytowns. This is sometimes referred to as the “ring of suffering”. In either case, the concentration of powerless individuals and disorganized communities has had negative effects on the overall health of the community.

As sprawl progresses, the property developers that have learned how to benefit from this pattern of development have sophisticated methods of making profits. Speculative investors will track the government’s development of infrastructure in an effort to predict where sprawl will spread geographically. In some cases, these developers will buy land in large chunks in what they hope will be the path of sprawl. They will then hold the land until it appreciates and either sell it to developers or develop it themselves. Many of these developers are powerful in local governments and have the ability to influence government decisions about future infrastructural development. Some broker deals by which public dollars finance much of the development in the interest of the economic growth of the region.

Some hapless residents that have been caught in the path of sprawl have experienced enormous price pressure in regions that were formerly affordable. This process, while relatively undocumented, is similar in nature to gentrification (Kennedy & Leonard, 2001), in that it places unexpected demands on long-term residents of a community as the area increases in value. This phenomenon of displacement will be explored in much greater detail in a later chapter.

Additionally, there have been suggestions of increased costs of living outside of the cost of rent or home ownership. The need to maintain a vehicle in an automobile dependent area is not the least of these. It costs around \$6000 a year to own and operate most cars (Gersch, & Congdon, 1999). If sprawl displaces low-income residents and requires them to purchase a car in order to commute, either to their job in the

central city or the grocery store and the jobs that are increasingly exclusively located in suburbs, then this is a hidden cost of sprawl to low-income residents.

### **Conclusions**

It is not difficult to see why Kiefer (2003), in a review of the sprawl literature in *Harvard Design Magazine*, states “the reader strains to draw firm conclusions from this bewildering variety of viewpoints on sprawl (pg. 4)”. His conclusions, ultimately, join the chorus of those who are convinced that sprawl, on the whole has many more negative effects than positive ones. “In our continual, poignant quest to achieve a pastoral ideal based on privacy, economic security, and mobility, we have converted concentric borderlands into the thing they once bordered, with mounting secondary consequences, and it is not clear that we have yet reached a turning point (pg. 4)”.

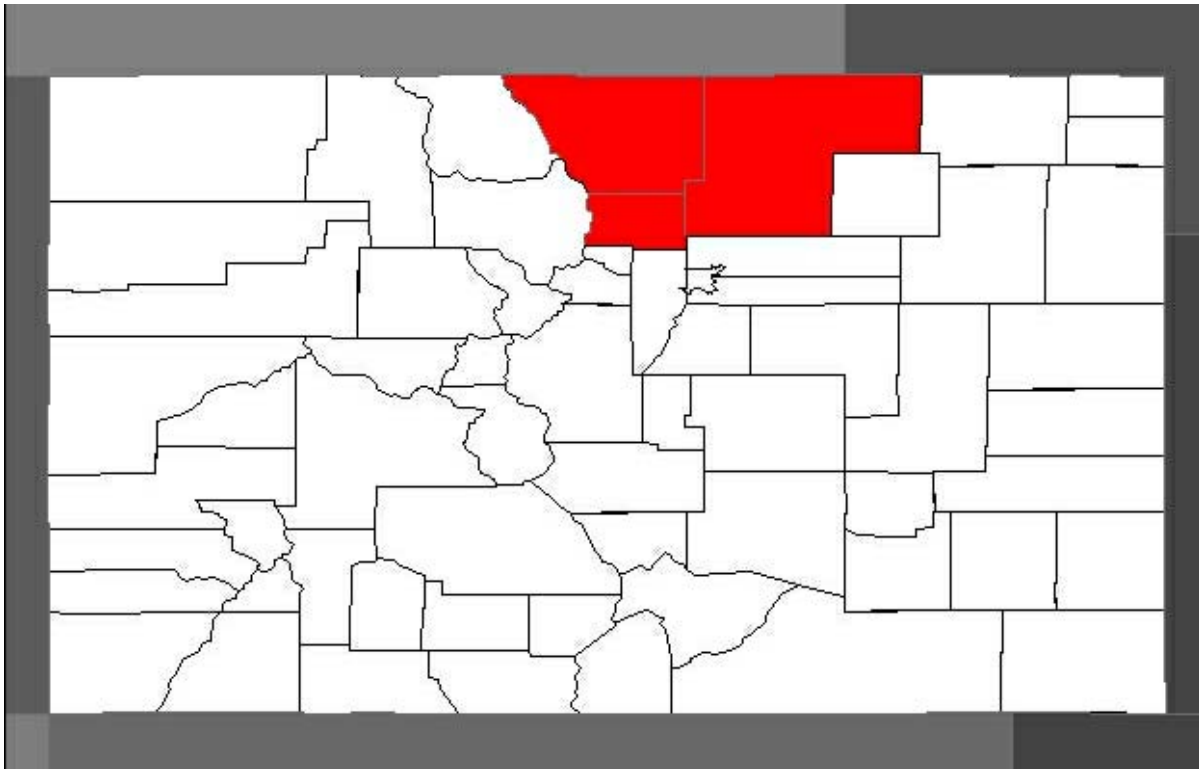
After looking at the literature, it is possible to make some general statements about sprawl. Sprawl is difficult to define or measure. It is slow moving, and has lagging and complicated effects. It differs from one area to another, particularly according to the size of the cities or regions that are sprawling. It increasingly tends to be viewed negatively, but there does not seem to currently be enough public outrage to dramatically alter the development patterns and policies that fuel it. It probably has stronger negative effects, in the end, on those who are unable to afford its more luxurious elements. It is with these understandings that we now turn to the specific case study of Northern Colorado.

## CHAPTER IV

### THE NORTHERN COLORADO FRONT RANGE

#### Introduction

The area of concern for this project is a three county area in the central, northern part of the state of Colorado. The three counties are Weld County, Larimer County, and Boulder County (Figure 1). The three largest cities in the region, Boulder, Ft. Collins, and Greeley are all small cities that rely on Denver, to the south, as a regional hub.



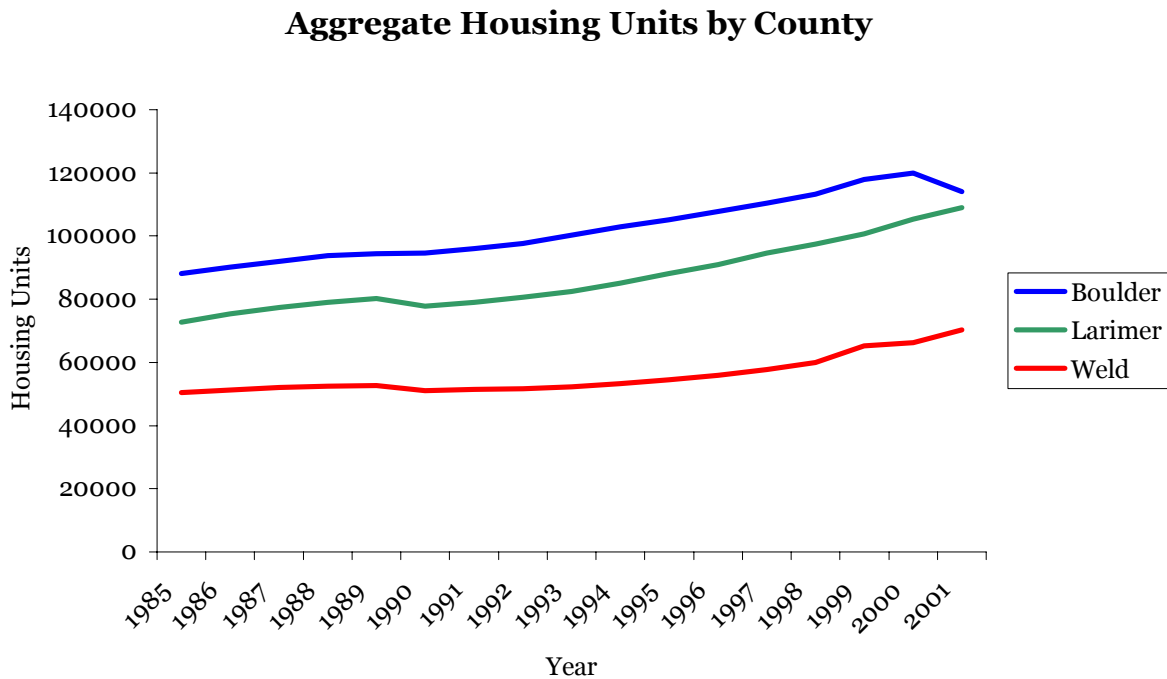
**Figure 1. The Northern Colorado Front Range: The white area is the state of Colorado, Divisions are counties: (from left to right) Larimer, Boulder, & Weld Counties.**

The community organization, Congregations Building Community, is active in organizing within these three counties. This is the primary rationale for adopting the

three county area for the study. As the third fastest growing state in the U.S., Colorado is faced with pressures resultant from quick growth, including the problem of urban sprawl in its major city of Denver, and regional sprawl in areas like the Northern Front Range. As the last chapter explained, the processes involved in sprawl and the phenomena associated with it are both multidimensional and multilevel. For this reason, this chapter begins looking at some of the data associated with sprawl at the level of the county. Analyses in subsequent chapters will analyze data that are disaggregated to different geographic levels of analysis.

### Population and Housing Trends

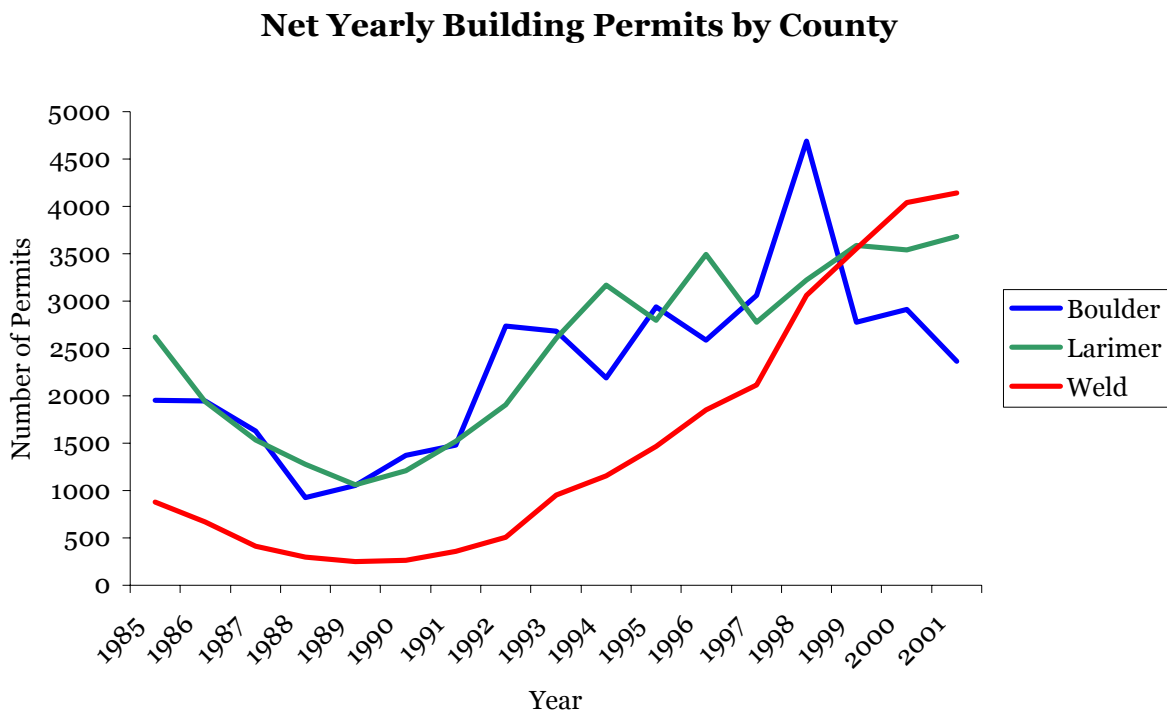
These representations of data on the Northern Colorado Front Range population and housing trends help to contextualize the theory from the preceding chapters and the analyses that follow. The emphasis is on an overarching understanding of the region and its development issues. The number of housing units over time shows the rate at which these counties are growing and developing (Figure 2).



**Figure 2. Aggregate Number of Housing Units by County (Data compiled by the Colorado Demography Section, 2000).**



Another measure of how quickly the Northern Front Range is growing is the number of building permits that were issued in each year. This way of viewing the data isolates the amount of new housing that is being constructed. It is important to note in the interpretation of this figure (Figure 3) that even in years in which there are relatively low numbers of building permits issued, this still represents an addition of housing units to the net housing stock of the county. Thus, a downward slope is not an actual decline in housing units.

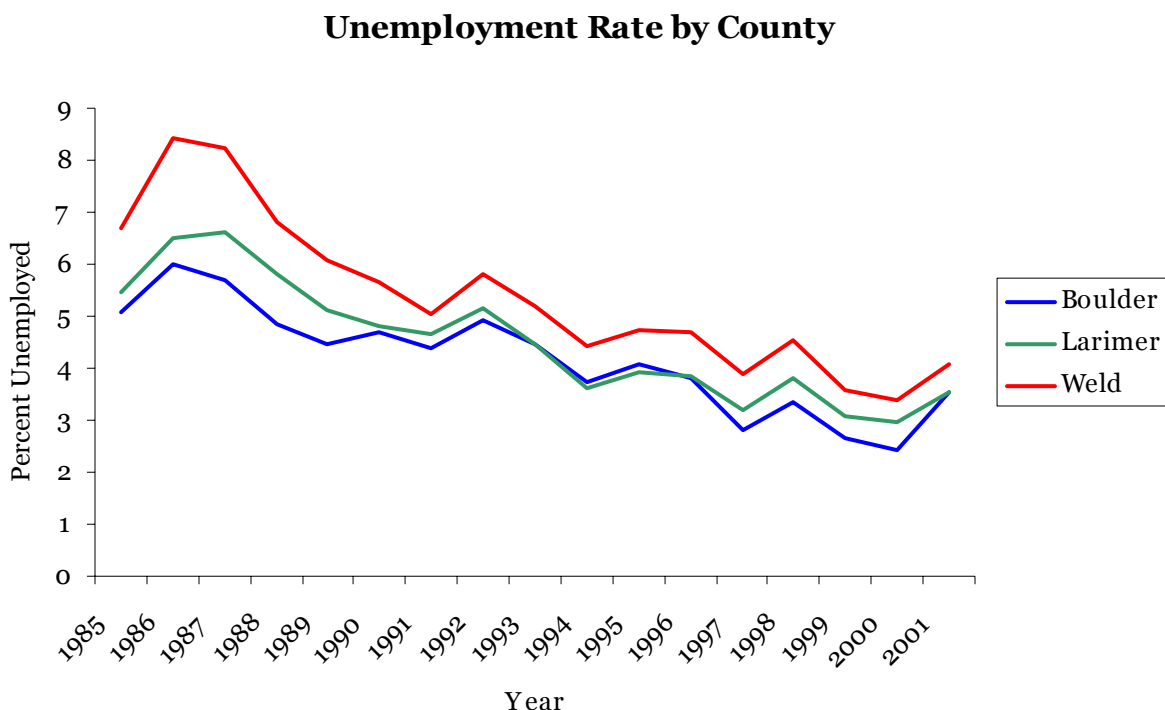


**Figure 3. Net Yearly Building Permits by County (Data compiled by the Colorado Demography Section, 2000).**

Much of the growth in the region, particularly in cities like Fort Collins and Boulder is tied to the service economy and the technological industry. It makes sense, then, to see population and housing trends that are strongly associated with economic factors. Noting that declines in net building permits (Figure 3) occurred in around 1989 and 2001, when the economy experienced recession, it stands to reason that these

declines were associated with economic factors. The regional economy in the Northern Front Range has grown dramatically over the time period from 1985 to present.

The unemployment rate is typically considered to be a strong indicator of the health of the economy. Looking at the unemployment rate by county over the same time period (Figure 4), it is noteworthy that as population has increased, there has been a significant decrease in the percent of the population that is unemployed, indicating a tremendous growth in jobs.

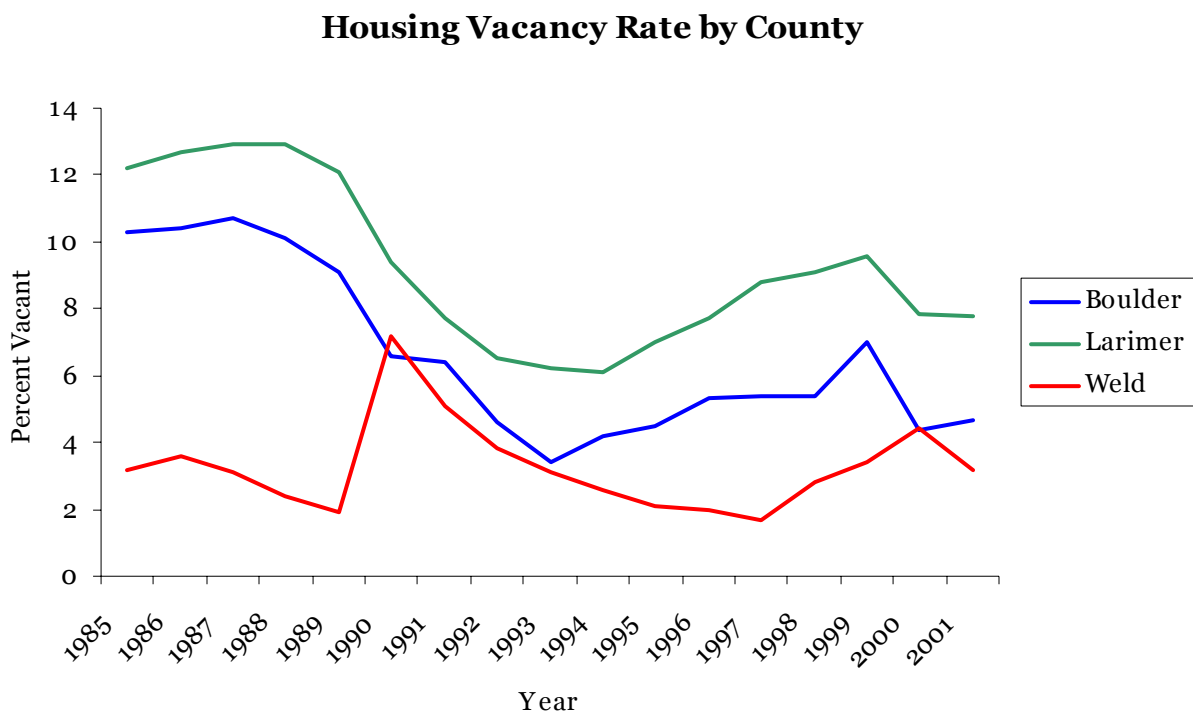


**Figure 4. Unemployment Rate by County (Data compiled by the Colorado Demography Section, 2000).**

Interestingly, this graph (Figure 4) shows a trend for Unemployment nearly opposite to the trend seen in Net Building Permits (Figure 3). The county with the highest unemployment rate (Weld) is also the county with least building permits. The surges in unemployment have slightly preceded the downturns in the number of

building permits that have been issued. This apparent association serves to illustrate the strong relationship between economic factors and housing and population trends.

Another factor that influences an understanding of the region's housing trends is the number of vacant housing units. Since the region is certainly experiencing a rapid increase in the amount of available housing, the vacancy rate can help to show when the supply outpaced the growths in demand (Figure 5).



**Figure 5. Housing Vacancy Rate by County (Data compiled by the Colorado Demography Section, 2000).**

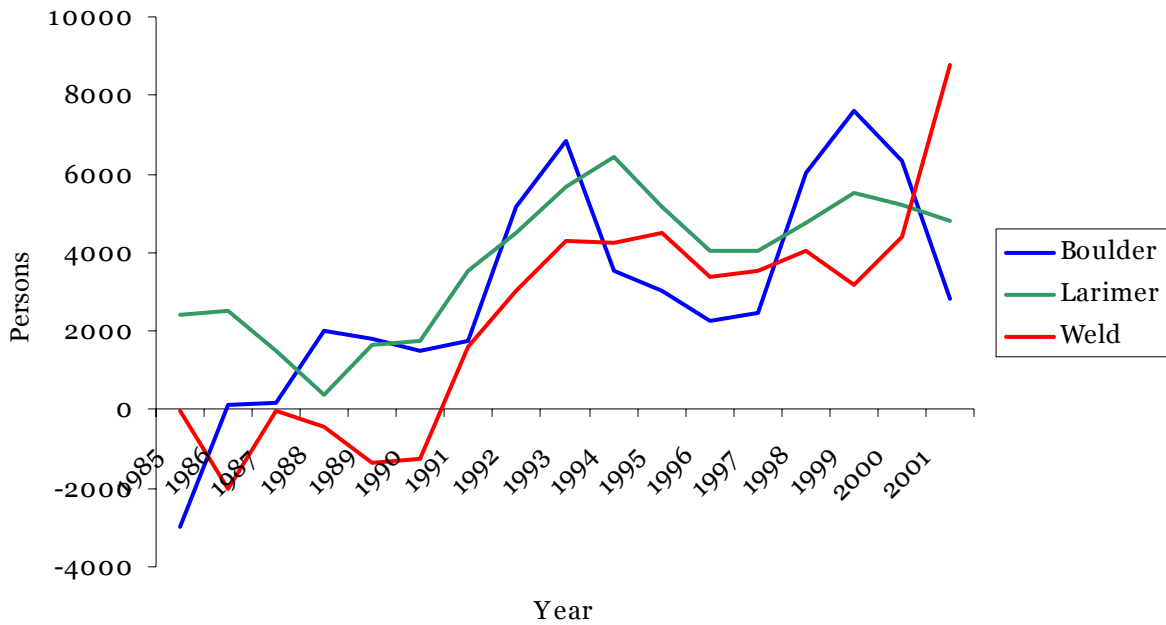
The housing vacancy rate (Figure 5) has either stayed relatively low (in Weld County) or has experienced a net decrease since 1985 (in Larimer and Boulder). This Figure (5) and the three preceding it (2,3, & 4) have all shown strong similarities between Boulder and Larimer Counties, and some difference in Weld County, which is

the least populous of the three. This suggests that Larimer and Boulder County are more similar or interrelated in terms of housing and population.

Weld's difference is apparent in other measures, as well. For instance, data from the Home Mortgage Disclosure Act (HMDA) (n.d.) shows that Weld has a much higher rate of owner occupied housing units (65.6%) than Boulder or Larimer (61.9% and 62.4%, respectively). All three counties have a higher rate of owner occupancy than the state of Colorado's average of 61.7%. Another factor that distinguishes the region's housing from much of the state is a relatively low percentage of seasonal-use housing. Colorado has high percentages of seasonal-use housing (for instance, Mineral County's housing is over 60% seasonal), however, the rate of seasonal-use in Boulder, Larimer, and Weld counties is 1.7%, 4.6%, and 0.3% (HMDA, n.d.). Again, we see that Weld County is distinguished from the two counties that are closer to the mountain range.

Perhaps the best indicator of the rapidity of the change that has taken place in housing and population trends in the region is the measure of net migration. This is the population growth rate with the naturally occurring population changes subtracted (births and deaths). What is left, then, is simply the number of people that moved into the county minus the number of people that moved out. This measure of migration will be used frequently in the chapters that follow. Looking at Figure 6, note that in the late 1980's more people were leaving the Northern Colorado Front Range than deciding to move there. This trend steadily reversed throughout the 1990's and continues to increase into the 21<sup>st</sup> century (although with substantial variation from county to county and year to year).

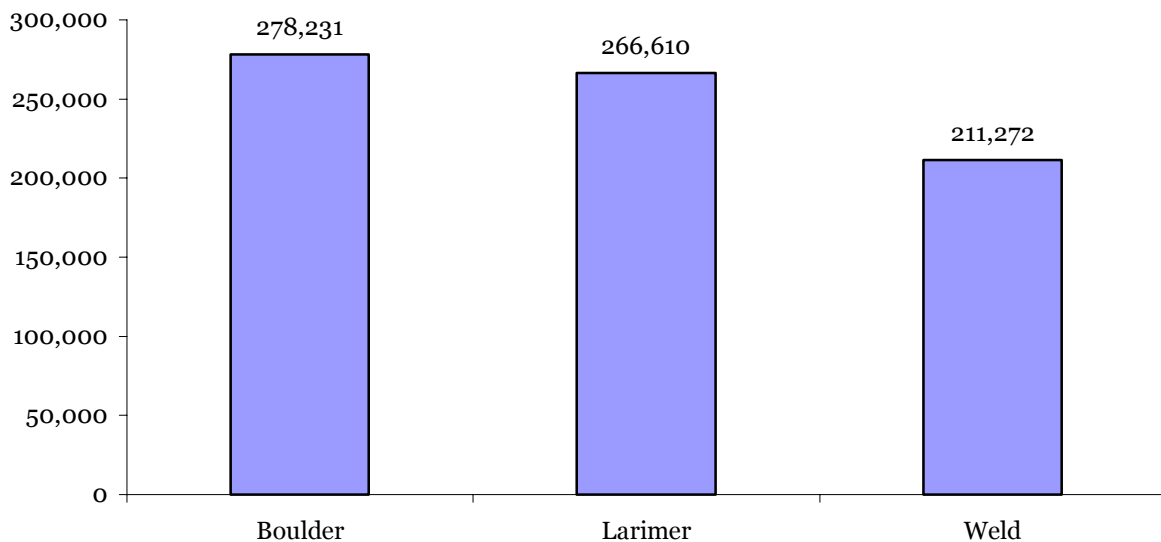
### Net Migration by County



**Figure 6. Net Migration by County (Data compiled by the Colorado demography section, 2000).**

Despite all this migration and overall population and housing growth, the total population estimate for the three county area is still under 400,000 (U.S. Census Bureau, 2000). Though it is the smallest, Boulder County is the most populous in the area, followed by Larimer and then Weld (Figure 7).

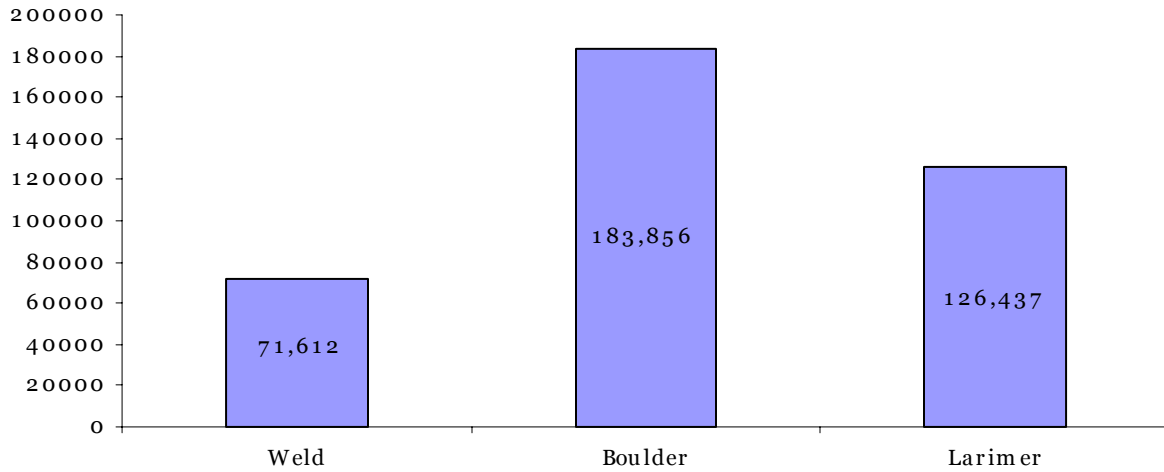
### Population of Northern Front Range Counties



**Figure 7. Population of Counties in the Northern Colorado Front Range (U.S. Census Bureau, 2003a).**

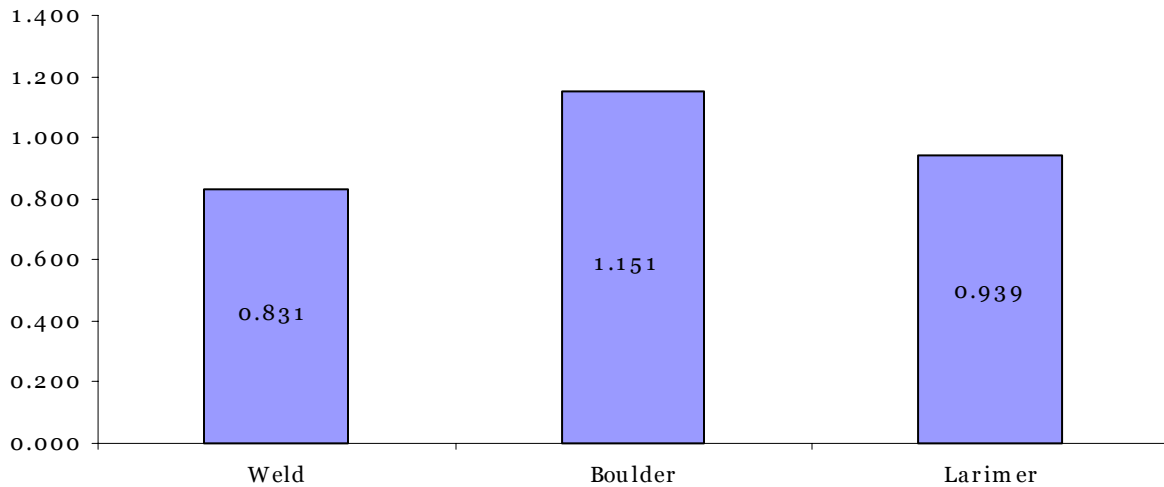
Boulder County, specifically, is known for its high cost of living and economic vibrancy. The city of Boulder (the major population center within the county) is radical in terms of urban planning and has an established “urban growth boundary” that is designed to counteract suburban sprawl. Urban growth boundaries, however, are less effective when instituted by a single municipality within a larger sprawling region. Some, like Calthorpe & Fulton (2001), have argued that a broader, regional approach is necessary to achieve the desired results in cases such as these. As it stands, the growth boundary is controversial because of the rises in the price of housing in the area to which it has allegedly contributed. Undoubtedly, though, other factors, such as the disproportionate number of jobs in Boulder County, have contributed to the high cost of living (see Figures 8 & 9).

### Number of Jobs in Counties



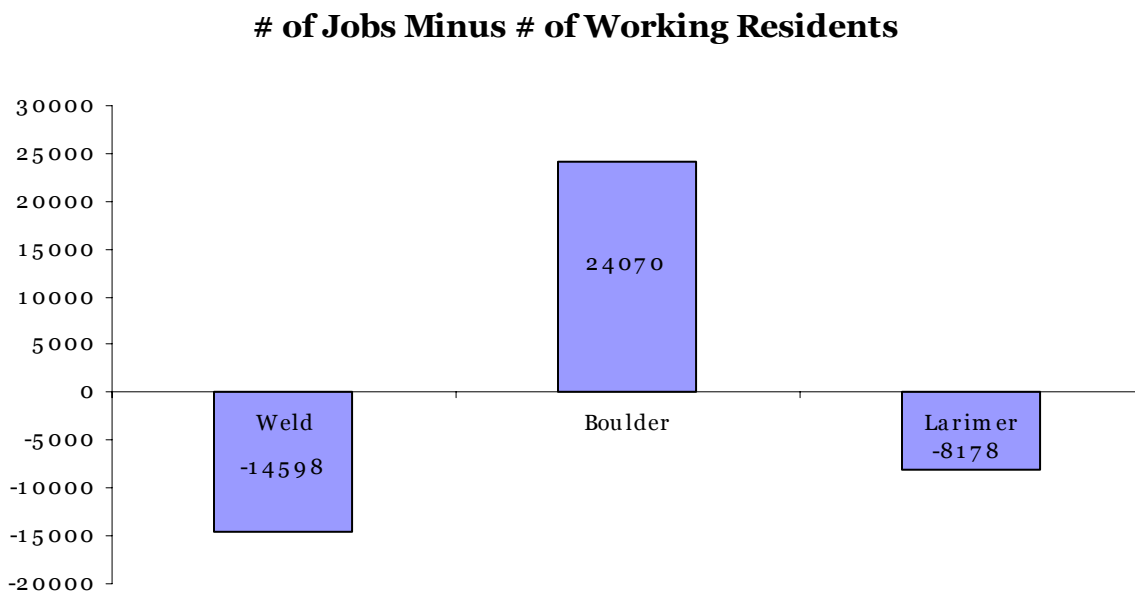
**Figure 8. Number of Jobs in Counties in the Northern Colorado Front Range (U.S. Census Bureau, 2000).**

### Ratio of Jobs to Working Residents



**Figure 9. Ratio of Jobs to Working Residents in Counties in the Northern Colorado Front Range (U.S. Census Bureau, 2000).**

The ratio of jobs to working residents is a good indicator of the self-sufficiency of the counties in the regional economy. Apparently, many who work in Boulder are living elsewhere, while more who live in Larimer and Weld are commuting to work in other counties. This has implications for our understanding of the regional economy and the development patterns that are leading to the concerns of many residents regarding the regional sprawl. To understand the actual number of workers and residents that are living or working in different counties, it is useful to display the data as the number of jobs minus the number of working residents by county (Figure 10).



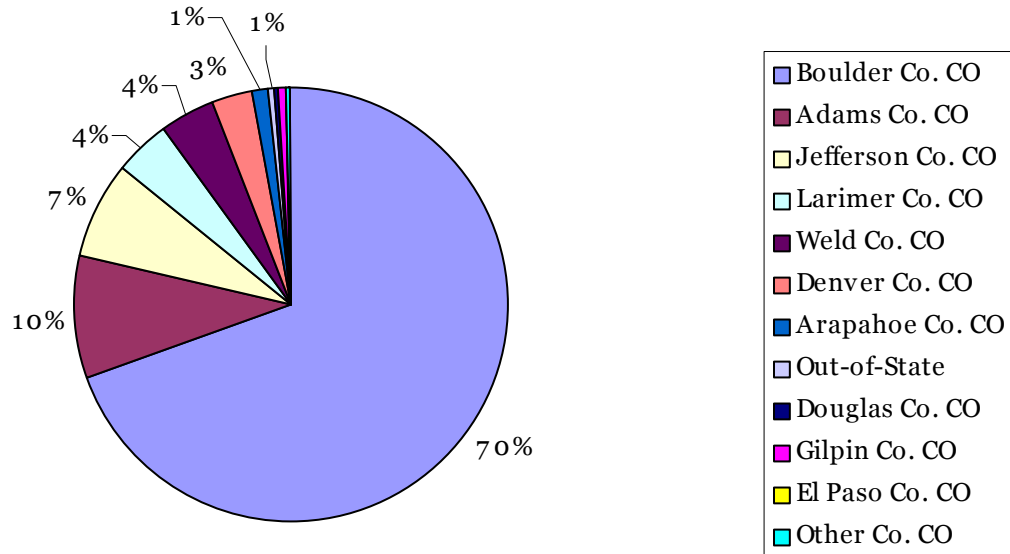
**Figure 10. Number of Jobs Minus Number of Working Residents in Counties in the Northern Colorado Front Range (U.S. Census Bureau, 2000).**

Noting that Weld and Larimer Counties have an undersupply of jobs (or an overabundance of residents), compared to Boulder County's surplus is helpful for understanding the figures that follow. Beginning with Boulder County (Figures 11 & 12), these figures display the places of residence of the county's workers, and the places or work of the county's residents. The end result is a fundamental understanding of the



regional economic (and traffic!) flows, and the interactions with other counties in neighboring regions.

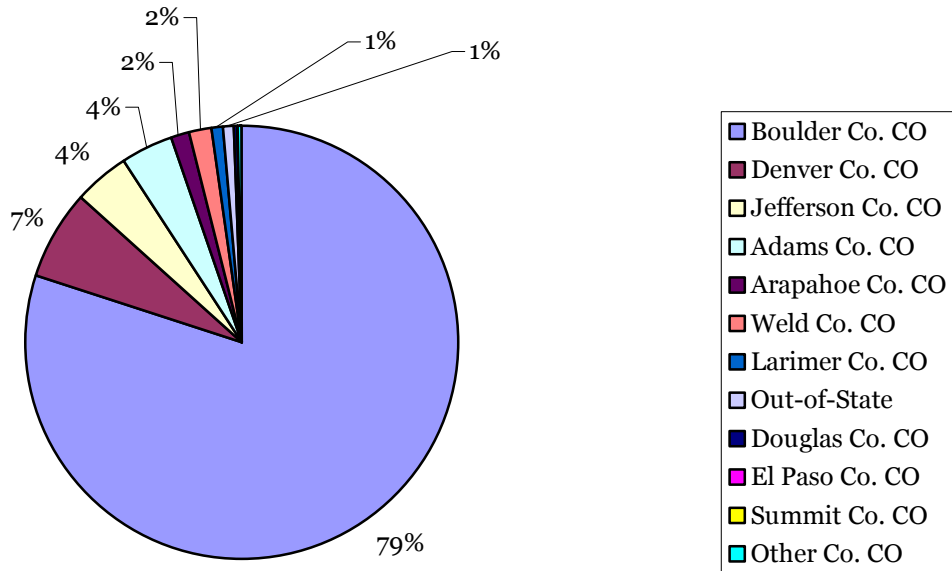
### Boulder County Workers' Places of Residence



**Figure 11. Boulder County Workers' Places of Residence (Data compiled by the Colorado demography section, 2000).**

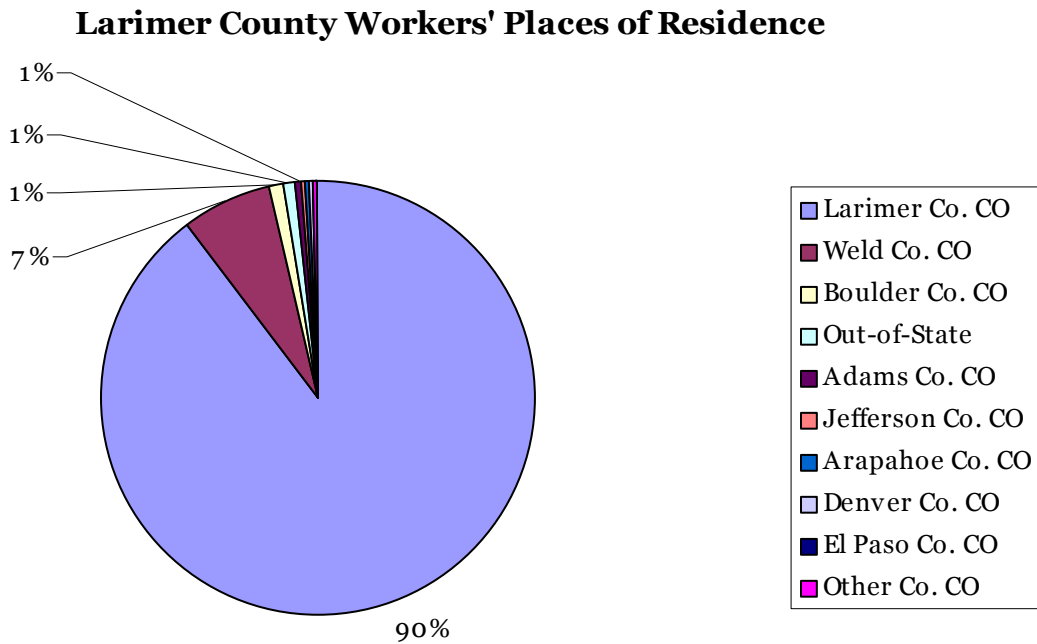
In Boulder County, only 70% of the workforce resides within the county (Figure 11). 17% commute from Adams County and Jefferson County, both of which share borders with Denver County. This is evidence that Boulder is definitely influenced by its proximity to Denver, and functions as a strong part of that metropolitan region. 8% of the Boulder workforce, however, is commuting from the other counties in the Northern Front Range, 4% from Larimer, and 4% from Weld.

### Boulder County Residents' Places of Work



**Figure 12. Boulder County Residents' Places of Work (data compiled by the Colorado demography section, 2000).**

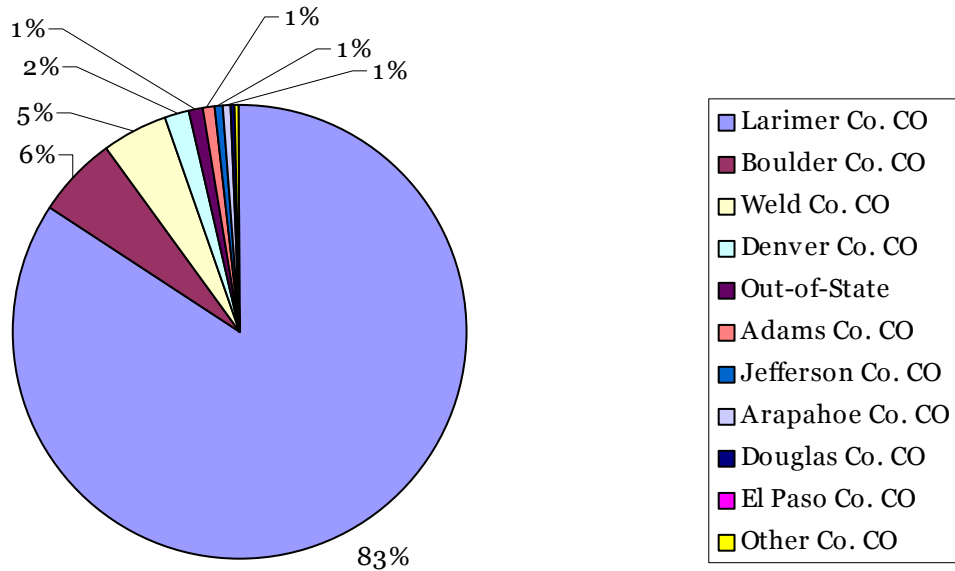
Due to its economic vitality, Boulder is able to employ a higher number of workers than it has residents. It may seem strange, then, that only 79% of resident workers have jobs within the county itself (see Figure 12). Stranger still is that the highest percentage of those who work outside the county do so in Arapahoe County, which is on the opposite side (southeast) of Denver County. This speaks more to the economic activity of that county than to anything related to Boulder County in particular. It is apparent from these data that Boulder is economically impacted more significantly by its proximity to the regional hub of Denver than it is by its association with the other two neighboring counties in the Front Range.



**Figure 13. Larimer County Workers' Places of Residence (data compiled by the Colorado demography section, 2004).**

Larimer County's workforce contrasts Boulder's strongly in that 90% of the workers live in Larimer County (Figure 13). A majority of the incoming commuters are from Weld County, followed by Boulder County.

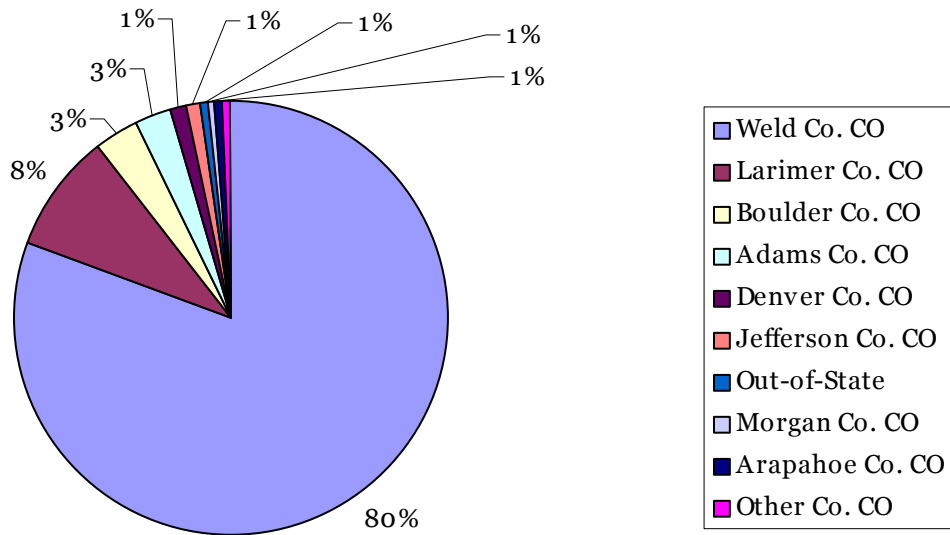
### Larimer County Residents' Places of Work



**Figure 14. Larimer County Residents' Places of Work (data compiled by the Colorado demography section, 2004).**

The undesirable possession of a higher number of residents than jobs leaves many Larimer county residents commuting to other counties for work. Figure 14 shows that despite Boulder County's strong ties to the Denver area, it is the largest employer of out-of-county commuting Larimer County residents. Weld County is close behind Boulder with 5% of Larimer County's working residents commuting there.

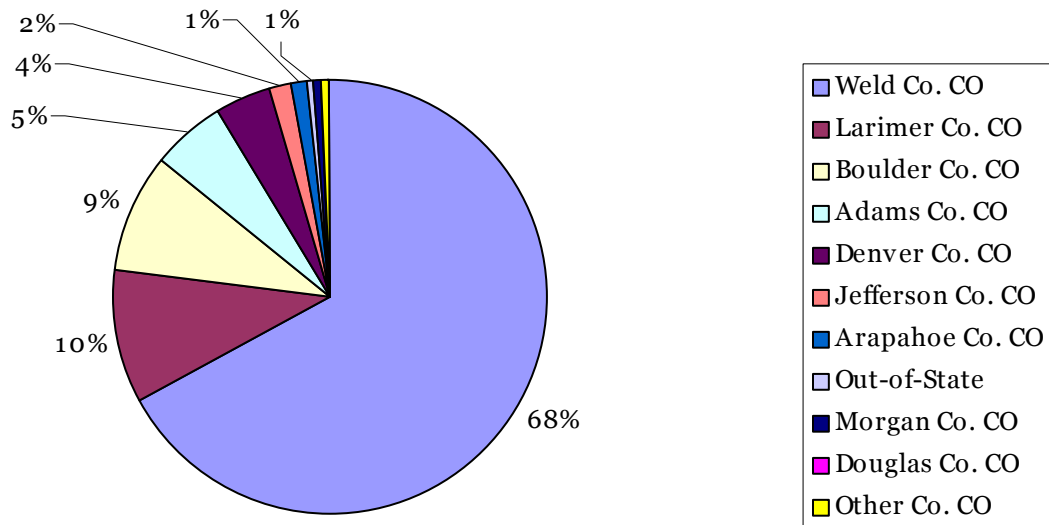
### Weld County Workers' Places of Residence



**Figure 15. Weld County Workers' Places of Residence (data compiled by the Colorado demography section, 2004).**

Following this demographic of Larimer County residents commuting to Weld County, Figure 15 shows that they make up the largest percentage (8%) of Weld County's commuters. Commuters from Boulder make up (3%), followed by commuters from counties in the Denver area, farther to the south. Figures 14 & 15 demonstrate that none of the three counties can be considered to be isolated from Denver. Boulder is strongly tied to Denver County and the surrounding Counties, and Larimer and Weld are also affected to lesser degrees.

### Weld County Residents' Places of Work



**Figure 16. Weld County Residents' Places of Work (data compiled by the Colorado demography section, 2004).**

Weld County, as can be seen in Figure 16, has the highest percentage of resident commuters. 19% of Weld County residents work in one of the other two counties in the Northern Front Range. This is interesting, given that by some indicators, the Greeley MSA (Weld County) “sprawls” much less than other MSAs in the state (as measured by population density/change; Fulton, Pendall, Nguyen, & Harrison, 2001). While Greeley MSA residents may live on less land, they are often the working poor commuting to other counties that have more expensive, sprawling residential areas and better ratios of jobs to residents. At least 12% more commute to the Denver metropolitan area.

All of these displays of data, taken together, show a region with several small cities and a population that is willing to live in one place and work in another (or does so because of economic necessity). The region has only minimal public transportation services, indicating that automobile travel must be the dominant method of transportation over the long distances from home to work and back. These broad

analyses alone suggest that this is a highly interconnected and quickly growing and sprawling region.

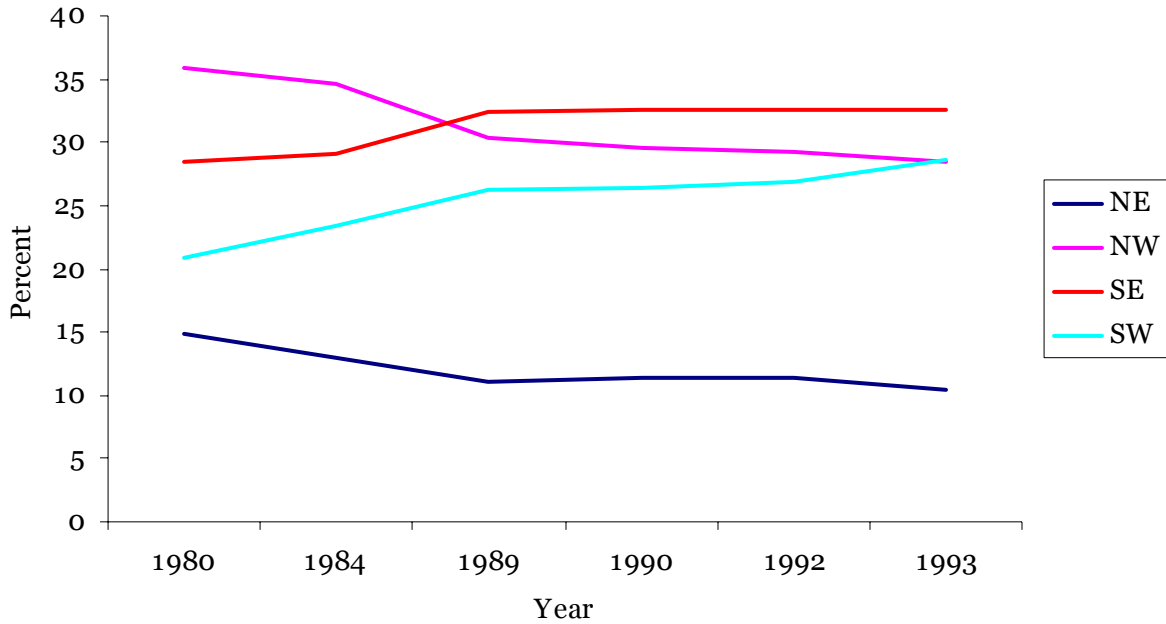
Most reports from economic and population forecasters predict that the Northern Colorado Front Range will continue to grow at least as fast as it has over the past decade. In fact, even though Colorado is projected to add a million residents over the decade from 2000-2010, Larimer and Weld Counties are expected to grow at a faster rate than the state average, increasing their share of the state's population and job market. Due to the continued growth pressure that this will exert, housing prices are expected to continue to increase in a way that will continue to make Northern Colorado one of the least affordable areas in the United States.

According to the Colorado Sprawl Action Center (2001a), Greeley (in Weld County) and Fort Collins (in Larimer County) are the top two Front Range communities in terms of projected growth over the next 20 years (70% and 60%) respectively. Larimer County has case examples in both of the publications from that group in 2001: the *Sprawl of Shame* (Colorado Sprawl Action Center, 2001b) and the *Smart Growth Hall of Fame* (Colorado Sprawl Action Center, 2001a).

The "Larimer County Rural Land Use Process" is commended and the "McWhinney at Berthoud" development is criticized, along with the "I-25 Corridor Plan". The fact that the same county government could be responsible for both positive and negative exemplars of sprawl seems surprising. In reality, it lends support to those that claim that private interests dominate development and governments are forced to be more opportunistic with their decisions.

The I-25 Corridor and the Ft. Collins Loveland metropolitan area are, in fact, often singled out in case studies of sprawl. The two relatively small cities are being overwhelmed by eastward growth toward the interstate that comes up from Denver. Looking at Figure 17, it is apparent that there has been a long, slow shift of place of residence to the southeast (toward Denver and the interstate).

### Percent of Households in Larimer County by Geographic area

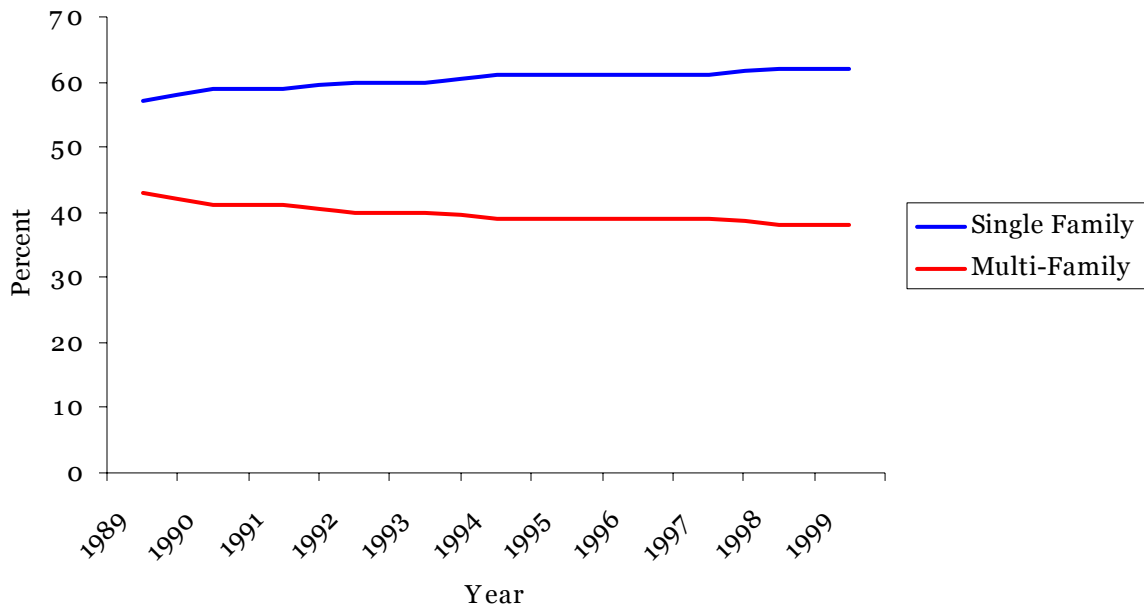


**Figure 17. Percent of Households in Larimer County by Geographic Area (Larimer County, 2004).**

The shift in location of housing in Larimer County has been accompanied by a shift in the type of housing. An increasing percentage of the housing units are single-family units, meaning that they are detached homes on individual plots of land (see Figure 18). This means that they consume more land, require large-scale infrastructural development, place greater demands on transportation systems, and are less energy efficient – while offering a greater degree of privacy and autonomy for families that can afford them.



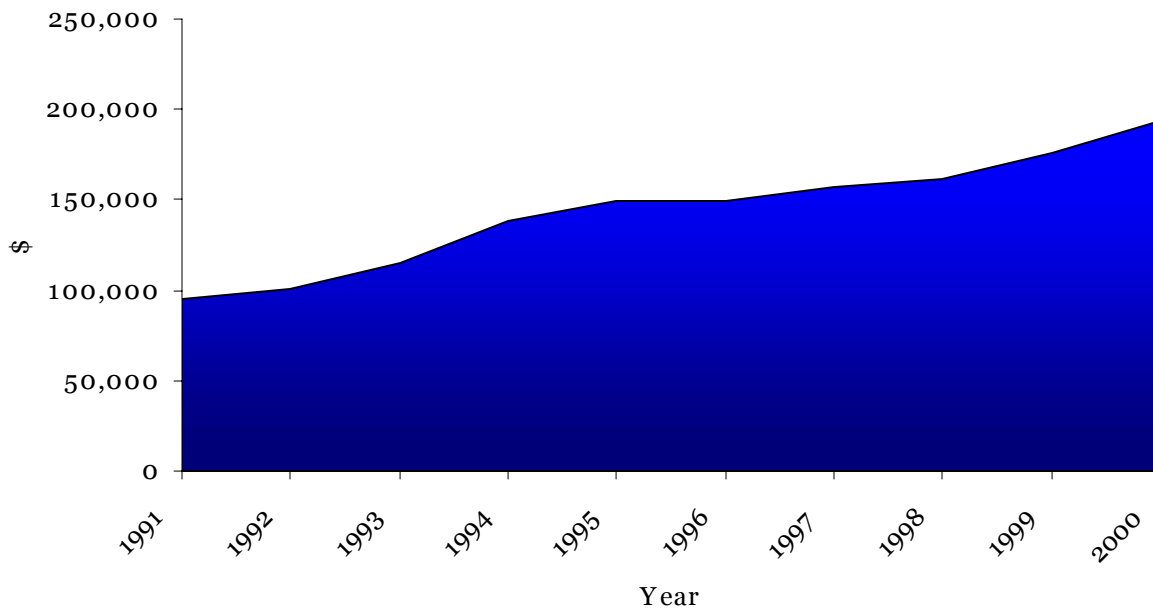
### Percent of Housing by Type in Larimer County



**Figure 18. Percent of Housing Units by Type in Larimer County (Larimer County, 2004).**

Continuing with the example of Larimer County, we can see the dramatic increase in price that has accompanied the changes in housing type and location (Figure 19).

### Average Sale Price of Homes in Fort Collins



**Figure 19. Average sale price of Homes in Fort Collins by Year (Larimer County, 2004).**

According to the Sierra Club – Poudre Canyon Group’s (2000) detailed report *Sprawl Costs Us All*, “housing costs have increased significantly, [but] wages have not kept pace” (pg. 7). Citing several independent research groups, the report shows that various methodologies (that take income and housing costs into account) rank the Greeley (Weld County) and Ft. Collins-Loveland (Larimer County) areas as among the least affordable – and increasingly so.

The Sierra Club’s report shows that population growth pressures and poorly planned development are causing multiple problems for the area besides housing affordability. Citing a survey conducted by the State of Colorado, *Colorado Looks at Growth* (1995), the report shows that citizen concerns regarding sprawl are widespread. In fact, “growth” was the number one concern of the surveyed citizens, with 34% reporting that concern. Crime was the second most frequently reported, at 16% (State of Colorado, 1995).

Among the impacts of sprawl in the region, the report lists loss of affordable housing, government fiscal crises, water supply crises, destruction of natural/rural areas, decreasing land availability for agriculture, and poor air quality. While somewhat typical, these arguments are made with the support of data and case studies from the Northern Colorado Front Range. The next chapter presents the results of a group of analyses that will contribute to understanding spatial and demographic elements of these phenomena.

## **CHAPTER V**

### **MAPPING SPRAWL'S COMPONENTS**

#### **Introduction**

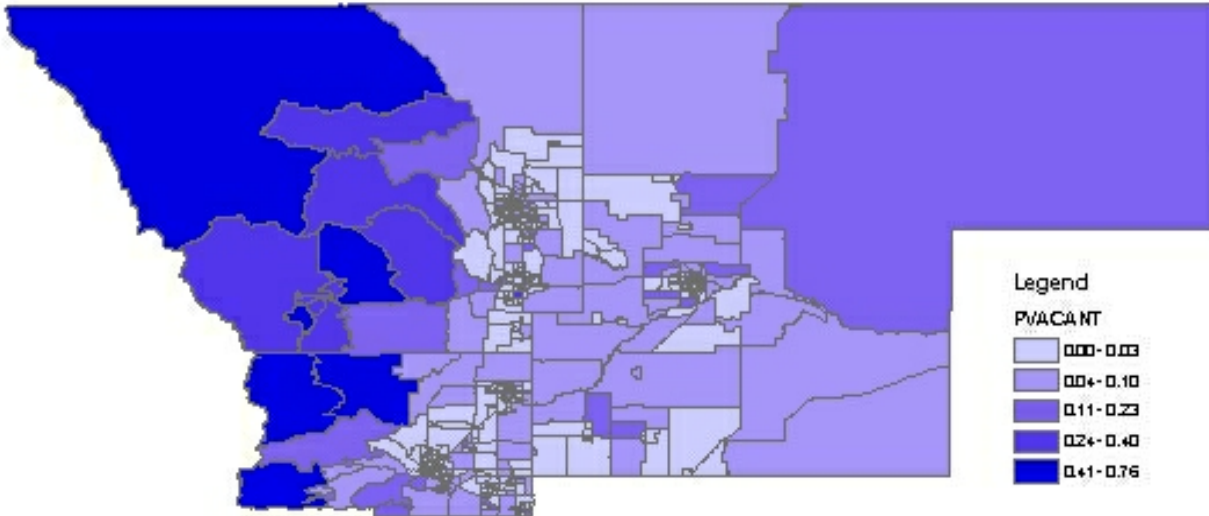
The literature review in Chapter II looked at the ways that sprawl has been defined. There was no consistent definition or way of measuring sprawl that could be found. There were, however, a number of traits and phenomena associated with sprawl that were frequently mentioned. There was also the sense that sprawl necessarily differs across regions and specific municipalities. The analysis of housing and population trends in the Northern Colorado Front Range in the last chapter reinforced this location-specific conceptualization of regional sprawl by pointing out some of the peculiarities of this particular region. This case study approach is preserved through the rest of this report.

This chapter presents analyses, first, of the region as a whole and its associations with sprawl. Then, an attempt to locate the areas that are most sprawling or contain features that are often associated with sprawling development is made. These areas are compared to the rest of the region statistically across several variables that are often attributed to or associated with sprawl in the literature or in popular culture. Across the literature from various disciplines that has been reviewed for this thesis, there is no comparable example of identifying small geographic units within a small region for associations with sprawl.

#### **Indicators of Association With Regional Sprawl**

Geographic software and disaggregated data (at the census block group level) provide the ability to visualize and analyze the variables of interest in more complex ways. For instance, in Chapter IV, we compared the vacant housing rates over time in the three Colorado counties in the Northern Front Range. Taking the number of housing vacancies per census block group and adjusting the number for the population of each case gives the percent vacant for each block group, which can then be mapped using Geographic software (see Figure 20).

### Percent Vacant by Census Block Group

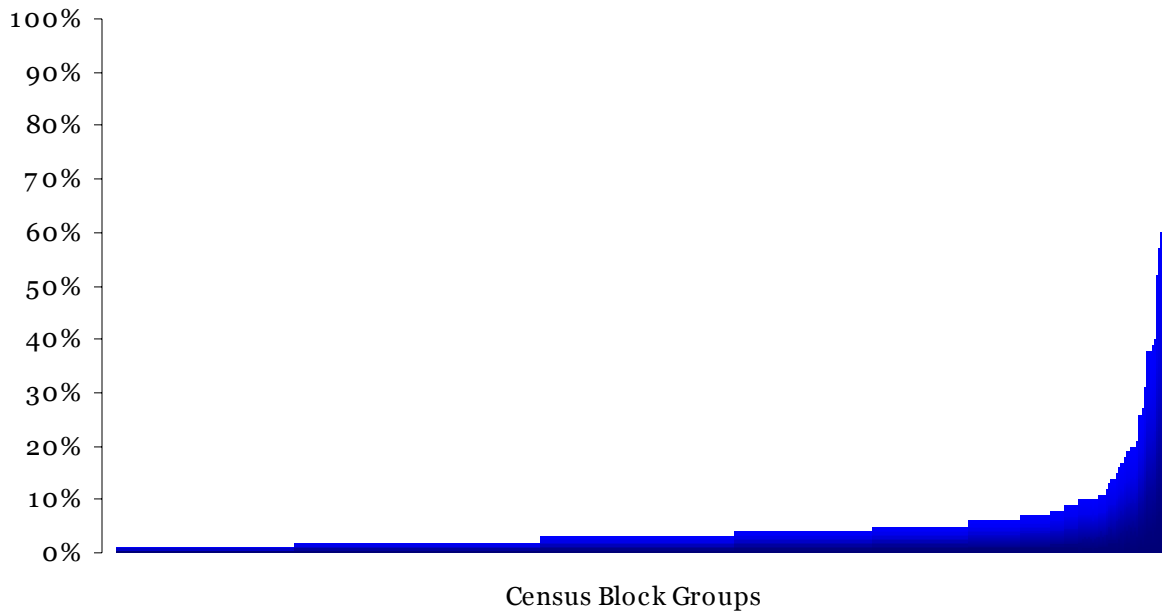


**Figure 20. Percent of Housing that is Vacant by Block Group (Tri-County) (U.S. Census Bureau, 2000).**

In a tri-county map such as this one, the clusters of census block groups represent the more densely populated areas. Looking at figure 20, then, one can distinguish the locations (going Northward) of Boulder, Longmont, Loveland, and Ft. Collins. Greeley is directly to the East of Loveland.

Another way to view this information is to sort and graph variables such as this one. Figure 21 displays the percentage of vacant housing in each census block group in the tri-county area (n=505).

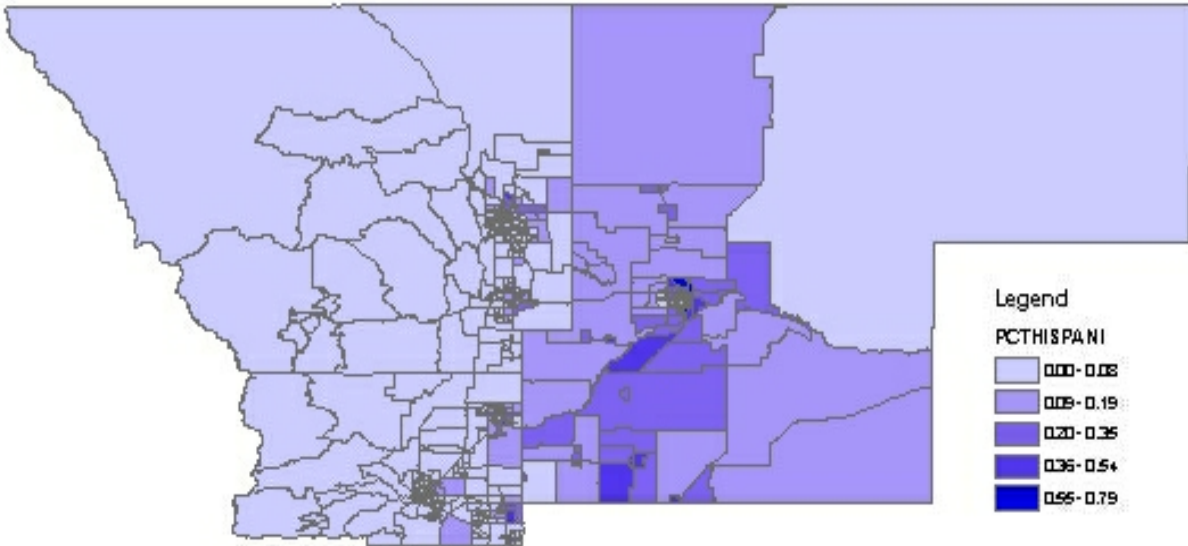
### Percent of 2000 Housing Vacant (Tri-County)



**Figure 21. Percent of Housing Vacant by Block Group (Tri-County) (U.S. Census Bureau, 2000).**

The slope and the curve of the line in Figure 20 are indicative of an extremely unequal distribution. In these three counties, a minority of the census block groups contains a majority of the majority of the housing vacancies. Similar curves result on variables of race in highly racially segregated cities or regions, or income in highly income segregated cities or regions. As documented in Chapter II, segregation by race and income are sometimes identified as being associated with sprawl. The next several figures consist of analyses of race and income by census block group, graphically and geographically.

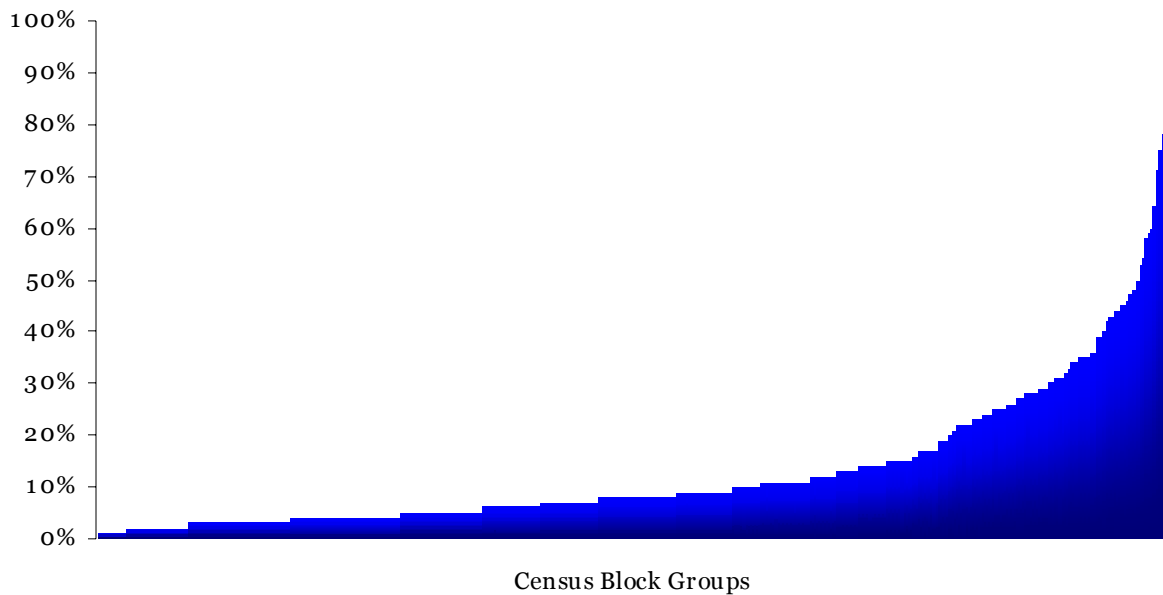
## Percent Hispanic by Census Block Group



**Figure 22. Percent Hispanic Population by Census Block Group (U.S. Census Bureau, 2000).**

Hispanics are the largest minority racial group in the area and this map indicates that they reside predominantly in western Weld County, along and slightly east of the I-25 corridor. There is a concentration of Hispanics in several census block groups around Greeley. Figure 23 displays the percent Hispanic by census block group graphically. Here, again, is a curve indicating segregation.

### Percent Hispanic by 2000 Block Groups (Tri-County)

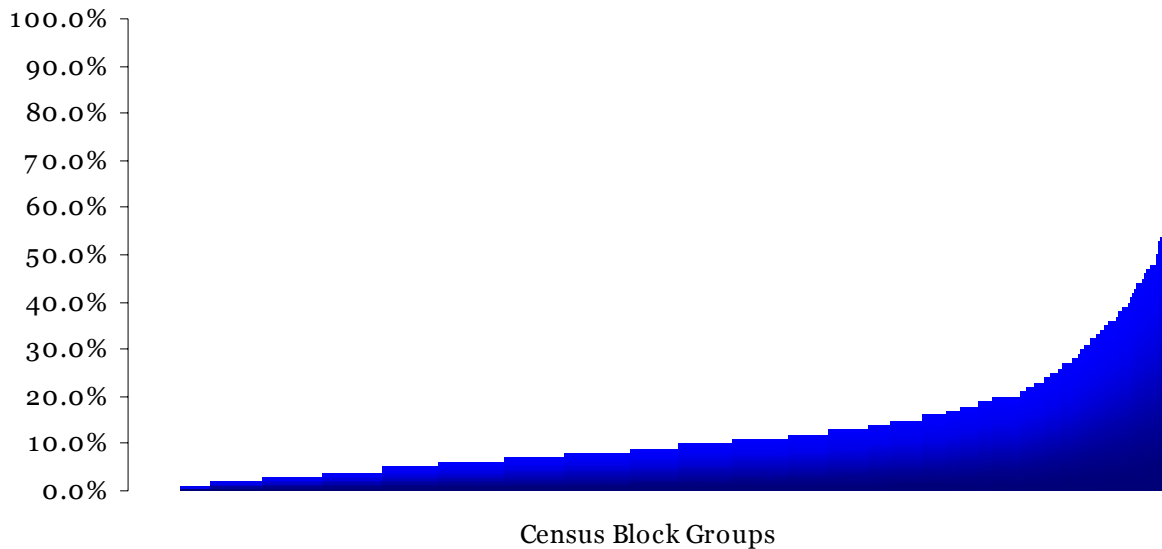


**Figure 23. Percent Hispanic Residents by Census Block Groups (Tri-County) (U.S. Census Bureau, 2000).**

A similar, if somewhat less extreme curve can be seen on the graph of the percent of households (by census block group) that have an annual income of less than \$15,000. Fortunately, this level of poverty is not so strongly concentrated anywhere within the region as to produce a long upward spike at the right end of Figure 24. The graph certainly indicates, though, that certain census block groups contain a wildly disproportionate number of impoverished households.



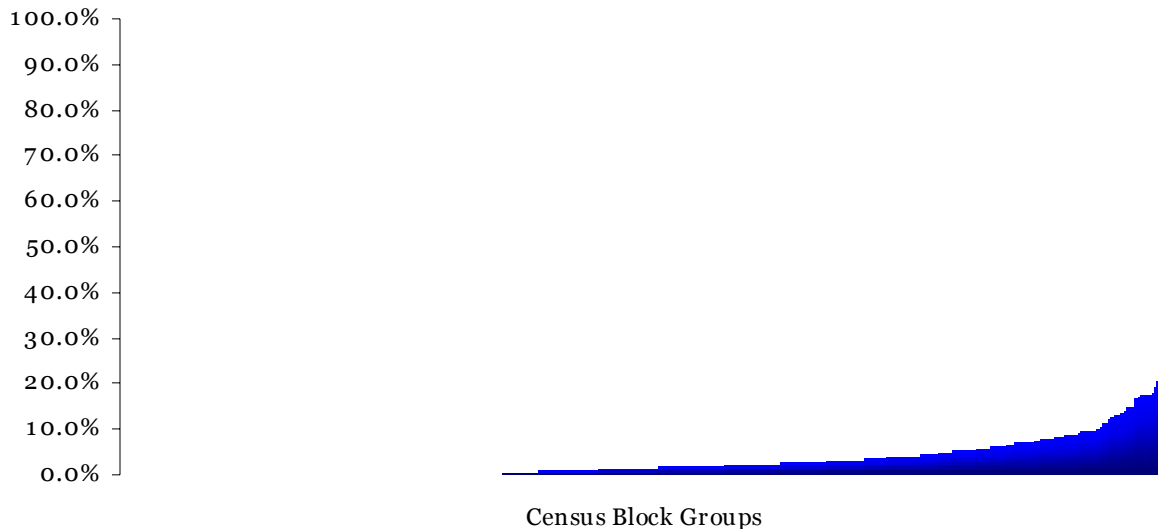
### Percent of Households with Annual Income Less than \$15,000



**Figure 24. Percent of Households with Annual Income Less than \$15,000 (Tri-County) (U.S. Census Bureau, 2000).**

As the poor tend to be concentrated, so do the rich. Figure 25 presents a graphic representation of the census block groups in the three counties according to the percent of households that have an annual income of greater than \$200,000. The curve is even less extreme due to the extremity of the income bracket, but indicates, similarly, that the rich in the Northern Front Range tend to live together in separate census block groups from the non-rich.

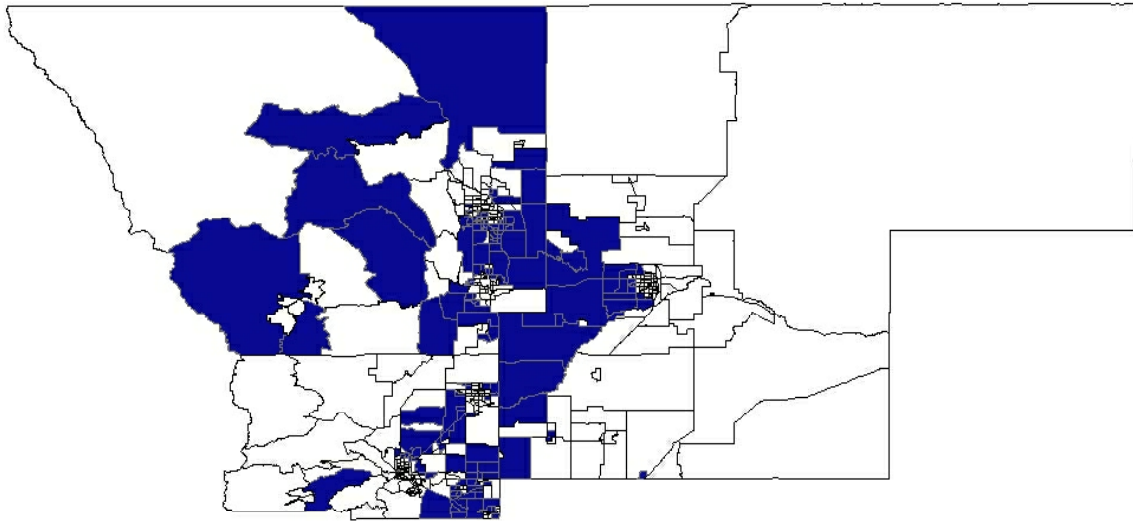
## Percent of Households with Annual Income Greater than \$200,000



**Figure 25. Percent of Households with Annual Income Greater than \$200,000 (Tri-County) (U.S. Census Bureau, 2000).**

### Identifying Sprawling Areas

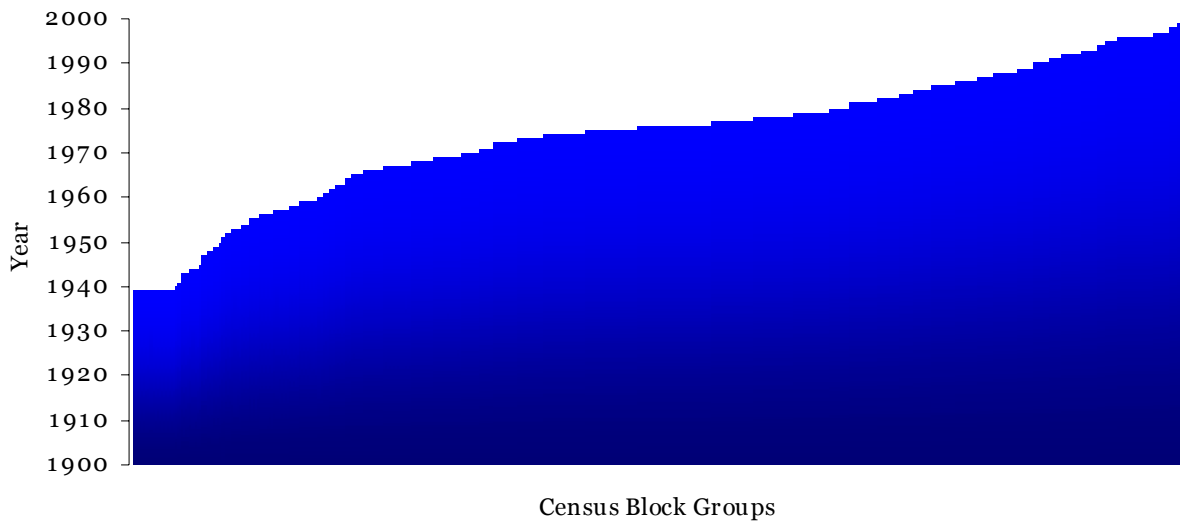
Due to the multidimensionality and elusiveness of sprawl, it is difficult to assign rankings or values to different geographic areas according to sprawl. Instead, this analysis takes several factors that are associated with sprawl and uses the variance therein to separate the census block groups in the Northern Colorado Front Range into two groups: those “associated with sprawl”, and those “not associated with sprawl”. While this is a relatively unique method for studying sprawl, no claim is made that others should exactly replicate it. The idea is for use with the available data in this region, and uses the Colorado Sprawl Action Center’s (2002) list of traits associated with sprawl where they can be matched up with available data. Other areas might require different criteria for association.



**Figure 26. Census Block Groups in the Northern Colorado Front Range in which the Median Year that Housing was built is More Recent than 1980 (U.S. Census Bureau, 2000).**

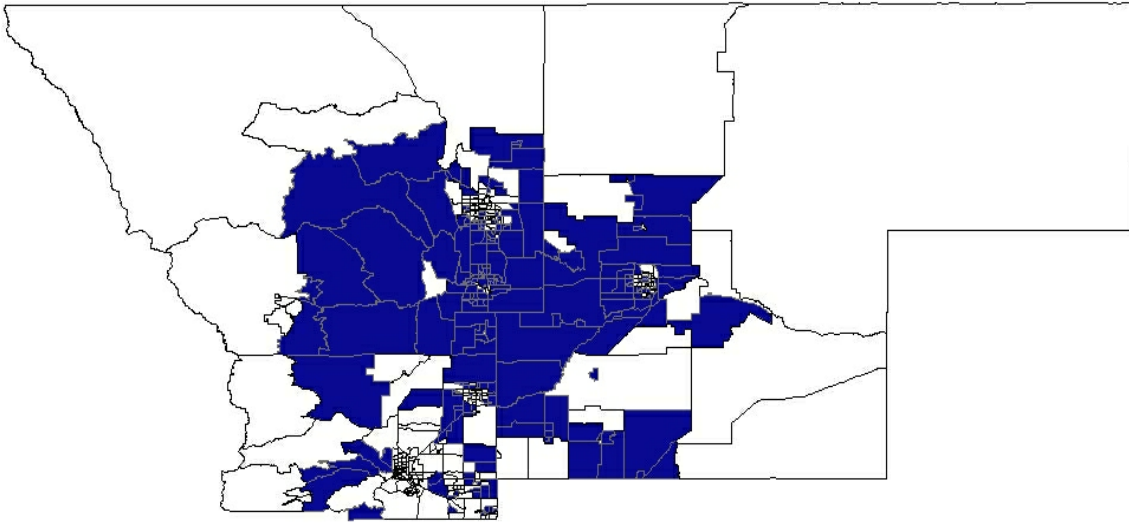
A useful idea of how to identify sprawling regions was established by comparing available population and housing data at the census block group level of analysis to the traits associated with sprawl set forth by the Colorado Sprawl Action Center (2002). The first trait, *unlimited outward expansion* is captured in the measure of the median year that the housing in a given census block group was built. The blue shading in Figure 26 shows the block groups in which a majority of the housing has been built since 1980. This type of rapid development is characteristic of unlimited outward expansion.

### Median Year that Housing was Built by Census Block Group (Tri-County)



**Figure 27. Median Year that Housing was Built by Census Block Group (Tri-County) (U.S. Census Bureau, 2000).**

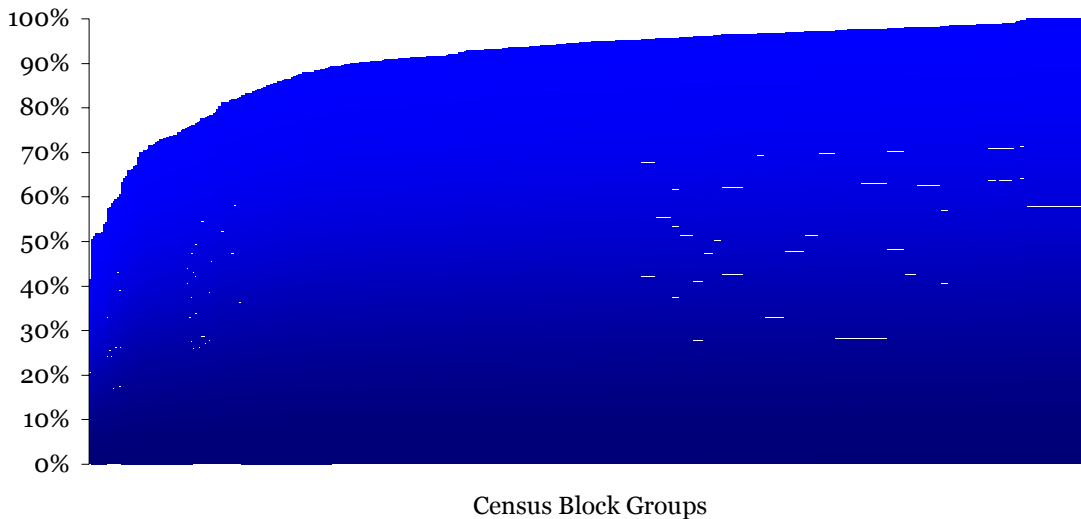
Another important trait associated with sprawl (Colorado Sprawl Action Center, 2002) is the *dominance of transportation by private automotive vehicles*. Two measures of the dominance of automobile transportation were available in the data at the census block group level. First, the percentage of workers that use an automobile to get to work was explored. Second, the amount of time that commuters take to get to work was analyzed. Figure 28 shows the census block groups in which 100% of workers use automobile transport to get to work.



**Figure 28. Northern Colorado Front Range Census Block Groups in which 100% of Workers Use Automobile Transport to Get to Work (of Workers that Work Outside the Home).**

Both of the two previous figures have face validity as identifiers of sprawl in that they show shaded areas surrounding the major population centers of the region, and along the major thoroughfares. Figure 28 shows that the more rural and less populous block groups have at least some residents that use alternate means of transportation to get to work. This is not surprising for areas with economies that remain strongly rural and/or agricultural. It also shows that denser, more urban areas tend to have workers using alternate means of transportation, which is also to be expected. Figure 29 shows the percentages of workers using automobile transportation by census block group.

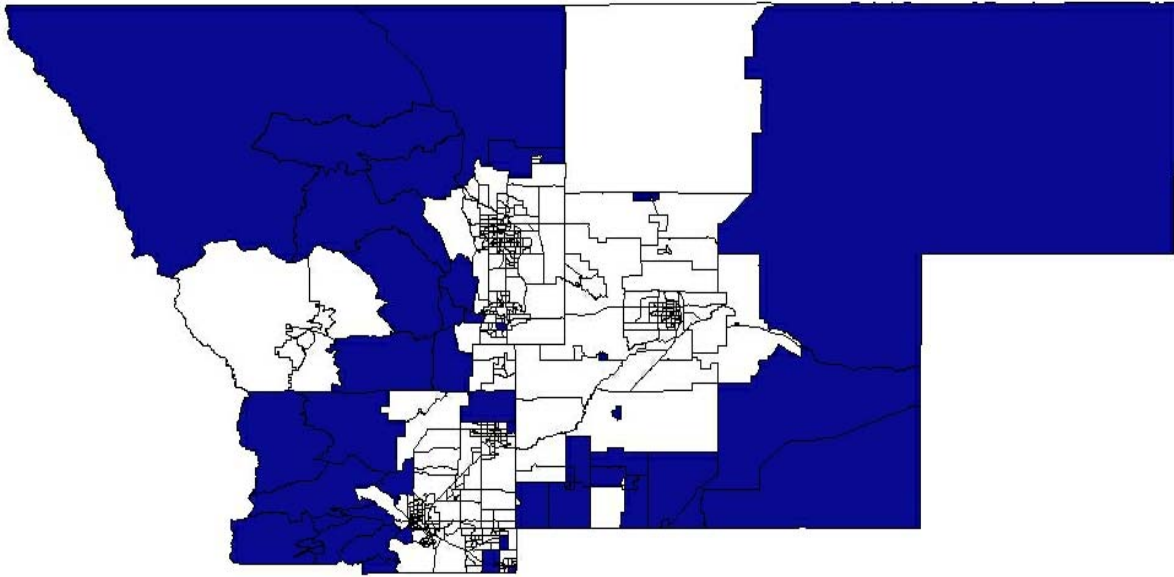
### Percent of Resident Workers that Use Cars to Get To Work (Tri-County)



**Figure 29. Percent of Resident Workers by Census Block Groups that Use Cars to Get to Work (of those that work outside the home) (U.S. Census Bureau, 2000).**

The graph (Figure 29) and the map (Figure 28) appear different since so few of the census block groups are at the 100% line in Figure 29 and so much of the map is shaded blue in Figure 28. The majority of the census block groups, however, are smaller and concentrated within the major population centers of the region (Ft. Collins, Greeley, Loveland, Boulder, Longmont, & Windsor). Almost all of these census block groups have less than 100% of residents using automobile transport and are not shaded in Figure 28.

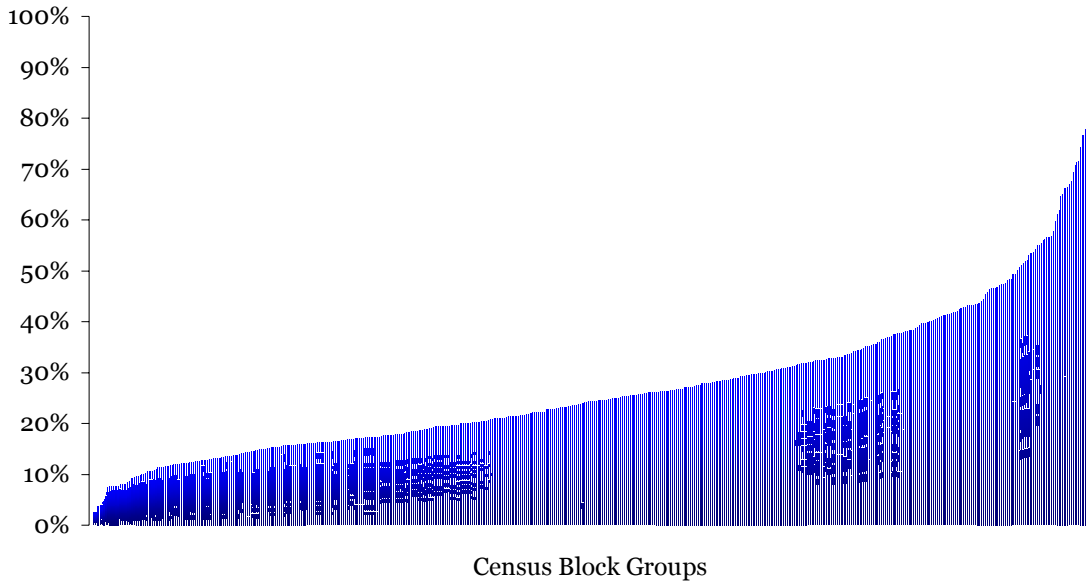
The second measure of the dominance of automobile transport is based on the length of time that workers (that work outside of their homes) take to get to work. The data and geographic analysis software allow us to select the areas in which percentages of commuting residents take more than 30 minutes to get to work. Figure 30 shows the census block groups (shaded in blue) in which more than half of the residents take more than 30 minutes to get to work. Many of these workers actually take greater than 90 minutes to get to work.



**Figure 30. Northern Colorado Front Range Census Block Groups in which Greater than 50% of Workers take Greater than 30 Minutes to Get to Work (U.S. Census Bureau, 2000).**

Figure 30 visually represents the fact that the more distal census block groups are more likely to have long commutes, thus increasing dependence on the automobile. Figure 31 is a graphic representation showing the percentages of drivers that take greater than 30 minutes to get to work. For this analysis, it was decided that in order for a geographic area to be considered to be “associated with sprawl”, it would have to meet either of the thresholds set regarding the dominance of automotive vehicular transport **and** the threshold set regarding median year that housing was constructed (that threshold being: more recently than 1980, recall Figure 26).

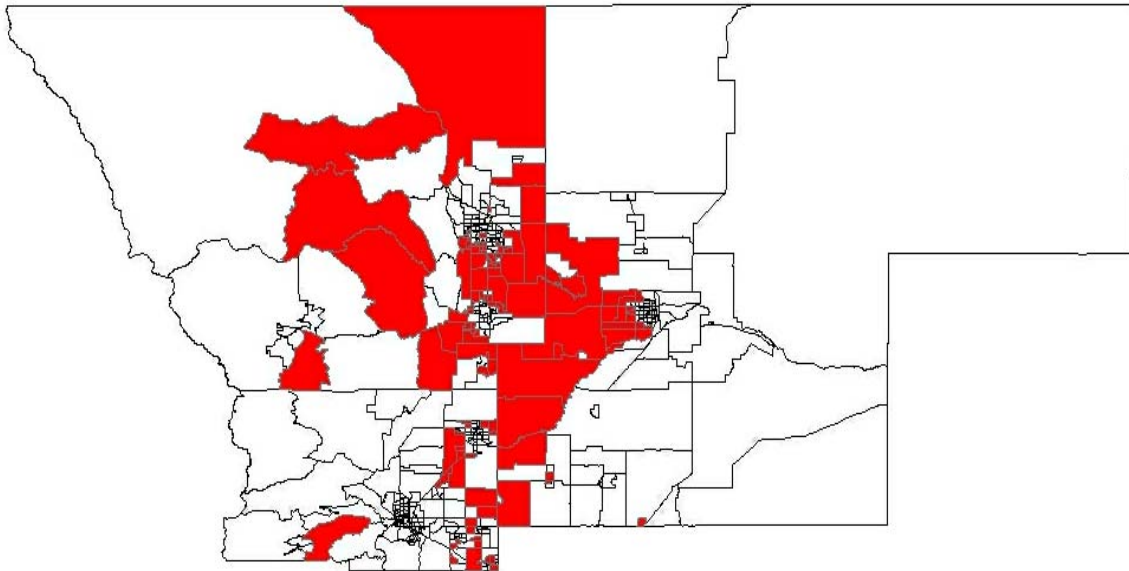
### Percent of Workers Taking 30 or More Minutes to Get to Work (Tri-County)



**Figure 31. Percent of Workers by Census Block Groups that take Greater than 30 Minutes to Get to Work (Tri-County) (U.S. Census Bureau, 2000).**

The criteria for association or disassociation with sprawl were determined prior to the preceding univariate analyses. Thus, it was impossible for researchers to predict which census block groups would or would not be included, or how closely the selection of associated block groups would reflect any of the criterion or general opinion on where sprawl is occurring. The result of selecting census block groups by the combination of the dominance of automotive vehicular transport and a recent median year of housing construction is presented in Figure 32. The geographic areas that are shaded in red are the areas that meet the criteria for association with sprawl.





**Figure 32. Northern Colorado Front Range Census Block Groups that Are Associated With Sprawl. (Tri-County) (U.S. Census Bureau, 2000).**

Looking at the map, it is apparent that the criteria for selection yielded a group of census block groups that fit descriptions of sprawl. Few of them are located within the city centers. Many of them are located along automobile transportation highways. In fact, it is almost possible to travel from the outskirts of some of the major regional population centers to the outskirts of the others without crossing into geographic areas that are not associated with sprawl. This method of determining association with sprawl, then, has encouragingly high face validity.

A descriptive analysis of the areas associated with sprawl and not associated with sprawl indicates that a majority of the population (over 500,000) is living in the areas not associated with sprawl. Slightly over 200,000 residents live within the areas that are associated with sprawl. In the next section, a multivariate statistical model is constructed to test the predictive power of these associations with sprawl on the variability in population variables that are often discussed in relation to sprawl.

## Multivariate Analysis

The data from the three county area in the Northern Front Range was analyzed in the last section using geographic techniques to determine which areas are associated with sprawl. This section contains analysis that seeks to determine significant differences in the populations of areas associated with sprawl versus those that are not associated with sprawl.

The MANOVA model for this analysis uses association with sprawl as the independent variable and seeks to predict statistical difference in means across the following variables:

**Percent Dependent** – the number of residents aged 0-17 or 65 and up divided by the total population of the census block group

**Percent Income Greater Than \$200,000** – the number of households with annual incomes greater than \$200,000 divided by the total # of households in the census block group

**Percent Income Less Than \$15,000** – the number of households with annual incomes less than \$15,000 divided by the total number of households in the census block group

**Mean Family Size** – the number of people reported in each family divided by the total number of families in the census block group

**Percent Owner Occupied** – the number of households that own their home divided by the total number of households in the census block group

**Percent Carpoolers** – the number of workers that report carpooling to work at all divided by the number of workers in the census block group

**Percent White** – the number of people whose race is reported as white divided by the total population of the census block group

**Percent Vacant** – the number of unoccupied housing units divided by the total number of housing units in the census block group

**Mean Number of Rooms** – the average number of rooms in the households of the census block group.

Due to the understanding of sprawl attained in the review of the sprawl literature, it is expected that the sprawling areas would contain fewer housing vacancies, larger houses, more white people, fewer carpoolers, more homeowners, smaller families, fewer

poor people, more rich people, and fewer dependents. This combination of predictions, if verified, would confirm the hypotheses that areas that are associated with sprawl are inhabited by the relatively powerful (rich, white, homeowners), and that their habits are more wasteful (larger homes, no carpooling) than those who reside in geographic areas that are not associated with sprawl.

Table 1 presents descriptive statistics for the variables across the areas associated with sprawl and the areas that are not associated with sprawl. The hypotheses of directionality were upheld across every variable except for the percent of residents that are dependent and the mean family size. The second data table provides the results of the multivariate test of statistically significant differences.

**Table 1.** Descriptive Statistics for Population and Behavioral Variables at the Census Block Group Level (n=384, Not Associated with Sprawl; n=119, Associated With Sprawl).

Variable	Non-Sprawl		Sprawl	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
% Dependent	0.324	0.096	0.360	0.052
% Inc > \$200,000	0.011	0.017	0.014	0.015
% Inc < \$15,000	0.057	0.054	0.021	0.018
Mean Family Sz.	2.982	0.319	3.100	0.224
% Owner Occupied	0.597	0.242	0.783	0.162
% Carpoolers	0.137	0.075	0.108	0.055
% White	0.875	0.096	0.913	0.050
% Vacant	0.494	0.086	0.482	0.061
Mean # of Rooms	5.633	1.469	6.514	1.109

Table 2 presents the results of the MANOVA test for statistical significance in the differences in means across the selected population and behavioral variables. All but two of the variables in the model are significantly ( $p = .05$ ) different in the univariate analyses with the sprawl areas compared to the non-sprawl areas. The overall model has a strong fit (Wilks' Lambda = .842,  $p = .000$ ). This lends weight to the method of geographic selection and confirms most of the hypotheses about population and

behavioral characteristics of areas associated with sprawl. The null hypotheses in these cases can be rejected.

**Table 2.** Summary of Test of Significance in Differences in Means Across Population and Behavioral Variables at the Census Block Group Level (n= 384, Not Associated With Sprawl; n=119, Associated With Sprawl).

Variable	F	p =	Partial Eta Squared
% Dependent	15.595	.000	.030
% Inc > \$200,000	3.609	.058	.007
% Inc < \$15,000	48.598	.000	.032
Mean Family Sz.	13.838	.000	.027
% Owner Occupied	61.469	.000	.109
% Carpoolers	15.657	.000	.030
% White	16.588	.000	.032
% Vacant	0.022	.883	.000
Mean # of Rooms	36.386	.000	.068

Using the statistical analyses presented in Tables 1 & 2 allows a specific description of the residents of the areas of the Northern Colorado Front Range that are associated with sprawl. Recall that the selection of the geographic areas was accomplished by measures of dominance of private automotive transport and the median year in which housing was built. Thus, it was pre-established that the residents of the areas associated with sprawl had moved into their homes more recently, and that their homes had been more recently constructed. It was also established that they spent more time commuting to work or that they lived in an area in which every resident used an automobile to get to work.

These results can be interpreted in order of the strength of the predictive power of association with sprawl over the various population and behavioral dependent variables. Therefore, the first thing that can statistically be said about those that live in areas associated with sprawl is that they are significantly more likely to be homeowners. A huge effect size shows that association with sprawl is a strong predictor of

homeownership. Second, the homes that these residents inhabit contain a significantly higher number of rooms. Neither of these findings is particularly surprising given the earlier discussion of the government subsidies of sprawl and homeownership.

Next, with equal effect sizes, it can be said that residents of areas associated with sprawl are significantly more white and less poor. This confirms the stereotypes of “white flight” and much of the criticism of the economic segregation of areas associated with sprawl. This is particularly interesting in the Northern Colorado Front Range given the conspicuously low number of African-Americans. While sprawl is often understood in terms of whites leaving central cities – which then become predominantly black – these findings show that sprawl has a racial dynamic seemingly regardless of location. This would seem to suggest a cultural factor linking sprawl and whiteness, which may not fully be explained by income.

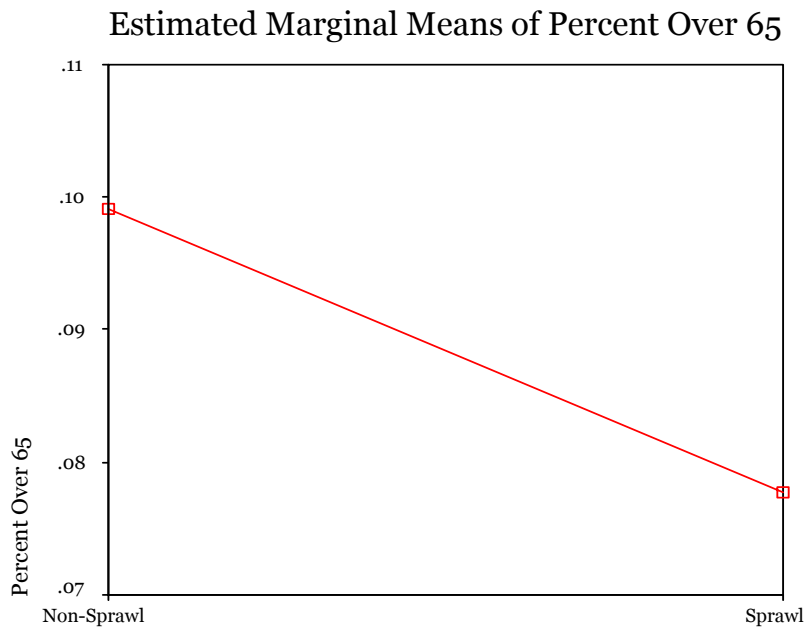
The next things that we can say about those that reside in areas of the Front Range that are associated with sprawl, again with equal effect sizes, is that they have a higher percentage of dependents living among them, and that they carpool significantly less. The lack of carpooling behavior is surprising given the fact that these residents are more dependent on the automobile and that they have longer commutes to work. On the other hand, the fact that there are a significantly lower number of poor residents may help to explain the lack of carpooling behavior, if carpooling is motivated by economic necessity. The higher number of dependents did not support the original hypothesis.

The mean family size also failed to support the original hypothesis that families living in areas associated with sprawl would be smaller. Rather, they are significantly larger. Further exploration of the age groupings and family sizes of those residing in areas associated with sprawl is in order. A more detailed analysis is warranted of the percentages of age groups in areas associated with sprawl and areas that are not associated with sprawl in the Northern Front Range.

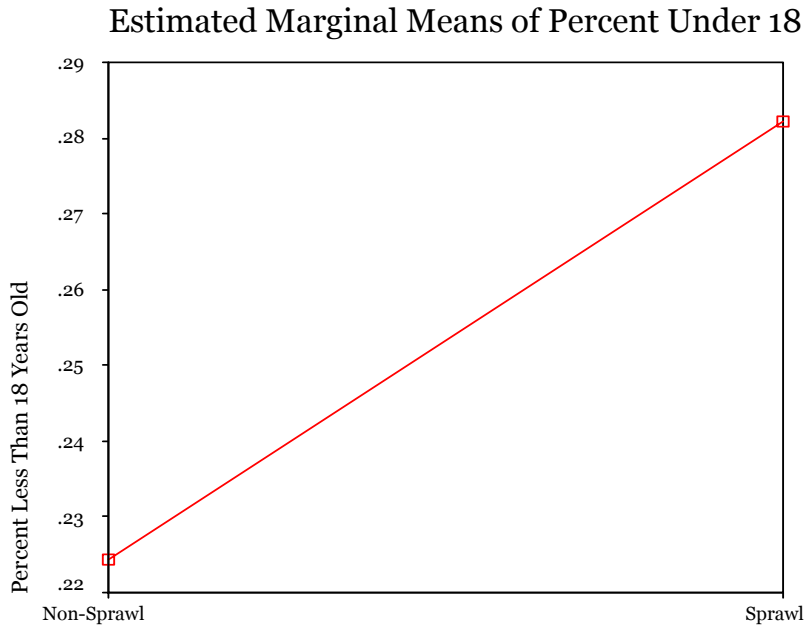
Another MANOVA was run using association with sprawl as the independent variable, with median age, percent of population less than 18 years old, and percent of population over 65 as dependent variables. Here it was discovered that the median age does not differ significantly when included in the model with percent less than 18 years old and percent over 65. Interestingly, both the measures of percent less than 18 and

over 65 were significantly ( $p = .000$ ) different across areas associated with sprawl and areas not associated with sprawl, in opposite directions.

This analysis reveals that the areas associated with sprawl have a significantly lower percentage of residents over the age of 65 and a significantly higher percentage of the population under the age of 18. Figures 33 and 34 show the respective differences by using the estimated marginal means from the multivariate analysis.



**Figure 33. Estimated Marginal Means for the Percent of Population Over the Age of 65 in Areas Not Associated With Sprawl and Areas Associated With Sprawl (Data source: U.S. Census Bureau, 2000).**



**Figure 34. Estimated Marginal Means for the Percent of Population Under the Age of 18 in Areas Not Associated With Sprawl and Areas Associated With Sprawl (Data source: U.S. Census Bureau, 2000).**

Finally, the interpretation of the results concludes with the two variables that were not significantly different in areas associated with sprawl from areas that were not associated with sprawl. Although it is accurate that there are less vacancies in areas associated with sprawl, and that there are more households with annual incomes of greater than \$200,000, the differences in the means were not statistically significant. Thus, it seems that our methods of associating areas with sprawl has little predictive power regarding housing vacancies. It is also interesting to note that one of the defining characteristics of areas associated with sprawl is the absence of the poor. While there are more rich households, the difference is not significant.

The next chapter examines the relationships between race, class, and sprawl in a more general way. It focuses specifically on segregation and displacement of low-income residents. A case study of low-income residents fighting displacement in the Northern Colorado Front Range is included.

## CHAPTER VI

### SEGREGATION AND DISPLACEMENT

#### Introduction

The previous chapter selected a subset of the census block groups in the Northern Colorado Front Range and designated them as “associated with sprawl”. A multivariate model showed significant differences along several population and housing variables between the two groups. This analysis permits the description of those that inhabit areas associated with sprawl (in order of statistical significance) as homeowners, living in larger homes, white, not poor, and living with more dependents (children, not the elderly). It is apparent that many of these differences are economic in nature, pointing to class segregation. Conspicuous among them are the race and age variables, which point to a type of segregation that warrants further investigation.

In the Southern and Eastern United States in particular, the history of sprawl has involved “white-flight” from central cities (Bullard, Johnson, & Torres, 2000). The legislation of desegregation in schools and public facilities has, in many cases, led to a spatial segregation that has reinforced economic and environmental inequalities. This multi-level connection between race and sprawl will be examined in this chapter at the level of the county.

This chapter will then address the implications of the findings and possible future directions for studying sprawl in the Northern Colorado Front Range. It begins with a discussion of analyses of race, class, and migration in the United States, and Colorado, in particular. It then describes the predicament of one group of residents in a trailer park in the Northern Colorado Front Range. Attempts are made to understand the connections between the macro-level phenomena and the microcosm of the trailer park. The thesis then concludes, in Chapter VI with a very brief literature review of “smart growth” and other alternatives to sprawl and some basic recommendations for change in the development processes in Northern Colorado.



## **Race, Class and Sprawl**

Given the relatively low (compared to the United States as a whole) percentage of African-Americans residing in the Northern Colorado Front Range, the fact that percent white residing in a sprawling area is significantly different from the percent of white residents in areas not associated with sprawl (documented in Chapter V) is a particularly interesting finding. According to Fulton et al. (2001), “metropolitan areas with high shares of Hispanic and black residents sprawl more”. As mentioned elsewhere in the literature, there is a salient racial dynamic to sprawl (e.g. Powell, 1998; Bullard, Johnson, & Torres, 2000). It is still somewhat surprising, due to the low level of variability, that there is such a pronounced difference in the percent of white residents in disaggregated geographic areas within a comparatively homogenous region of the country.

Weld County is the fastest growing county on the Front Range. In fact, it is the 2<sup>nd</sup> fastest growing county in the state and the 32<sup>nd</sup> fastest growing county in the entire United States (U.S. Census Bureau, 2004a). Interestingly, Weld County is only 0.6% African American, compared to the state of Colorado, which is 3.8%. Boulder County is 0.9% and Larimer County is 0.7% (U.S. Census Bureau, 2004b). In terms of percent growth over the past year, Colorado has grown 4.8%, while Larimer County has grown 5.2% and Weld County has grown 13.4%. Boulder County has only grown 3.5%, possibly due to some of the anti-sprawl measures that will be discussed later in this chapter. Only Douglas County, CO has grown at a greater rate than Weld County (20.1%). It too has a dramatically low percentage of African-American residents (1.0%) (U.S. Census Bureau, 2004b).

The analyses in Chapter V showed that small geographic areas that are associated with sprawl had significantly higher percentages of white residents. Looking at the numbers for these counties, it is evident that sprawl and race are correlated at a larger scale. More specifically, population growth of counties appears to be inversely correlated with counties' percentages of black residents. Using data from the Census, it is possible to track population growth dynamics (U.S. Census Bureau, 2003b) and racial composition (U.S. Census Bureau, 2002) of all United States counties.

**Table 3. Correlation of percentage population growth in U.S. Counties (2002-2003) and percent black in those counties (2002) (U.S. Census Bureau, 2002; 2003b).**

		Correlations	
		percentage population growth 2002-2003	percent black 2002
percentage population growth 2002-2003	Pearson Correlation	1	-.045*
	Sig. (2-tailed)	.	.012
	N	3141	3141
percent black 2002	Pearson Correlation	-.045*	1
	Sig. (2-tailed)	.012	.
	N	3141	3141

\*. Correlation is significant at the 0.05 level (2-tailed).

Table 3 shows a simple, statistically significant correlation of the percent of black residents residing in U.S. Counties and the percentage population growth of U.S. Counties. The significance of the finding indicates that there is a trend toward greater population growth in counties with lower percentages of black residents. When natural population increases (births minus deaths) and international immigration are removed from the growth of the counties, it is possible to isolate the growth or shrinkage that is occurring from domestic relocation. This measure is called net domestic migration. As Table 4 demonstrates, it is inversely correlated with percent black to an even greater degree. These analyses are not similarly significant for the percent of the residents that are Hispanic.

**Table 4. Correlation of Percent Black in U.S. Counties with Net Domestic Migration (population adjusted for years 2000-2003) (U.S. Census Bureau, 2002; 2003b).**

		Correlations	
		percent black 2002	migration 2000-2003, population adjusted
percent black 2002	Pearson Correlation	1	-.093**
	Sig. (2-tailed)	.	.000
	N	3141	3140
migration 2000-2003, population adjusted	Pearson Correlation	-.093**	1
	Sig. (2-tailed)	.000	.
	N	3140	3140

\*\* . Correlation is significant at the 0.01 level (2-tailed).

These findings are consistent with other recent studies of race and segregation. In fact, the increases in black segregation over the past century are well documented. As Massey & Denton (1993) write in their book *American Segregation*, “black segregation is not comparable to the limited and transient segregation experienced by other racial and ethnic groups... this extreme racial isolation did not just happen; it was manufactured by whites through a series of self-conscious actions and purposeful institutional arrangements that continue today” (pg. 2). Sprawl was also identified as a prominent component of this process of segregation; “The most salient feature of postwar segregation is the concentration of blacks in central cities and whites in suburbs” (Massey & Denton, 1993; pg. 67).

The patterns of segregation demonstrated in Massey & Denton (1993) are largely based on white preference for living in predominantly white areas and the perpetuation of an isolated, black underclass that is reinforced by its powerlessness (as described in earlier chapters). While there are interactions with class, race trumps all in Massey & Denton’s (1993) analyses of contemporary segregation. In terms of current population patterns leading to even greater segregation across United States counties, however, these analyses of census data show that absence of those with low income is even more

closely associated with net domestic migration (see Table 5). The analyses that follow use Census data to select the percent of a county’s households that are making less than \$15,000 per year. The data set has this percentage labeled as “percent of residents in poverty”. This nomenclature should be considered synonymous with “percent of households making less than \$15,000 per year” and does not indicate the use of standardized government measures of poverty.

**Table 5. Correlation of Percent of Households making less than \$15,000 in U.S. Counties and Net Domestic Migration (population adjusted for years 2000-2003) (U.S. Census Bureau, 2002; 2003b).**

Correlations			
		percent of residents in poverty	migration 2000-2003, population adjusted
percent of residents in poverty	Pearson Correlation	1	-.293**
	Sig. (2-tailed)	.	.000
	N	3140	3140
migration 2000-2003, population adjusted	Pearson Correlation	-.293**	1
	Sig. (2-tailed)	.000	.
	N	3140	3140

\*\* . Correlation is significant at the 0.01 level (2-tailed).

In fact, if net domestic migration is chosen as the dependent variable and percent black and percent of households making less than \$15,000 per year are entered step-wise (as two independent variables) into a linear regression, there is not enough variance left for the racial variable to have statistical significance as a predictor. The fact that percent black and percent of households with incomes less than \$15,000 are strongly associated (see Table 6), though, makes the question of whether it is race or class that is predictive less important than the fact that it is some of both. People are relocating to areas with less poor people and less black people, and many times, those two are the same.

**Table 6. Correlation of Percent of Households making less than \$15,000 in U.S. Counties and Percent Black (U.S. Census Bureau, 2002; 2003b).**

Correlations			
		percent of residents in poverty	percent black 2002
percent of residents in poverty	Pearson Correlation	1	.408**
	Sig. (2-tailed)	.	.000
	N	3140	3140
percent black 2002	Pearson Correlation	.408**	1
	Sig. (2-tailed)	.000	.
	N	3140	3141

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The fact that these analyses have so much power at the aggregated geographic level of the county is remarkable. It demonstrates a nation-wide trend toward an increasing concentration of poverty and racial segregation. The fact that Colorado has such a low percentage of African Americans may help explain, at a national level, the high rate of migration to the state. If Colorado is examined in isolation, it is clear that segregation is intensifying along the lines of class (Table 7).

**Table 7. Correlation of Percent of Households making less than \$15,000 per year and Net Domestic Migration (Population adjusted for years 2000-2003) in Counties in the State of Colorado.**

		Correlations	
		percent of residents in poverty	migration 2000-2003, population adjusted
percent of residents in poverty	Pearson Correlation	1	-.296*
	Sig. (2-tailed)	.	.019
	N	63	63
migration 2000-2003, population adjusted	Pearson Correlation	-.296*	1
	Sig. (2-tailed)	.019	.
	N	63	63

\*. Correlation is significant at the 0.05 level (2-tailed).

The correlation in Table 7 is statistically significant using a much smaller sample of counties. A similar analysis using racial data does not show a significant relationship. Thus, at least at the macro level of the county, racial segregation does not seem to be intensifying in Colorado. Table 8 shows the correlation of the percent of households making less than \$15,000 and the percent of residents that are black in Colorado counties. Interestingly, these two variables that were so significantly correlated at the national level are not significantly correlated in the State of Colorado. None of these analyses had statistical significance when percent Hispanic was used.

The preceding analyses at the county level can be used to understand basic information about where people are moving and whether race and poverty factor into those migration decisions. Colorado shows marked differences from the U.S. as a whole. First, it contains a lower percentage of African Americans. While race seems to be driving sprawl in many other parts of the United States, to a surprising degree, it does not appear to have a particularly salient role in Colorado.

**Table 8. Correlation of Percent of Households making less than \$15,000 per year and Percent Black in Colorado Counties.**

		percent of residents in poverty	percent black 2002
percent of residents in poverty	Pearson Correlation	1	.162
	Sig. (2-tailed)	.	.203
	N	63	63
percent black 2002	Pearson Correlation	.162	1
	Sig. (2-tailed)	.203	.
	N	63	64

The presence of the poor, on the other hand, does have a negative correlation with migration. The growth of middle to high-income areas (very likely to be the areas that were selected as “associated with sprawl” in Chapter V.) serves to highlight economic divisions. These class concerns that emerge in this case study are less frequently discussed than concerns of race, religion or other non-economic difference in the United States. Bettie (2003) points out that scholars and citizens alike tend to shy away from the issues related to social class in the United States, because we prefer to think of economics as completely related to individual efforts.

These demonstrated associations between sprawl and economic inequality and segregation warrant further investigation. Especially given the research that shows that segregation based on income and race is highly detrimental to the less privileged (Logan, Oakley, & Stowell, 2003). According to this report “separate neighborhoods also continue to be unequal... these inequalities are experienced most strongly by children” (pg. 1). The next section details the predicament of one group of Front Range residents that are being impacted by the aspects of sprawl that are driving segregation and displacement.

### **Low Income Residents: Get Out of the Way**

The residents of Harmony Mobile Home Park, in the Southeast part of Ft. Collins, Colorado, are understandably concerned about sprawl. The residents typically own their own mobile homes, but do not own the land on which those homes sit. Members of the “working poor” most often head these households. They are teachers, food service workers, ministers and retirees. Most of them perform extremely vital functions for the surrounding community, even while they are often poorly compensated for their work. Their presence is a necessary component of the Northern Colorado Front Range’s economy. And, while the trailer park is not luxurious when compared to many of the surrounding residential areas, it provides a place where residents can comfortably live and experience many of the benefits of real community – some of which are not available to those in more typical suburban dwellings.

The land on which the park sits belongs to a publicly traded real estate holdings company. There is concern among residents of the park that the owners of the land are waiting until property values rise to sell the land to big-box commercial developers; this phenomenon is often referred to as “parking” the land. Their anxieties over residential instability are exacerbated by the actions of the holdings company in the day-to-day maintenance of the park. The residents are increasingly unable to afford new fees and constantly rising rent payments. In fact, rent was raised 5 times between 1998 and 2003, so that it nearly doubled in 5 years (Jones, 2003).

The Harmony Mobile Home residents have organized to combat what may be inevitable forced relocation in the event that the property changes hands. Their organizing effort has involved participation by CBC. Another trailer park that was located close to Harmony, Pioneer Mobile Home Park, was sold several years ago to developers and is now the site of a Home Depot® store. Figure 35 shows a newspaper article covering the story of the demise of the Pioneer Mobile Home Park.



OCT 12 1995

# Homes out, stores in

## Shopping center in the works for Pioneer site

By DAVID PERSONS  
The Coloradoan

A 379,500-square-foot regional shopping center is likely to be the new resident of 300 E. Harmony Road, the site that is now home to the beleaguered Pioneer Mobile Home Park.

The proposal to build Center

Point Fort Collins on the 36-acre property near the intersection of Harmony Road and South College Avenue inched toward reality at a conceptual review before the city planning department early this week.

Officials of JD&M Management, the owners of the mobile home park, revealed they are close to finalizing a deal that will team them with Chandelle Properties of Denver to develop the shopping center.

"We will finalize it in the next two to three weeks," Jeff

### Sketch of center plans/A8

Donaldson said Wednesday. "Everything has been agreed to and it's just in the hands of the attorneys now."

Donaldson, president of JD&M Management, presented a conceptual blueprint of the center.

"It's been incredible," Donaldson said. "There's been a lot of interest (in the project). But we need to get a concrete site plan

completed . . . something we can put in front of people before we can get past a letter of interest."

Despite the early stages of the project, Donaldson said preliminary talks already had been held with a number of interested parties, including Walgreens and Dillards, a department store chain with headquarters in Little Rock, Ark.

"Walgreens was just one of a ton that were interested," Donaldson said. "Dillards — they have a little interest but

See CENTER, Page A8



Jill P. Mott/The Coloradoan

**WHAT'S NEXT?:** Liz Nira looks at proposed plans for the Pioneer Mobile Home Park on Harmony Road as her husband, Maros, and son Eli, 3, look

on. Residents of the park will have to relocate by March to make way for development of the land.

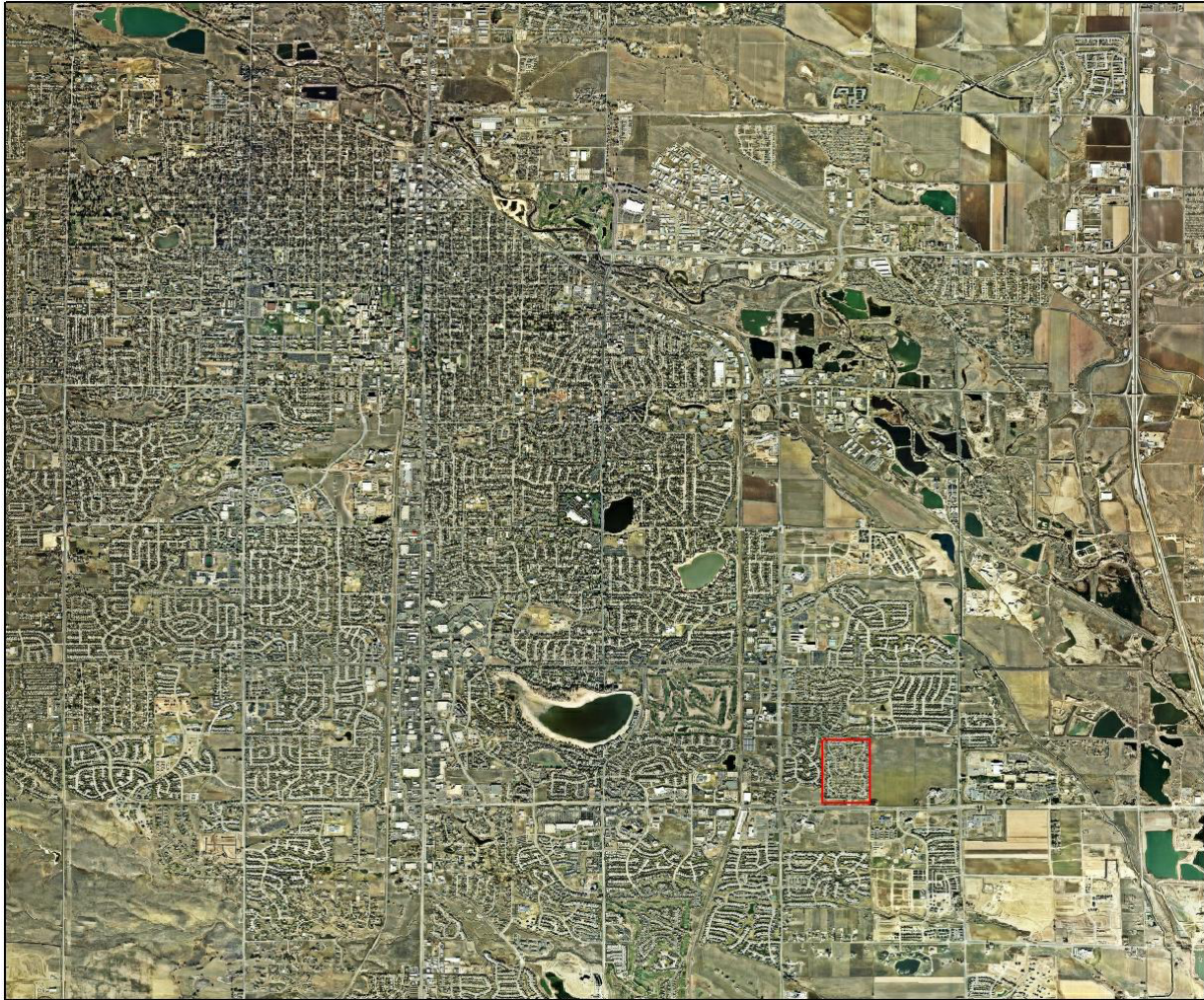
**Figure 35. Newspaper article detailing the demise of Pioneer Mobile Home Park (Persons, 1995).**

The owners of the trailers, in instances such as this one, are given short notice that they will need to relocate. They are often unable to pay the money necessary to

move their trailer home. Moving a trailer costs around \$5,000. If they are unable to sell the trailer (which is often the case) and cannot afford to move it, they are forced to simply forfeit their investment in it.

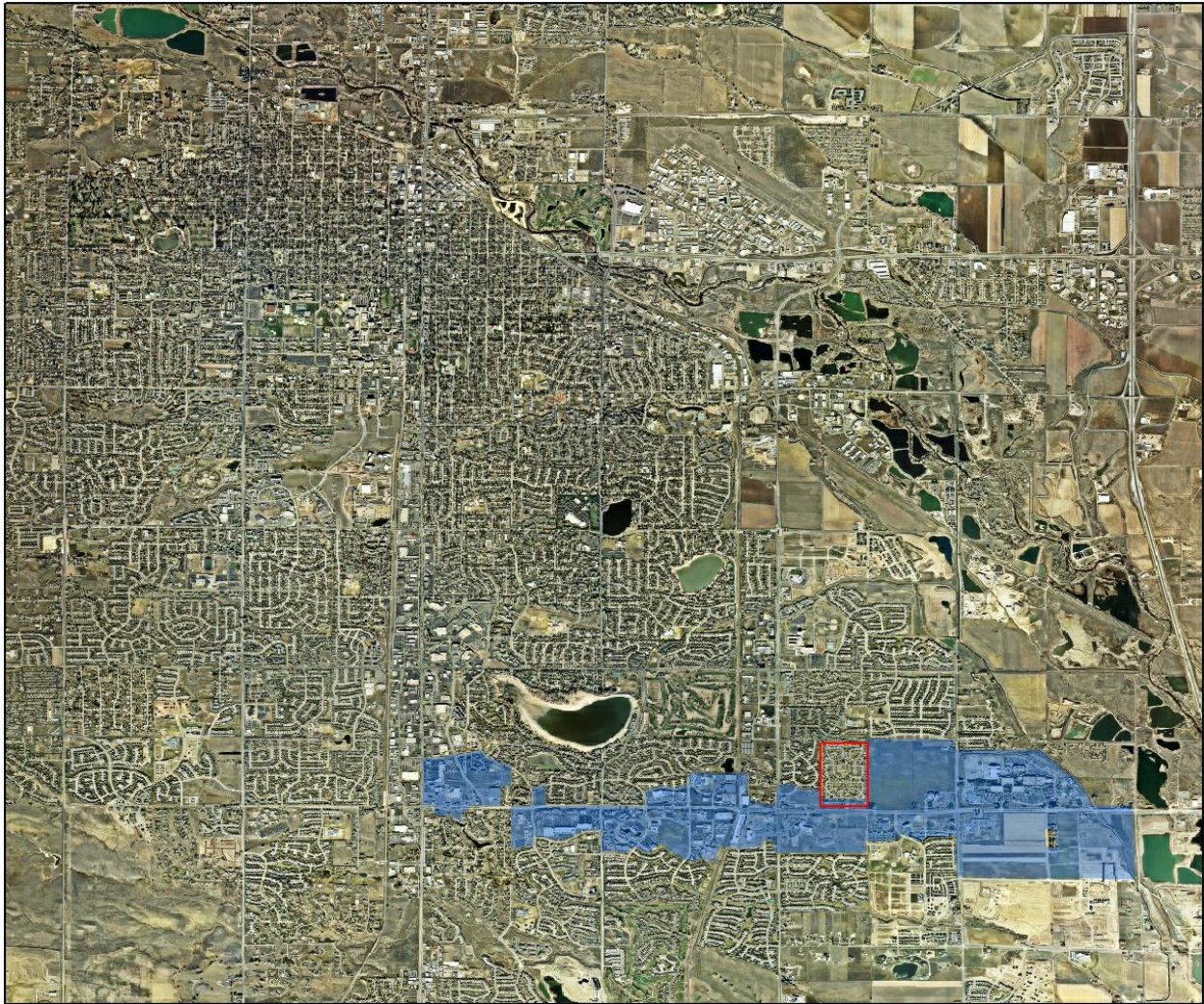
It is important to realize what a tremendous blow this forced relocation can be to a family that is working for pay that prevents entry into the middle class. It is often comparable to debilitating accident or a life transforming illness, in that opportunities for economic recovery may not appear until the next generation. Members of the middle class may have trouble imagining the economic (and usually, psychological) trauma that such forced location can represent to a household that is not economically upwardly mobile. All of society is eventually burdened by the multitude of ripple effects associated with displacing and/or concentrating its poorer residents.

To further contextualize the case study of the trailer park, Figure 36 shows an aerial view of the trailer park in the southeastern part of Ft. Collins. The densely settled area in the northwestern portion of the aerial is the downtown. It is bordered to the South and West by Colorado State University. The major Interstate highway in the region is pictured in the Eastern portion of the aerial. Using the subjective, visual criteria that architects sometimes use to identify sprawl, it is clear that this is, indeed, a sprawling region. Indicators are the segregation of land uses. Windy roads that sometimes dead-end characterize residential land uses. Big box retail strip malls and vast parking lots are visible, even at this elevation.



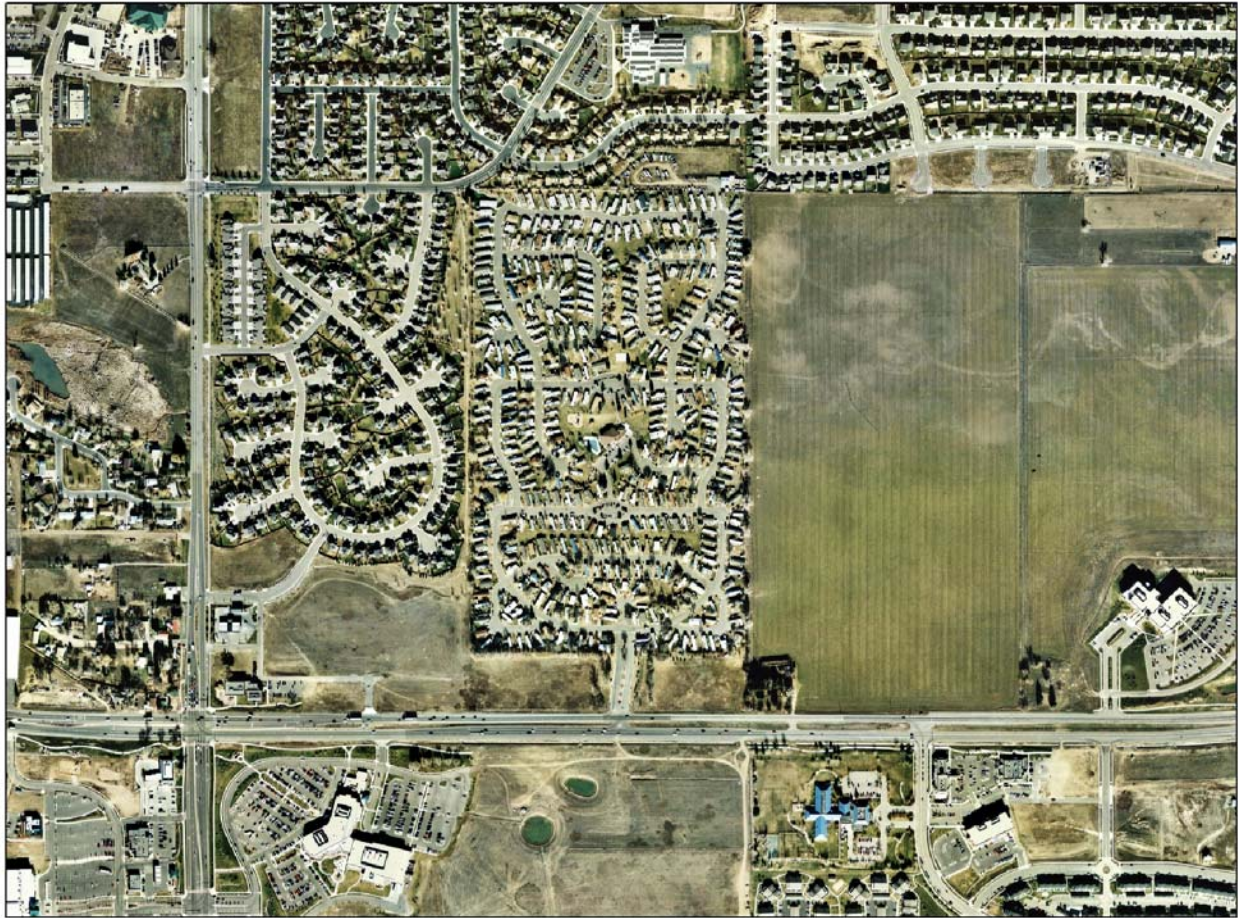
**Figure 36. Fort Collins Aerial (downtown is in the NW quadrant; mobile home park property is outlined in red, I-25 is directly to the East).**

It is clear from the aerial that the park is located along a crucial linkage between the Interstate highway and the downtown and major commercial areas of the city of Fort Collins. The park is located on Harmony Road, which has received a special code in the zoning law of the city. It is designated as a special mixed-use area, effectively a corridor that is free for most types of development. Figure 37 shows the area of the Harmony Corridor special zoning district. The data are taken directly from the GIS department of the city of Fort Collins (City of Ft. Collins, 2004).



**Figure 37. Ft. Collins Aerial (Harmony Corridor Special Zoning District shown in blue; mobile home park outlined in red).**

By zooming in for a closer look at the aerial view of the mobile home park, it is possible to see that because of the size of the units and the distance between them, the mobile home park constitutes an extremely high-density development. The park actually sits on land that is currently zoned for ‘mixed use’. Thus, eventual development could mix retail and residential. Figure 38 is a closer look at the mobile home park. The plot of land, which could potentially become one large supermarket with parking lot, is currently the site of 486 housing units.



**Figure 38. Close-up view of the mobile home park and surrounding properties.**

The real estate holdings company that owns the land has become a national conglomerate in the years since it purchased Harmony Mobile Home Parks. Astutely recognizing mobile home parks as one of the last fragmented sectors of the housing market, it has monopolized ownership of what has traditionally been relatively affordable housing. The company does not enjoy a friendly relationship with the residents of Harmony. This is due to a combination of the increases in rent and a general feeling, on the part of the residents, that the company is not treating them well.

“My next door neighbor right across the street from me, she has a five year old who has a brain tumor. She’s never home. She’s in Denver trying to get chemotherapy for her son. Well, the company keeps putting on her door notices to mow her lawn. Well she’s never home. Okay,

granted it does look like it needs to be mowed. It doesn't look nice. But please, work with the woman! She's got a lot on her plate right now. She's a single mom. Her husband left her last year. So what I do is I go over and I mow my lawn, and then I mow her lawn. I don't charge her anything for it, just so that the company will stay off her back. Thank God all my children are healthy."

-Harmony Resident (Jones, 2003)

Complaints about mandatory charges for failure to mow the lawn, elevated utility fees, and a general impersonality on the part of representatives of the company have been pervasive in qualitative interviews with Park residents. The residents have worked extensively on developing ways to gain more influence over their collective fate. They secured a cooperative loan that would have exceeded the amount that the real estate company paid for the land by several million dollars. This was intended to allow the residents to purchase the land and own it collectively. The financing was accomplished through working with lenders to pool the residents' collective credit. Their offer to purchase the land, however, was ignored by the company.

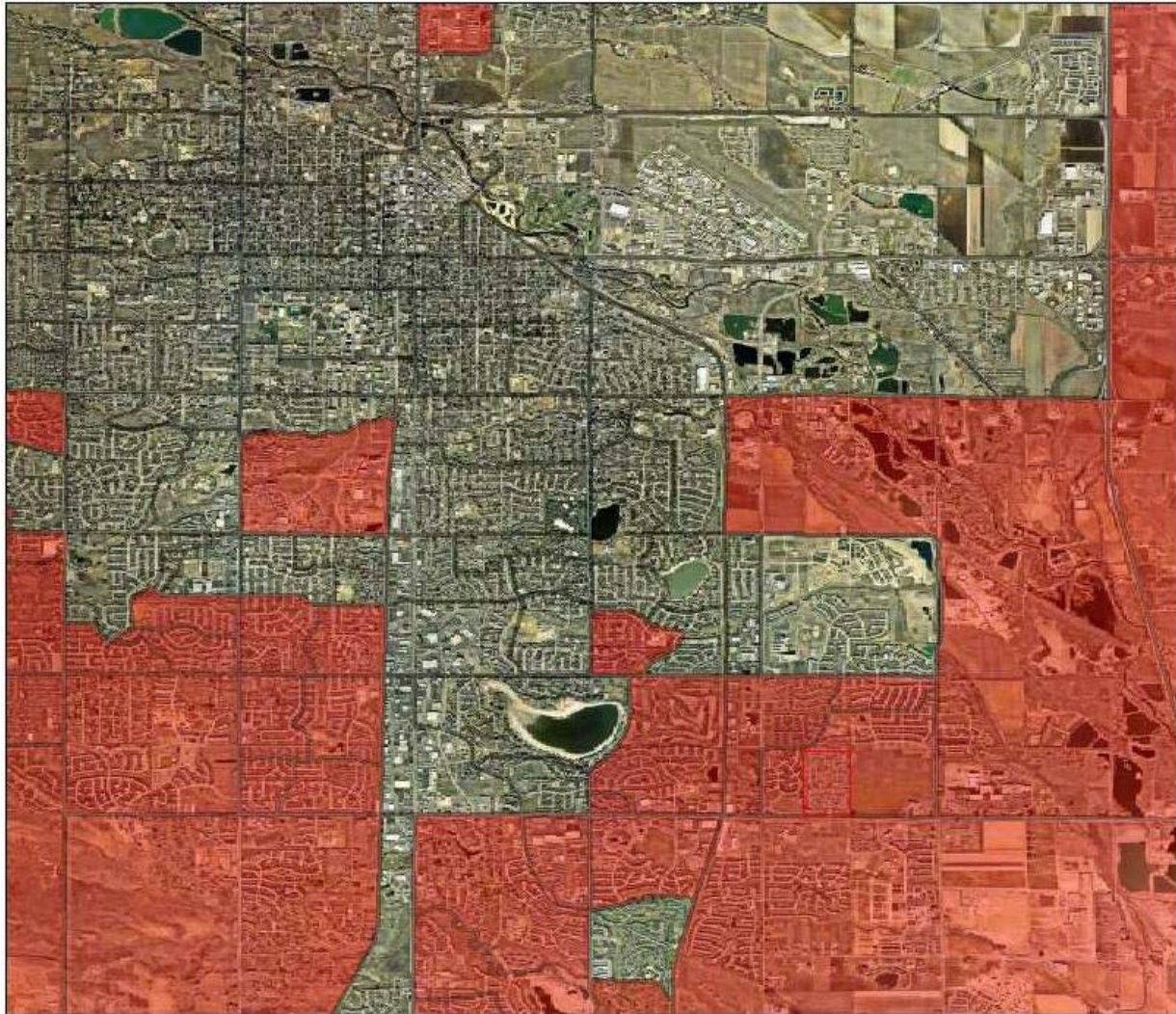
Frustrations abound about the Harmony mobile home situation. One CBC organizer summarized the issues by saying, "it's the wealthy exploiting the poor to get rich...[they] could get fabulously rich without oppressing a single person... [They have] opted to get incredibly filthy rich by exploiting everyone, and that just makes me madder than hell" (Jones, 2003).

The current exploitation of the position of low-income mobile home park owners is certainly an issue that requires action. It is useful, however, to understand the dilemma in terms of the larger context, or ecology. As the development of Fort Collins creeps slowly toward the Interstate, this piece of property becomes more and more valuable. Politically and economically, the city is set up to be friendly to developers who create large economic stimuli. The city most likely feels that it must maintain development friendly policies since other cities are doing the same. The common perception is that it will lose out on development if it does not provide these standard incentives.

It is definitely not unreasonable, then, for the real estate company that owns the park to want to hold the property until it can be sold for a maximum value.

Additionally, there is a social class bias that de-emphasizes the concerns of the poor. The CEO of the real estate company that owns the parks is on public record saying, “here’s the reality: nobody wants to live in a trailer house. People live there because they have to live there”. While it may be true that most residents of trailer homes would prefer much larger, luxurious houses, the same could be probably be said for most residents of any type of housing. The interviews conducted with mobile home residents give no indication that there is inherent dissatisfaction with living in a trailer home. In fact, their efforts indicate the opposite.

Spatially, it is helpful to look at the relationship of the mobile home park to the city and to superimpose the map of the areas that are associated with regional sprawl from Chapter V. Figure 39 shows this association.



**Figure 39. Areas associated with sprawl (census block groups shaded red) in the Ft. Collins area (see Chapter V for detailed methodology).**

Harmony Mobile Home Park is on the forefront of a geographic area associated with sprawl. Association with sprawl, then, is certainly influencing the processes at play in the Harmony Road area where the Pioneer Mobile Home Park was located and where the Harmony Mobile Park hopes to continue to exist. The reluctance of the real estate company to part with the property, even for a profit, is more easily understood when viewed in this context. The value of this land stands to increase as development moves toward it, especially if that development is almost exclusively white, middle to upper class, home-owning workers with children (see Chapter V). Other cultural amenities –



such as high quality schools, the perception of relative safety, and Starbucks® - will undoubtedly follow. The displaced mobile home residents, very few of whom fit the above description of the population of areas associated with sprawl, will have to find residence elsewhere in the area if they hope to continue working there.

The disappearance of mobile home parks is another part of the declining affordability of the area. Congregations Building Community has worked for years to get the city to build new affordable housing units. At least until 1998, though, Harmony Mobile Home Park was an affordable place to live, as was Pioneer Mobile Home Park. These mobile home parks, unlike rental apartment units or public housing, allowed for some sense of ownership. They also subtly worked to contain sprawl by housing a large number of people in a very small land area. When areas like these dense mobile home parks are redeveloped, they are highly unlikely to be built to contain a higher population density. This microcosm, then, is highly illustrative of many of the concepts that have been revealed quantitatively in this thesis. The next chapter summarizes the findings on regional sprawl, discusses alternatives and makes recommendations for changes in community development in the Front Range.

## CHAPTER VII

### CONCLUSIONS AND ALTERNATIVES

#### **Summary of Analyses**

The preceding chapters have discussed regional sprawl in the Northern Colorado Front Range. Analyses at the national, state, county and census block group levels have contributed to an understanding of regional sprawl as a multifaceted phenomenon. One conclusion that can be made from these analyses is that factors associated with sprawl are contributing to the displacement and segregation of the low-income population. This seems to be the case not just in Northern Colorado, but also across the entire United States. This spatial segregation that has been intensifying over recent decades (Massey & Denton, 1993) creates a power imbalance within cities and regions.

Critics of sprawl rarely highlight its effects on low-income residents, or its role in creating a perpetual and highly segregated underclass. This thesis helps to reveal a process of development that increasingly works to the benefit of those with some financial power. When freed from the presence of the poor, middle- to upper- class communities are able to provide many of the amenities that keep their housing values high, adding to their overall wealth. In effect, middle class consumerism is protected from the interests of the poor through a system that involves government intervention and private speculation. Conversely, communities without the benefit of high salaries continue to decline in market value as the residents with financial wherewithal move to new suburban developments. Residents of lower-income neighborhoods in the paths of these developments are forced to relocate to other disinvested parts of the region, where they join other relatively powerless individuals.

The resulting absence of fiscal or political power in these areas almost ensures that they will not be beneficiaries of an equal share of tax-dollar improvements. If the area ever becomes so bad as to necessitate government intervention, it may very well spark the interest of some 'urban pioneers' who will venture into and begin to rehabilitate some of the (by then, incredibly inexpensive and dilapidated) housing stock. This process of gentrification will again displace many of the residents through a variety of well-documented mechanisms (Sumka, 1979; Palen & London, 1984; Wagner, 1995).

Despite Civil Rights gains that led to racial desegregation of institutions, this thesis shows that racial segregation is increasing through development and migration patterns across the United States, even at a level as large as the county. Statistically significant differences in the percent of residents who are black can even be found in areas as white as Northern Colorado. The relationship between the incredible rate of land consumption for new development and the intensification of power differentials across lines of race and social class is highlighted in this thesis. At least several other case studies have focused on similar relationships between sprawl and disenfranchisement (Bullard, Johnson, & Torres, 2000; Braun, 2003).

Sprawl, in its current, rampant form, began in the years immediately following the Second World War. Economic and technological advances, along with the 'baby boom' and 'white flight' fueled its early advances. The development of new neighborhoods on large, expensive plots of land prevented some from being able to buy into the new development model. Blacks, in particular, were sometimes socially or even physically harmed for moving to white, affluent suburbs (Meyer, 2000). While sprawl is often criticized for being wasteful, unappealing, and injurious to the health and mental health of its residents, it is not nearly as often indicted for its role in the disenfranchisement of those that it pushes around, squeezes out, or leaves in its wake.

The contribution of this thesis to the literature on sprawl provides additional reasons to look for alternative development paths and suggests avenues for future research and action. The next section discusses several strategic goals for organizations that would put pressure on powerful entities to make change. These goals include changes to subtle policies, public discourse, and the general vision of the future.

### **Alternatives to Sprawl**

Smart growth is an umbrella term that can often only mean slight modifications to suburban developments that are designed to increase the quality of life in the suburbs. It has also sometimes meant more substantial changes in development policies, such as increased reinvestment in the central cities and urban infill in brownfields. Smart growth has significant non-profit backing, though, and is increasingly being embraced as part of the battle against sprawl. While many of its

supporters are suburbanites who hope that no one sprawls out past where they have moved, smart growth is increasingly being understood as a potential tool for increasing equality of opportunity. In a paper entitled, *Sprawl as a civil rights issue*, former mayor, civil rights leader, and president of the Urban League, William Johnson (2002), writes, “ultimately, smart growth programs may offer the best chance to deal with our most pressing racial problems” (pg. 13). The results of this paper, as related to race and class, would support the idea that halting sprawl could do much to decrease inequality of opportunity.

Smart growth has been somewhat of an all-encompassing term for a variety of measures that may be taken to combat sprawl. The American Planning Association (APA) formally adopted a *Policy guide on smart growth* (2002) that clarifies definitions and makes recommendations. The definition of smart growth that is published in that document is as follows: “Smart growth means using comprehensive planning to guide, design, develop, revitalize and build communities for all that:

- have a unique sense of community and place
- preserve and enhance valuable natural and cultural resources
- equitably distribute the costs and benefits of development
- expand the range of transportation, employment and housing choices in a fiscally responsible manner
- value long-range, regional considerations of sustainability over short-term, incremental geographically isolated actions
- promotes public health and healthy communities” (pg 1; APA, 2002).

One of the problems often associated with the implementation of smart growth is that it is often implemented in isolated localities without the scope that a regional planning agency can provide. This fact that multiple cities are functioning together as an economic area renders individual cities less powerful to combat development patterns that are perceived to be negative. This undoubtedly affects many of the smart growth policies that are being implemented in Boulder, Colorado. The alternative approach, sometimes known as ‘regionalism’ (Calthorpe & Fulton, 2000) involves cooperation between municipalities on a number of interrelated goals. Most of these ideas are simple, but have complex political components to them. The next section chooses several essential elements of smart growth that would be potential policy

changes that would affect the concerns associated with sprawl in the Northern Colorado Front Range.

The 'new urbanism' model (Congress for the New Urbanism, 1999) of neighborhood development is essentially a movement toward creation of neighborhoods that more closely resemble the neighborhoods of the pre-sprawl era, 1890's-1920's. There are some improvements that perhaps justify the addition of 'new' to the term 'urbanism', and the designs are made to accommodate today's needs for quickly constructed, large-scale developments. New urbanism is often included as a component of smart growth.

From these available alternatives, smart growth appears to be the most inclusive.

### **Basic Recommendations for Change**

Sprawl has been identified as having negative effects on environment and community. It is also frequently described as unsustainable. It is less frequently discussed in terms of its impact on underprivileged groups. This thesis and several other works have discussed some of its subtle, but highly negative effects on the poor. Sprawl has also been examined as an expression of racial inequality and racism. Due to concerns that have been identified regarding sprawl in the Northern Colorado Front Range, this final section contains some basic recommendations for change that could begin to reduce the current negative effects - and prevent future negative effects - of this damaging form of community development. The primary goal of this set of recommendations is the achievement of greater social justice in the region. If these measures are taken, though, there are additional potentially positive effects on the regional economy, environment, and culture.

The first recommendation is that a regional organization be established that would consider development as it impacts the entire region. Fulton et al (2001) reports, from a national study, that more "politically fragmented" metropolitan statistical areas (MSAs) sprawl more. Actions on the part of individual municipalities have a much smaller effect when they are executed in isolation. State regulations are general and cannot directly address local concerns. Some form of regional authority would go a long way toward assuring that the region is able to cooperate in its attempt to build communities that are desirable for a variety of reasons. Because there is no dominant

population center in Northern Colorado, the competition between smaller cities could work to the region's disadvantage. If the region is able to work together to define its goals and priorities collectively, there could be greater achievements than the sum of each municipality doing so independently.

If it is not possible for community organizations to get city governments to collaborate on planning and transportation issues, it is possible that a regional, non-profit, urban design think tank could begin to influence development policies in all three – especially if it is connected to a group that is organizing in the area, such as CBC. Several cities around the country have vibrant Design Centers. Nashville, TN has a non-profit Civic Design Center supported by government, private donors, and two major Universities. It was founded through the activism of concerned citizens. The Center has been effective in addressing some community development issues, but could benefit from greater collaboration with organizations on implementation strategies (Christens, 2004). If CBC was involved in the formation of such a center for the entire region, its ability to achieve changes in regional community development could be great. Design centers have the potential to change the vision for development in a region, and to alter the development discourse. Ultimately, they may make development more democratic and equitable.

Regional growth management is one of the most obvious and pressing concerns for the Northern Colorado Front Range. While one study has shown that state level growth management policies are present in the states with the most sprawling cities (Fulton et al, 2001), it is suspected that this is because the states have implemented these policies recently to combat the sprawl – not that the policies cause sprawl. Preservation of open, public, and rural land has very positive implications for the future desirability of a region. Additionally, large-scale growth management programs have been shown to have positive effects on the revitalization of central cities (Dawkins & Nelson, 2003). As documented earlier, this is a step in the right direction for the poor, who are often left behind (in the most dilapidated areas) by sprawl. In fact, studies have also shown links between growth management policies and housing affordability (Nelson, Pendall, Dawkins, & Knaap, 2002). Growth management, then, is a crucial recommendation.

Associated with growth management is the preservation of older neighborhoods. By keeping the infrastructural and public property improvements up to date in older neighborhoods, property values are kept stable and urban blight is kept in check, at least to some degree. This can have the effect of decreasing the population's desire to 'escape' from the city, and can therefore reduce segregation by income level. This is consistent with Fulton et al.'s (2001) finding that higher-density MSA's have more people on sewer systems. Also, preservation often means less displacement, and can also avoid the kind of deterioration that leads to a "rent gap" and ultimately to gentrification (Smith, 1987).

Limiting growth and keeping existing neighborhoods from decline would represent, some would argue, constraints on the free market economy, reducing affordability. This argument does have some validity. In Boulder, for instance, the urban growth boundary that has been created has probably played some role in increasing the cost of housing (much to the delight of many Boulder residents). Boulder and other isolated municipalities with urban growth boundaries tend only to push poor populations elsewhere (in this case, to Weld County). When growth boundaries are instated without a coordinated housing affordability strategy, the result can be disastrous. Placing a constraint on a market without plans to adjust for its effects is ill advised. Growth management systems need to consider affordability issues specifically, and general market forces generally (Pendall & Carruthers, 2003) if they are to avoid having the reverse of their intended effects in the social and economic realms.

Ironically, given the resistance of many political conservatives to city planning, the greatest barriers to building affordable housing units are government regulations and middle class community pressures on planning departments. The "not in my backyard" (NIMBY) phenomenon is pervasive and keeps most forms of subsidized housing (and even multi-family units or duplexes) out of suburbs full of home owners that are concerned that their property values will drop if poor people move into the neighborhood. This classist (and often, racist) legislation is outrageous. Yet, it works. These zoning laws affordable housing from being built.

Planning departments in the U.S. are typically weak (compared with European or Canadian planning) and must cave on issues that stand to offend groups of citizens with economic power. Another government interference that works directly to the perceived benefit of those who want to keep the poor away from them (ostensibly for reasons of

maintaining high property values) is the minimum lot size. Included in zoning codes for many areas, is a minimum acreage on which a housing unit may be built. These laws have sometimes been referred to as “snob-zoning laws” (Bluestone, 2003), and (again, ironically) the same people who would generally argue that individuals should be able to do whatever they want with their own property usually support them. They are one of the fundamental barriers to housing affordability in this region and in others.

How do most sprawling areas handle housing affordability? Most regions *use the phenomenon of contained neighborhood deterioration as their system of affordable housing*. By allowing entire historic neighborhoods to turn into ghettos, cities have been able to house lower-income residents in neighborhoods with poor school systems and a less than equitable share of desirable neighborhood characteristics. These methods produce economic and racial segregation that, in turn, leads to other social problems. This thesis suggests that this is an antiquated and socially irresponsible system. Additionally, it has multiple economic costs from a public perspective. Aside from the costs of combating social ills related to concentrated poverty, the neighborhoods must eventually be rescued from neglect and decline, which can be enormously difficult and expensive – not to mention the effect that a “bad” neighborhood has on driving away potential private investment in the area.

A much more forward-thinking and responsible approach for a region that is still deciding how it will handle community development would be to establish affordable housing units throughout the region, dispersed over a variety of municipalities and areas within each city. This can be accomplished through the actions of groups like CBC, holding public officials and planning professionals accountable to higher standards. One policy tool that begins to help is “inclusionary zoning” (Fox & Rose, 2003) that either requires or creates incentives for developers of high-quality, market rate housing units to include a certain percentage of affordable units in each new development. The costs associated with this method pale in comparison to the costs of attempting to rescue entire neighborhoods from the compounding effects of concentrated poverty and disinvestment.

Another seemingly apparent way to reduce sprawl, while increasing housing affordability, is to reduce the size of the lots on which single-family homes are built, through the elimination of snob zoning laws. While many critics of sprawl combat the



entire notion of single-family homes, this thesis assumes that there will always be some demand in the U.S. for the suburban house with the white picket fence. Although, there would probably be substantially less demand for this sort of living if more urban areas were made livable. The suburban lifestyle, though, does not have to be attained at the expense of the working poor and the entire society. Currently, most municipalities, including those in the Northern Colorado Front Range, do have minimum lot sizes included in their zoning codes. These laws should be reconsidered.

Greater irony concerning snob-zoning laws is that they are supposedly designed to keep property values high by preventing density. As contrary (if anecdotal) evidence, the island of Manhattan and the peninsula of San Francisco are two of the most densely populated areas in the country – and they are both full of the most exorbitantly priced real estate, as well as relatively diverse populations. The perceived association between density and low property values is either related to associations with the central city decline that has been discussed, or it is a more fundamental racist or classist notion.

Minimum lot sizes, however, prevent affordability by placing a floor on the ultimate price of a home (Braun, 2003) by adding the cost of the large piece of land to the price of the home. The same is true for regulations that require expensive amenities to be added to all homes in an area. If the market was allowed to function unhindered, in this particular case, it would allow for the building of some homes that are more basic and are situated on smaller lots. The final price of these homes would be affordable to teachers, police, retail workers, and others that make essential contributions to the community. There is certainly a profitable market for the production of affordable homes in this region, with a discrepancy between incomes and home prices.

The Northern Colorado Front Range has been, for years, combating a water shortage. Much of this water is used to water the large lawns mandated by the zoning codes in the form of minimum lot sizes. The lawn is another expression of individualism. It provides a private park so that public facilities lose importance. In fact, the lawn itself is an interesting study in patterns of consumption and marketing. Messia (2003) tells the story of the lawn, pointing out that it is a relatively recent idea, and a heavily marketed, individualistic commodity. The creation of neighborhood parks can often provide – much more affordably – the amenities that a lawn currently provides to many families.

Instead of functioning to protect middle class consumers from their fears of racial minorities and the working class (or the perceived decrease in property values from living in the same neighborhoods as these groups), government regulations on development should focus on equity for those most likely to be displaced or otherwise disadvantaged. One example of this would be legislation protecting the Harmony Mobile Home residents, and others like them, from sudden eviction. Zoning law could be used to prevent the property from being used for other purposes. At the very least, the residents could be offered the opportunity to buy the property collectively (as they have tried to do) for a reasonable price from those who seek to benefit through exploitation of the property and its residents.

If existing neighborhoods are preserved and density is added to these neighborhoods in a strategic way, property values only stand to increase. Public funding of subsidized, affordable units throughout these neighborhoods that are becoming denser can prevent drastic, expensive measures from having to be taken down the road. A particular benefit of limiting lot sizes and the land area into which Northern Colorado Front Range municipalities can expand is the savings in the rate of water consumption. All of these changes need to happen at a regional level, with each municipality seeing its self-interest in participating in this process. This coordination of efforts can benefit everyone.

Sprawl, in conclusion, is not just environmentally wasteful, expensive and unsustainable: it is economically and social destructive of people's lives and their children's futures: it impoverishes working class people. Changes to this system of development can be made, but it does not appear to happen naturally. If the public discourse around these topics is altered to include the fact that sprawl is displacing those who perform many of society's most essential tasks, there is increased potential for actions on the part of groups like CBC to eliminate government subsidies to the powerful and barriers to the powerless. Conversely, it is possible to secure legislation that protects the powerless from terrible surprises due to the movement of capital in development.

A summary of this section's recommendations begins with regional planning. Consideration of the entire region and actions taken simultaneously, by each municipality, minimize the element of competition between localities. Next, a growth

management strategy is important, not only for environmental and transportation purposes, but for the part that the curtailing of unlimited outward expansion will play in halting the socially destructive forces of sprawl. Affordability, densification, and desegregation are the ultimate goals. Only by taking significant steps in working toward these principles of smart growth can the Northern Front Range grow into what is steadily becoming an anomaly in the United States: an environmentally sustainable, socially responsible region that values all of its members and its future generations.

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