NONMETROPOLITAN LAND USE PLANNING IN THE MOUNTAIN WEST:
THE CASE OF COCHISE COUNTY

by

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A Thesis Submitted to the Faculty of the
GRADUATE PLANNING PROGRAM
In Partial Fulfillment of the Requirements
For the Degree of
MASTER OF SCIENCE
In the Graduate College
THE UNIVERSITY OF ARIZONA

1998
Statement by the Author

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John I. Carruthers

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Date 6-6-98
Acknowledgements

I wish to acknowledge several individuals for their contributions to my studies at the University of Arizona. My committee provided me with exceptional support during the writing of this thesis. I am especially indebted to my advisor, Dr. Adrian Esparza, for his guidance and mentoring during the last two years. Dr. Esparza is personally responsible for helping me develop the desire, motivation, and skill necessary to pursue doctoral studies in urban planning. I would also like to recognize Dr. Michael Bonine for giving close attention to my thesis, and for his unequaled enthusiasm for scholarship. Special thanks to Dr. Barbara Becker, for being a constant source of encouragement and support, and for the numerous hours invested in my academic and professional development. In addition, I wish to acknowledge the Faculty of the Graduate Planning Program, with particular thanks to Dr. Arthur Silvers, who has had a deep impact upon my outlook toward planning and public policy. Personal thanks to Karen Young, Program Coordinator, for her friendship and caring during the course of my graduate studies. Finally, I wish to thank Renee Schaufler, for providing me with the love, support, and understanding that enabled me to complete this thesis and graduate degree.
To Mom, Dad, Carla, and Nada.
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Abstract

Recent years have seen widespread population growth and land development in nonmetropolitan areas of the Mountain West region of the United States. This growth has led to a special form of development that is neither urban or rural, but a combination of both: counterurbanization, or exurbanization. Exurbanization occurs as residents of urban areas relocate to the countryside in search of an idealized rural living situation while still retaining their urban lifestyles. Large quantities of rural land and irreplaceable natural open space are consumed as low density, urban-style development patterns are transposed onto the rural landscape. While this mode of development has become common in many parts of the country, it signals far deeper impacts for the Mountain West, where pro-growth ideologies—in the form of property rights coalitions and home builder’s associations—dominate. This thesis examines the role that land use planners play in the process, and delivers a conceptual model which demonstrates how traditional forms of land use regulation hasten the development of rural land rather than prevent it. The conceptual model is tested through a detailed case study of land use policy and land development patterns in Cochise County, Arizona. Based on the findings of the empirical analysis, the thesis concludes by providing several methods which should be considered when developing a new approach to nonmetropolitan land use planning.
Chapter 1
Introduction

1.1 Rationale and Statement of Purpose

Recent years have seen widespread population growth and land development in nonmetropolitan areas of the United States. While nearly all parts of the country have been affected by this trend, it has had a particularly significant impact upon the Mountain West—Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming—where rural living has come into its prime. The region’s rugged landscapes, scenic vistas, and vast expanses of wide-open space serve as strong draws for newcomers committed to finding a higher quality of life in the nation’s “untamed frontier.” The outcome of this amenity-driven growth has been a proliferation of low density rural residential development, as newcomers stake their claim to the region’s natural environment (Starrs 1995; Shumway and Davis 1996).

Most of this growth can be accounted for by one of two trends. First, metropolitan areas of the region continue to expand outward, claiming progressively larger amounts of land as they grow. This sprawling pattern of development is closely tied to the widely-held perception that land in the region is abundant and in “no short supply.” Second, the growing popularity of “rural living” and “rural lifestyles” has led large numbers of newcomers and local urban dwellers alike to seek out more remote locations. The scenic beauty and rustic charm found in small towns and distant nonmetropolitan areas are strong draws for people seeking access to outdoor recreation activities and retirement destinations. In both cases, the promise of proximity to the natural environment combined with the reluctance to abandon the comforts of suburban life result in settlement patterns which are low density reproductions of those found in more metropolitan settings.
Several interrelated land use problems have arisen from widespread rural residential development in the Mountain West. First, the process has resulted in the consumption of large quantities of rural land and irreplaceable natural open space. And since the motivation driving the demand for development in rural settings is access to pristine natural environments, the process is self perpetuating; even as development is drawn into areas with high amenities, that same development degrades the quality of the local environment. In turn, new-coming residents must locate in even more distant areas to obtain the quality of environment that they seek. Second, rural residential development commonly occurs under inordinate circumstances in areas far beyond the reach of planning jurisdictions. As a result, large rural subdivisions are often installed as inexpensively as possible, without proper regard for quality or scale, or even such necessary provisions as paved roads and adequate utility systems. Third, the process is actively promoted through opportunism on the part of land developers who benefit from engaging in the development of rural land. Because of the low cost of initial investment and a relative absence of land use controls the rural land market yields enormous financial returns. Finally, rural residential development often occurs without consideration for adjacent land uses, and comes into conflict with more traditional rural land uses and long-term rural dwellers (Yaro 1991; Nelson 1992a, 1992b, 1995; Davis et al. 1994; Nelson et al. 1995).

The seemingly endless demand for rural land in the Mountain West provides compelling grounds for reconsidering the role that land use planners play in negotiating between competing ideologies. On the one hand, the rapid pace of population growth and land development in the region has underscored the need for land use interventions aimed at the preservation of the natural environment. On the other hand, pro-growth sentiments—in the form of property rights coalitions and home builder's associations—prevail throughout most of the region. Meanwhile,
planners are left occupying a tenuous middle ground, charged with the none-too-small responsibilities of promoting orderly development and protecting the natural environment wherever practical or profitable.

The purpose of this thesis is to examine the role that planners—and the planning discipline in general—play in the rural residential development process. The traditional land use planning framework has proven ineffective for controlling the pace of rural residential development in the Mountain West. Instead, it is hypothesized that planners hasten the consumption of land by contributing to an environment in which land developers flourish.

1.2 Research Objectives

Working from this premise, the specific objectives of this thesis are to: (1) present a conceptual model of the rural residential development process, describing how land developers and planners alike promote the consumption of rural land; (2) examine whether the conceptual model explains the rural land development process in Cochise County, Arizona; and (3) propose several policy recommendations that should be considered when developing a new approach to rural land use planning.

1.3 Thesis Organization

This thesis is organized into 7 chapters. Following the Introduction, Chapters 2 and 3 provide a background discussion of issues related to land use regulation and population growth in nonmetropolitan areas. Building on these concepts, Chapter 4 develops a framework for explaining rural residential development in the Mountain West, concluding with a conceptual model summarizing the process. Chapter 5, the empirical analysis, examines whether the
conceptual mode explains the rural residential development process in Cochise County, Arizona. Based on the findings of the empirical analysis, Chapter 6 delivers several policy recommendations which should be considered when developing a new approach to nonmetropolitan land use planning. Finally, Chapter 7 concludes by summarizing the research findings and offering directions for future research.

The purpose of Chapter 2 is to deliver an overview of both applied and conceptual definitions of rurality. In the first case, the most common method of defining rural areas comes from the United States Census Bureau, which distinguishes between nonmetropolitan and metropolitan counties and rural and urban places. The Economic Research Service (ERS) has elaborated on these definitions by ranking nonmetropolitan counties according to how “rural” they are, and classifying them according to their dominant economic function and policy typology. While the framework provided by these organizations is useful for regional or national scale research, it poses serious limitations for more detailed studies because it relies heavily upon broad generalizations. A more conceptual approach draws upon several key sociological factors which differentiate nonmetropolitan settings from their metropolitan counterparts. In particular, rural areas are characterized by an ideological orientation which places a high value on land ownership and the property rights of individual land owners. As a result, many rural places remain comparatively free from land use regulation, leaving them susceptible to changes brought on by rapid population growth and land development.

Chapter 3 provides a review of national-level population change in nonmetropolitan counties during the last 25 years. The discussion consists of three components. First, patterns of nonmetropolitan population change are described in detail, demonstrating that the process has
been cyclical, and has affected different parts of the country disproportionately. In contrast to
most other regions, the nonmetropolitan Mountain West has experienced a consistent rate of
growth, even as others have faced severe decline. Second, the process of nonmetropolitan growth
is defined as counterurbanization, the product of urban residents relocating to rural areas. This
distinction is important because most rural population growth does not consist of a “rural
renaissance” or a “return to the land” as many commentators originally hypothesized. Finally,
the chapter describes three frameworks that have been advanced in explanation of
counterurbanization. Of these, the deconcentration hypothesis provides the best explanation
because it accounts for the regional selectivity of nonmetropolitan growth by pointing to the role
that consumer motivations play in relocation decisions.

Building on the background discussion provided in Chapters 2 and 3, Chapter 4 delivers a more
detailed explanation of the counterurbanization process in the Mountain West. The chapter has
four main objectives. First, it outlines the demand and supply mechanisms which drive rural
residential development, establishing that much of the region’s growth hinges on a special set of
market circumstances. These include the high demand for “rural living” situations, the abundance
of open space and low cost of rural land in the region, and the relative absence of land use
controls found in rural areas. Together, these factors encourage consumers and land developers
alike to seek out remote, high amenity locations. Second, exurbanization—the product of
widespread rural residential development in the region—is described. The process leads to the
consumption of large amounts of land and irreplaceable natural open space as low density, urban-
style development patterns are imposed upon the rural landscape. Third, the implications that
the process hold for land use planning are explained. Planners have developed their own
explanations for exurbanization, which have led them to approach the problem through the use of

5
traditional forms of land use regulation. Finally, the chapter concludes by delivering a conceptual model which summarizes the rural land development process in the Mountain West. The model demonstrates that the result of the planner’s approach has been to inadvertently perpetuate the consumption of rural land and open space.

Working from this premise, Chapter 5—the empirical analysis—demonstrates that the conceptual model explains the rural land development process in Cochise County, Arizona. The analysis consists of three components. First, Cochise County is described in detail, establishing that it provides an ideal setting for an analysis of the rural residential development process in the Mountain West. Second, quantitative data are used to document recent trends in population growth and land development in unincorporated portions of the county. Finally, the planner’s role in the rural residential development process is documented through an analysis of land use policy and land development patterns in Sierra Vista, the largest city in Cochise County. Planners from Sierra Vista have responded to the rapid rate of growth and residential development in their vicinity through a “managed growth” strategy, consisting of traditional forms of land use regulation. The plan is implemented through an aggressive annexation policy which is used to extend the reach of the city’s regulatory control by adding large quantities of vacant and newly developing land to its incorporated area. The outcome of Sierra Vista’s approach has been to inadvertently perpetuate the consumption of rural land. As the city and the reach of its land use regulations continue to expand outward, so too does development, resulting in a sprawling, low density urban form.

Based on the findings of the empirical analysis, Chapter 6 recommends several methods which should be considered when developing a revised approach to rural land use planning in the
Mountain West. First, nonmetropolitan planning should be based on a regional approach which takes both urban and rural areas into account. The principal benefit of this is that both urban and rural land uses are recognized as separate components of an integrated whole, facilitating the development of relevant land use policies for each. Second, nonmetropolitan land use planning should seek to incorporate the economic concept of value in its approach to preserving open space. This point is particularly important because at present, land dedicated to open space has little or no value in the market place which can enable it to compete with its value in a developed state. Nonetheless, it still carries a substantial intrinsic value that can be measured through an emerging array of valuation techniques. Although they have yet to be formalized, such measures would allow for better qualification of the preservation of open space in a natural, undeveloped state. Finally, the need for land use regulations should be minimized wherever possible. This can be accomplished through the use of large lot sizes, performance standards, and conservation easements. Implemented together, these principles contribute to a new framework for rural land use planning—one in which the role of planners is more a custodian of open space, and less a regulator of development.

The thesis concludes with Chapter 7, which provides a summary of the research findings and a discussion of their implications for future research. This thesis has demonstrated that the conventional approach to land use planning contributes to the rapid pace of rural residential development in the Mountain West. Recommendations for future research include the development of a similar study which examines population growth and development patterns in 5 or more nonmetropolitan counties, and incorporating surveys of local land developers into the analysis.
The term "rural" lacks precise definition, and has long been the subject of a variety of applied and conceptual interpretations (Bealer et al. 1965; Fuguitt et al. 1989; Mattson and Burke 1989; Flora et al. 1992; Brown and Zuiches 1993; Sallant and Waller 1995). The purpose of this chapter is to provide an overview of those definitions which are most important from the standpoint of land use planning. The discussion is divided into two components. First, several applied approaches to defining rurality are outlined, including the definitions employed by the United States Census Bureau and the Economic Research Service (ERS). While nonetheless useful, the framework provided by these agencies faces serious limitations because it relies heavily upon broad generalizations which can lead to serious misrepresentation of rural areas. Second, a more conceptual approach is described. This perspective draws upon several key sociological factors which differentiate nonmetropolitan settings from their metropolitan counterparts. In particular, rural areas are characterized by an ideological orientation which places a high value on land ownership and the property rights of individual land owners. As a result, many rural places remain comparatively free from land use regulation, leaving them susceptible to changes brought on by rapid population growth and land development.

2.1 Applied Approaches: Statistical and Economic Definitions

A key determinant in approaches that planners and policy makers take is the way in which relevant data are organized. In the United States, most rural data are organized on the basis of two interrelated definitions. The first derives from statistical classifications employed by the Bureau of the Census (hereafter the Census), which is by far the most accurate and commonly
used source of demographic data. Census definitions provide the basis for distinguishing between most rural and urban areas. The second, relating to economic function, comes from the Economic Research Service (hereafter the ERS), a branch of the United States Department of Agriculture. Based on Census definitions, the ERS has developed a classification scheme aimed at categorizing all nonmetropolitan counties according to their dominant economic function. While nonetheless useful, both frameworks face major deficiencies from the standpoint of rural studies; they rely upon generalizations which overlook many of the distinctions that differentiate rural places from urban places as well as from each other.

2.1.1 Statistical Definitions

The Census offers two levels of definition which are used to differentiate rural areas from their urban counterparts. First, *metropolitan* counties are distinguished from *nonmetropolitan* counties. To be considered metropolitan, a county must contain a metropolitan statistical area (MSA)—an incorporated city of 50,000 people or more—or maintain direct functional ties with an adjacent county that does. In the latter case, a county is considered metropolitan only if it contains 50,000 people or more and is part of a greater MSA of at least 100,000 people. All other counties—those which do not contain large enough incorporated areas and are not part of a greater MSA—are considered nonmetropolitan. Second, Census definitions distinguish between *urban* and *rural* places. An urban place is one that contains 2,500 or more people and all others are considered rural. The two levels of distinction are based on different concepts and are not mutually exclusive (Sallant and Waller 1995). For example, metropolitan counties commonly contain rural places, and many urban places are located within nonmetropolitan counties.

As of 1993, 2,276 counties in the United States were classified as nonmetropolitan according the
the Census’ definition. The distribution of these counties is shown in Figure 2.1, which illustrates that the vast majority are concentrated in the Great Plains and Mountain West regions of the country. These counties can be further described through the Beale Coding System, developed by the ERS. As shown in Table 2.1, the system ordinarily ranks nonmetropolitan counties according to how “rural” they are, based on whether they contain an urban place or not. The most “urbanized” nonmetropolitan counties are those which contain an urban area of 20,000 people or more and are adjacent to a metropolitan county. The most “rural” nonmetropolitan counties are those that contain no urban areas (a place with 2,500 or more people), and are not adjacent to a metropolitan county (Flora et al. 1992; Salant and Waller 1995).

2.1.2 Economic Function and County Typology

A more elaborate description of rural areas is obtained through the ERS Typology. This scheme is summarized in Table 2.2. It classifies nonmetropolitan counties according to their dominant economic function and policy type (Cook and Mizer 1990; Flora et al. 1992; Salant and Waller 1995). Most recently revised in 1990, the ERS Typology classifies all 2,276 counties considered to be nonmetropolitan in 1993 into six mutually exclusive categories related to economic function: (1) farming-dependent; (2) mining-dependent; (3) manufacturing-dependent; (4) government-dependent; (5) services-dependent; and (6) nonspecialized, reserved for those counties not meeting the specifications of the other 5 categories. Furthermore, as of the 1990 revision, it assigns an overlapping classification related to public policy: (1) retirement destination; (2) federal lands; (3) commuting; (4) persistent poverty; and (5) transfers-dependent (Cook and Mizer 1994).
Figure 2.1 Nonmetropolitan Counties, 1993

Source: Sallant and Waller 1995, p. 15.
Table 2.1 The Beale Coding System

<table>
<thead>
<tr>
<th>Urban Character</th>
<th>Location</th>
<th>Definition</th>
<th>Number and Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urbanized</td>
<td>Adjacent</td>
<td>Urban population of 20,000 or more and adjacent to a metropolitan county</td>
<td>133; 6%</td>
</tr>
<tr>
<td>Urbanized</td>
<td>Nonadjacent</td>
<td>Urban population of 20,000 or more and not adjacent to a metropolitan county</td>
<td>113; 5%</td>
</tr>
<tr>
<td>Less Urbanized</td>
<td>Adjacent</td>
<td>Urban population of 2,500 to 19,999 and adjacent to a metropolitan county</td>
<td>611; 27%</td>
</tr>
<tr>
<td>Less Urbanized</td>
<td>Nonadjacent</td>
<td>Urban population of 2,500 to 19,999 and not adjacent to a metropolitan county</td>
<td>647; 28%</td>
</tr>
<tr>
<td>Rural</td>
<td>Adjacent</td>
<td>No places with a population of 2,500 or more and adjacent to a metropolitan county</td>
<td>247; 11%</td>
</tr>
<tr>
<td>Rural</td>
<td>Nonadjacent</td>
<td>No places with a population of 2,500 or more and adjacent to a metropolitan county</td>
<td>525; 23%</td>
</tr>
</tbody>
</table>

Total Number of Counties: 2,276; 100%

Source: Adapted from Flora et al. 1992 and Sallant and Waller 1995.
Table 2.2 The ERS Typology

<table>
<thead>
<tr>
<th>Economic Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farming Dependent</td>
<td>Farming contributed to a weighted annual average of 20% or more of total labor and proprietor income between 1987 - 1989</td>
</tr>
<tr>
<td>Mining Dependent</td>
<td>Mining contributed to a weighted annual average of 15% or more of total labor and proprietor income between 1987 - 1989</td>
</tr>
<tr>
<td>Manufacturing Dependent</td>
<td>Manufacturing contributed to a weighted annual average of 30% or more of total labor and proprietor income between 1987 - 1989</td>
</tr>
<tr>
<td>Government Dependent</td>
<td>Government activities contributed to a weighted annual average of 25% or more of total labor and proprietor income between 1987 - 1989</td>
</tr>
<tr>
<td>Services Dependent</td>
<td>Service activities (including private and personal services, agricultural services, wholesale and retail trade, finance and insurance, transportation and public utilities) contributed to a weighted annual average of 50% or more total labor and proprietor income between 1987 - 1989</td>
</tr>
<tr>
<td>Nonspecialized</td>
<td>Counties not classified as a specialized type between 1987 - 1989</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Policy Types</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retirement Destination</td>
<td>The population added 60 years or older increased by 15% or more between 1980 - 1990 through the inmovement of people</td>
</tr>
<tr>
<td>Federal Lands</td>
<td>Federally owned lands made up 30% or more of the counties land area in 1987</td>
</tr>
<tr>
<td>Commuting</td>
<td>Workers aged 16 years and over commuting to jobs outside of their county of residence were 40% or more of all county workers in 1990</td>
</tr>
<tr>
<td>Persistent Poverty</td>
<td>Persons with poverty-level income in the preceding year were 20% or more of the total population in each of four years: 1960, 1970, 1980, 1990.</td>
</tr>
<tr>
<td>Transfers-dependent</td>
<td>Income from transfer payments (Federal, state, and local) contributed to a weighted average of 12% or more of total personal income between 1987 - 1989</td>
</tr>
</tbody>
</table>

Source: Adapted from Cook and Miser, 1994.
The ERS Typology is commonly drawn upon in analytical research. For example, two recent studies of population change in nonmetropolitan counties organize the data they analyze by ERS classifications (Fuguitt and Beale 1996; Shumway and Davis 1996). Both describe the increased population growth that has occurred in nonmetropolitan counties over the last several years, and point to a corresponding increase in the number of service sector jobs in those counties experiencing growth. These findings were made possible by a 1990 revision to the ERS Typology, which added services-dependent counties to the list of classifications (Cook and Mizer 1994). In short, the ERS Typology is maintained to reflect contemporary nonmetropolitan trends, and is a valuable tool for broad-scale research regarding nonmetropolitan counties.

2.1.3 Limitations of Statistical and Categorical Definitions

Several interrelated limitations arise from widespread reliance on statistical and categorical definitions. First, Census definitions carry a decidedly urban bias, leading gross generalizations to be made about rural areas. Both rural and nonmetropolitan are residual terms, used to describe everything that is left over after all urban areas and places have been categorized (Flora et al. 1992). The framework leaves little room for making specifications regarding rural places, but instead, lumps them all together. In part, this is because the spatial dimensions that many rural areas have are prohibitively large for detailed descriptions. But under such a classification scheme, a nonmetropolitan county located in the Mountain West differs little from one located in the Great Plains. This poses a serious problem because most analytical research involving rural areas utilizes county level data, and focuses upon those counties which have been classified as nonmetropolitan (Salant and Waller 1995).
Second, the use of county-level data leads to serious geographic misrepresentation of the urban/rural divide. In a recent study, Cromertie and Swanson (1995) demonstrate that census tracts may be used to delineate rural areas much more accurately than counties. Using a method similar to the Beale Coding System described above, they show that county-level classification in the state of Arizona conceals vast rural areas. That is, many of the states “metropolitan” counties are actually composed primarily of rural areas. When classified at the scale of the census tract, the portion of the state’s total area accounted for by metropolitan areas drops from 19% to 2% (Cromertie and Swanson 1995). The significance of this is that the rural population—of both metropolitan and nonmetropolitan counties—and the urban population of nonmetropolitan counties typically comprise what most analysts consider to be rural and small town environments (Fuguitt et al. 1989). But given the current organization of data, much of this population remains hidden because there is no way to accurately account for rural populations located in metropolitan counties.

Finally, ambiguity pervades on cultural and socioeconomic levels because contemporary rural America is very complex and diverse, and cannot easily be described in general terms (Fuguitt et al. 1989; Lapping et al. 1989; Flora et al. 1992). Beale (1981) places this diversity in context through his characterization of 15 separate nonmetropolitan geographic regions. These regions range in composition from the commuter-populated exurban counties of the Northeastern Metropolitan Belt to the impoverished counties of the Mississippi Delta Region, and from the agriculturally-dependent Corn Belt and Great Plains to the arid and semiarid counties of the Rio Grande Valley and the Southwest. Within this geographic diversity is found an equally rich variety of cultural and socioeconomic settings, which are not accounted for through Census definitions, or even through the elaborations provided by the ERS Typology (Brown and Zuiches
1993). In short, there is a strong need to develop other ways of describing rural areas, not only by way of statistical methods, but also within a sociological context.

2.2 Conceptual Approach: Ideology and Land Use Issues

A more conceptual approach focuses on the role that an ideological orientation plays in defining rural environments. Although rural settings and communities are very heterogeneous, they often have in common a social climate which favors individualism and the right to freedom and self determination (Lassey 1977; Healy and Rosenberg 1979; Popper 1979; Dyballa et al. 1981; Healy and Short 1981, 1983; Garkovich 1982; Daniels et al 1989, 1995; Mattson and Burke 1989; Sargent et al. 1991). This belief system provides an appropriate foundation for defining rurality because it does not limit the term to a particular context. Rather, it lies at the heart of the vast diversity found throughout rural America. Rural places are very much the product of the people who live in them and, in many ways, are direct manifestations of their lifestyles, occupations, and values.

2.2.1 Characterizing Rural Ideology

The rural ideological orientation can be characterized on the basis of several key distinctions between rural areas and their urban counterparts. First, rural communities are smaller and less complicated than urban communities. They are composed of fewer numbers of people, and typically have less complex social institutions (Fuguitt et al. 1989). Because communities tend to be small, rural dwellers on the whole have better access to local government than urban people, granting them more direct control over their environments (Daniels et al. 1995). As a result, rural communities rely less on government control than urban communities, instead depending upon cooperation and community participation as a means of meeting common goals and solving
problems (Sargent et al. 1991; Galston and Baehler 1995). In short, rural communities owe much of their flavor and uniqueness of character to their small size, and the influence that residents have over the setting as a whole.

Second, people from rural areas are commonly regarded as being more conservative and slower to accept new ideas and change than people from urban areas (Daniels et al. 1989; Lapping et al. 1989; Flora et al. 1992). But if rural people have been observed to accept change slowly, it is often because they are wary of the impacts that change brings. Rural communities are particularly susceptible to disruption from outside influences because of their small size. The arrival of branches of large retail chains such as Wal-Mart can have devastating effects on small towns throughout an entire region (Daniels and Lapping 1996). Many local businesses and banks have been driven out of business or bought out by such larger corporations, taking money out of rural economies (Flora et al. 1992). Therefore, rural conservatism should not be characterized as an aversion to change but, instead, as a strong interest in controlling the rate and size of change (Daniels et al. 1995).

Finally, land is at the forefront of consciousness in nonmetropolitan America, and its importance as a symbol of rural life cannot be overstated. Rural people have long filled the role of keepers of the nation’s natural resource base, often deriving their livelihood directly from the land (Dyballa et al. 1981; Flora and Christenson 1991; Sargent et al 1991). Historically, rural land has been the source of much of the nation’s crops, livestock, timber, and minerals, all of which represent a means of production (Lapping et al. 1989). For this reason, many rural land owners retain very close emotional ties to land, which is valued for its productive capacity and as a symbol of status. This attachment often leads to a very negative attitude towards traditional urban-based
forms of land use regulation. In rural settings, land—and the ability to do what one pleases with it—is the key to people's ability to determine not only their own future, but also that of the community as a whole.

These three factors point to a critical distinction between rural and urban areas. The distinction is surmised best as an ideological orientation, although in truth, it is something much more comprehensive. Small communities and local governments, and extensive property rights endowed through land ownership, have given rural people a high degree of control over the shape and character of their environments. In relation to both form and function, rural areas are more the product of individuals than government. Thus, rural communities are very diverse, especially across regions, having developed according to the particular social, economic, and environmental peculiarities of each given locality.

2.2.2 The Impact of Rural Ideology on Land Use Issues

From the perspective of land use planning, rurality can be defined in terms of how the rural ideological orientation affects issues of land use regulation. There is considerable rationale for adopting this approach, because it provides a foundation for building a planning framework that is better suited for rural settings. Planners have been criticized extensively for treating small towns and rural environments as if they were urban (Cohen 1977; Swanson et al. 1979; Popper 1984; King and Harris 1989; Mattson and Burke 1989). In order to address rural and small town environments with more sensitivity, it is necessary to understand that the distinctions described above amount to a significant difference in the way rural people react to land use regulation. In this sense, rurality is embodied in the attachment that many rural people exhibit towards the right to freedom and self determination, particularly with regards to property rights.
The most direct manifestation of that belief system is the way in which rural dwellers perceive land and land ownership. The feeling is that, above all, they are in the best position to determine the most appropriate future for their land. For this reason, land use regulation is a very controversial issue in most rural areas; it is often thought of as unfair, and as a hindrance to the fundamental rights of property owners (Popper 1979; Garkovich 1982; Daniels et al. 1989, 1995; Mantell et al. 1989). Because rural landowners traditionally have had a high level of discretion over their land, land use regulations are often resented, and viewed as interfering with a way of life. As Popper (1979, p. 129) notes:

"Most frequently... ownership and regulation will be diametrically opposed....[A]ll owners feel drawn to their land. They would intrinsically prefer to avoid regulation. They will always fight it. If absolutely necessary, they will accept it, but only in the weakest possible form. It is not a matter of disliking change or paperwork. It is not even necessarily a matter of liking money. It is an instance of the deep human impulse to property, which becomes yet deeper in the context of the American tradition of free-enterprise individualism."

Such beliefs presuppose that the property rights and the land-based interests and intentions of the individual are tantamount to those of the community as a whole (Garkovich 1982). Most traditional land uses rely heavily upon the discretion of individual land owners, making land use controls cumbersome, unnecessary, and even irrelevant (Nelson et al. 1995). But a significant problem arises when land governed by such a belief system comes under demand for urbanization. Chapter 4 explores this issue further, and addresses many of the mechanisms involved with land conversion in detail. That discussion is articulated around the understanding that the rural environment is dominated by a sociopolitical climate which is adverse to land use regulation. Land use issues strike at the heart of the rural sociocultural construct, creating dimensions that are typically unfamiliar to planners, complicating planning efforts in
nonmetropolitan areas (Garkovich 1982; Wright 1993).

As an outcome, the effectiveness and viability of traditional land use controls is sharply limited in rural settings. Most techniques—from zoning to subdivision regulations—rely upon preordained guidelines which circumvent the decision making processes traditional to many rural communities. In small towns, regulations of this sort do not allow for the flexibility needed to maintain adequate control over impending change, and in outlying areas they preclude the discretion of individual landowners. In short, most forms of land use regulation serve only to tell rural communities how to become more like their urban counterparts. In so doing, they undermine individuality within rural communities, and detract from the diversity that is found throughout the nation's rural environments.

2.3 Summary and Conclusions

This chapter presented an overview of both applied and conceptual definitions of rurality. In the first case, the most common definition of rural areas comes from the Census, which distinguishes between metropolitan and nonmetropolitan counties and rural and urban places. Nonmetropolitan counties can be described in more detail through the Beale Coding System—which ranks them according to how "rural" they are—and by the ERS Typology, which classifies them by their dominant economic function and policy typology. A major limitation to this framework from the standpoint of rural studies, is that it relies upon broad generalizations which can lead to serious misrepresentation of rural areas. As a result, the rich diversity of rural communities and settings found throughout the country often remains overlooked and unanticipated.
A more conceptual approach defines rurality on the basis of an ideological orientation. This perspective draws upon several key sociological factors which distinguish rural settings from their urban counterparts. First, rural communities are smaller and less complex than urban communities, enabling their residents to play a greater role in public decision making. Second, rural dwellers often approach change and new ideas—regarding their communities—with conservatism because rural and small town environments are especially sensitive to the impact that change brings. Finally, at the heart of the rural sociological construct lies a strong emotional attachment to property rights and the ability of individuals to use their land as they please. Together, these characteristics create an environment unfamiliar to most urban planners. In particular, the viability of land use regulations is greatly reduced because they are perceived as an obstruction to the sovereignty of individual land owners, and as an impediment to a traditional way of life. In sum, land use planning—in the traditional urban sense—is not readily accepted in rural areas because it too often runs contrary to the beliefs and lifestyles of long-term rural dwellers.

The definitions provided by this chapter relate to this thesis in two important ways. First, Census definitions are used in Chapter 3 to describe broad patterns of population change in nonmetropolitan counties over the last 25 years. For the purposes of national-level population analysis, “nonmetropolitan” equates with “rural,” so the two terms are used interchangeably. Second, the remainder of the thesis 4, 5, and 6—centers on the consumption of rural land as an outcome of widespread nonmetropolitan population growth. A key factor in the process is the relative absence of land use controls in rural areas—and how the lack of an adequate land use planning framework has been capitalized upon to meet a new and growing demand for suburban-style living in rural settings.
Chapter 3
Counterurbanization

This thesis has delivered an overview of both applied and conceptual approaches to defining rural and nonmetropolitan areas. Of these, the framework employed by the Census Bureau is by far the most commonly used in analytical research. Census definitions distinguish between rural and urban places and metropolitan and nonmetropolitan counties. This heavy dependence on statistical definitions has produced several limitations for rural studies, and can lead to serious misrepresentation of rural areas. Nonetheless, the Census remains the most accurate comprehensive source of demographic data. As a result, nearly all national-level research involving rural areas focuses on nonmetropolitan counties.

The purpose of this chapter is to review patterns of population change in nonmetropolitan counties over the last 25 years, and to present an analytical framework for interpreting those changes. The discussion consists of three components. First, nonmetropolitan population change is described in detail, demonstrating that the process has been cyclical and has affected different regions of the country disproportionately. In contrast to most other regions, the nonmetropolitan Mountain West has been less sensitive to population downturns, consistently attracting a large proportion of the nation’s internal migration flow. Second, nonmetropolitan population growth is described as “counterurbanization,” the product of urban residents relocating to rural areas. This distinction is important because most rural population growth does not consist of a “rural renaissance,” or a “return to the land,” as many commentators originally hypothesized. Instead, it consists of the dispersal of urban residents, and in many areas has resulted in a reconfiguration of the traditional urban form. Finally, three theoretical frameworks
are described that have been used to explain counterurbanization. Of these, the deconcentration perspective provides the best explanation because it points to the role that consumer motivation plays in the restructuring of population distribution patterns.

3.1 Nonmetropolitan Population Change in the United States

For most of the twentieth century internal migration within the United States has favored urban areas. Rural areas either lost population through outmigration or gained population very slowly by way of natural increase (Johnson 1993; Johnson and Beale 1994; Fuguitt 1995). But recent demographic trends have countered this long standing pattern, causing rural areas nationwide to gain population through an increase in net migration. Still, a divide exists, and there is clear evidence that nonmetropolitan population change affects different regions of the country disproportionately, causing some to grow and others to decline.


The past two and a half decades have seen three unanticipated shifts in the pattern of population change in nonmetropolitan America. The first—called the “nonmetropolitan turnaround”—began in the early 1970s when rural areas suddenly began to gain population at the expense of urban areas (Beale 1975; Brown and Zuiches 1993; Fuguitt and Beale 1996). The second shift occurred in the early 1980s when nonmetropolitan areas began to lose population once again, as migration flows reverted back towards metropolitan areas. More recently, a third reversal has occurred, and there is substantial evidence that a new turnaround is underway. Data from the 1990s indicate that nonmetropolitan areas are once again experiencing a higher rate of net migration than their urban counterparts (Johnson and Beale 1994; Fuguitt 1995; Fuguitt and Beale 1996; Shumway and Davis 1996).
With the onset of the 1970s' nonmetropolitan turnaround, the population of rural areas began to grow at a faster rate than in urban areas for the first time in recent history (Fuguitt et al. 1979; Fuguitt and Beale 1996). Between 1970 and 1980, the nation's rural population increased by 15.4%, compared to a 9.1% increase in the urban population (Healy and Short 1981). Figure 3.1, which shows the rate of net migration for metropolitan and nonmetropolitan areas between 1970 and 1994, demonstrates the outcome of this change. As the rate of net migration to rural areas rises in the early 1970s, a corresponding decrease occurs in the rate of net migration to urban areas as the result of people relocating to the countryside. Note that the dip in the metropolitan curve appears shallow compared to the rise in the nonmetropolitan curve, because the changes are expressed in terms of rates. The number of people relocating to rural areas--where population is comparatively low--has a much greater impact than it does on metropolitan areas, where the populations are comparatively large.

The countertrend of the 1970s was particularly remarkable for two reasons. First, while net migration to rural areas was on the rise, natural increase was in decline, increasing the importance of net migration for nonmetropolitan population growth (Beale 1975; Johnson 1993; Johnson and Beale 1994; Fuguitt and Beale 1996). Figure 3.2 shows the rate of natural increase for metropolitan and nonmetropolitan areas between 1970 and 1994. In both areas natural increase was relatively low for much of the decade, causing a much less substantial effect compared to previous periods. As a result, most of the population growth that occurred in nonmetropolitan areas is attributable to net migration. Second, the countertrend affected not only rural areas located in close proximity to urban centers, but also those that are more remote (Beale 1975; Vining and Strauss 1977; Long and DeAre 1982; Fuguitt et al. 1989). In other words, the widespread nonmetropolitan population growth was not the product of metropolitan
Figure 3.1 Rate of Net Migration for Metropolitan and Nonmetropolitan Counties 1970 - 1994

Figure 3.2 Rate of Natural Increase for Metropolitan and Nonmetropolitan Counties 1970 - 1994

decentralization alone; people were specifically seeking out remote rural areas when relocating.

In the early 1980s, a second reversal occurred, and nonmetropolitan areas nationwide began to lose population once again (Fuguitt and Beale 1996; Shumway and Davis 1996). Migration flows favored metropolitan areas, and nonmetropolitan areas continued to experience a low rate of natural increase (Frey and Speare 1988, 1992; Frey 1993; Johnson 1993; Johnson and Beale 1994). Again, both trends are demonstrated in Figures 3.1 and 3.2. Figure 3.1 shows a substantial drop in the rate of net migration for nonmetropolitan areas beginning in the late 1970s, becoming negative in 1981. At the same time, Figure 3.2 shows that after rising slightly in the late 1970s, the rate of natural increase in nonmetropolitan areas remained in decline through the 1980s. The outcome was that 55% of all nonmetropolitan counties lost population during the 1980s.

The final shift began in the mid-1980s as the rate of net migration to nonmetropolitan counties slowly began to increase in many parts of the country (Long and DeAre 1988; Beale and Fuguitt 1990). The overall rate of net migration to nonmetropolitan counties became positive again in 1991 (Figure 3.1), with more than 64% gaining population between 1990 and 1992 (Johnson and Beale 1994). This recovery has been particularly substantial in counties which are not located adjacent to metropolitan areas; between 1990 and 1994 nonadjacent counties experienced an absolute increase of 772,000 people, compared to the 134,000 of the entire decade of the 1980s (Economic Research Service 1995). By 1992, nonmetropolitan counties on the whole were gaining population at a more rapid rate than their metropolitan counterparts once again (Fuguitt and Beale 1996). At the same time, the rate of natural increase for nonmetropolitan areas reached its lowest point in the 24 year period (see Figure 3.2), indicating that the current trend of
population growth is again attributable to net migration.

Some researchers align current trends with those of the 1970s, identifying them as a revival of the nonmetropolitan turnaround (Johnson 1993; Lichter 1993; Johnson and Beale 1994). Others, however, remain more reluctant to make this association (Frey and Speare 1992; Albrecht 1993; Frey 1993; Fuguitt 1995). The primary reason for the hesitance is that population growth has not occurred evenly throughout nonmetropolitan areas as it did during the 1970s. Between 1990 and 1994, approximately 26% of all nonmetropolitan counties continued to lose population (Economic Research Service 1995). This has raised a number of questions, most of which relate to the selectivity of the current trend of nonmetropolitan growth, and why some regions continue to decline while others are growing rapidly. As noted in a recent Economic Research Service report, “a rural revival, if it has begun, is not occurring across all of rural America” (Economic Research Service 1995, p.3).

3.1.2 Nonmetropolitan Decline: The Great Plains

Although nonmetropolitan growth has been widespread in recent years, the trend has not affected all regions of the country equally. This is illustrated in Figure 3.3, which shows the locations of declining population counties in the United States. Most of these counties are concentrated in the Great Plains, including Iowa, Kansas, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, and Texas. Data indicate that during the 1980s, 84% of Great Plains counties lost population—a greater proportion than any other region. And even with the revival of nonmetropolitan growth in the 1990s, the situation seems unlikely to change. Between 1990 and 1994, the Great Plains continued to experience persistent outmigration and slow economic growth. As a result, the region received the smallest rate of population increase in the country.
Figure 3.3 Declining-Population Counties

At first glance, the protracted state of decline in the Great Plains appears to undermine the case for a rural revival, but two points require further consideration. First, many counties in the region are very remote. As a result, they are located far from metropolitan areas which are able to support nonmetropolitan growth by acting as regional service centers. Second, as shown in Figure 3.4, the ERS Typology classifies a large proportion of Great Plains counties as agriculturally dependent. The Economic Research Service (1995) indicates that these two factors—remoteness and agricultural dependency—are the primary attributes associated with persistent nonmetropolitan decline. Further, as a result of the farm crisis, the 1980s were particularly hard on the Great Plains. Although the region has seen some relief since that time, it has not been enough to offset persistent outmigration. In short, the prevailing trend of nonmetropolitan decline in the Great Plains is attributable to its distinct geographic and economic characteristics. Therefore, the region’s situation should not overshadow patterns of widespread nonmetropolitan growth in other parts of the country.

3.1.3 Nonmetropolitan Growth: The Mountain West

In contrast to most other regions of the country, nonmetropolitan areas of the Mountain West have experienced a consistent rate of population increase in recent years. Data indicate that even during the 1980s, when nonmetropolitan decline was widespread, counties in the Mountain West continued to grow through net migration (Johnson 1993). As the 1990s have progressed, nonmetropolitan counties located in Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming have captured an increasingly large proportion of the country’s internal migration (Beale and Fuguit 1990; Johnson 1993; Environmental Research Service 1995; Johnson
Figure 3.4 Farming-Dependent Counties, 1986

Source: Flora et al. 1992, p. 46.
Figure 3.5 shows the locations of rapid growth counties in the United States. The figure shows that many of these counties are concentrated in the Mountain West. Although the West has claimed much of the population growth during recent decades, its role in the present nonmetropolitan growth trend is particularly significant. The Economic Research Service documents that between 1990 and 1994, “the growth rate in the nonmetro West was more than double the pace of any other region... [the West] received 34% of all U.S. nonmetro growth, although [it] had only 14% of the nonmetro population in 1990” (Economic Research Service 1995, p. 4 - 8). The same report also notes that a large number of counties located in the region are experiencing growth rates higher than the national average of 4.7%.

In contrast to the 1970s, the present rate of nonmetropolitan growth in the Mountain West is not as rapid, but a greater number of counties are participating. Between 1990 and 1995, 75% of all nonmetropolitan counties in the region gained population. This compares to 60% during the 1970s and just 30% during the 1980s. Nonetheless, not all counties claim an equal share of the growth trend. Counties gaining the most population are destinations for retirees and people seeking access to outdoor recreation--in short, those with high natural amenity values (Shumway and Davis 1996).

Thus, the selectivity of growth occurring across the country--and within individual regions--is directly related to the attractiveness of individual locations. People are consumers of place (Logan and Molotch 1987), and when relocating, they consciously seek out areas that are perceived as desirable places to live. The Mountain West, with its rugged landscapes, scenic
Figure 3.5 Rapid Growth Counties, 1993

vistas, and vast expanses of wide-open space, offers a quality of environment unavailable in most other regions of the country. As a result, the Mountain West attracts large numbers of migrants, and will continue to do so as long as requisite amenities remain available.

3.2 Counterurbanization

The widespread nonmetropolitan growth of the 1970s provoked two distinct reactions from the academic community (Vining and Strauss 1977). First, many commentators associated the process with urbanization and the decentralization of metropolitan areas. This perspective remains common today, and has direct implications for planning and other public policies administered in rural areas. Second, others believed that the turnaround signaled the onset of a fundamental change in the pattern of human settlement. In this case, the event was viewed as the outcome of a "rural renaissance" or "back to the land" movement, leading people to seek out lower densities and neo-rural lifestyles (Long and DeAre 1982, 1988; Champion 1989). This argument was strengthened by evidence that growth was not confined to counties located adjacent to metropolitan areas.

From this basis, the process of nonmetropolitan growth—population deconcentration—came to be known as "counterurbanization" (Champion 1989). When the concept was first advanced in the mid-1970s, it was intended to denote a reversal of the process of urbanization (Berry 1976). This interpretation arose from speculation that the population turnaround had brought about an entirely new form of settlement, or as Vining and Strauss (1977) suggested, a "clean break" from patterns of the past. The "clean break" perspective held that the population of the country no longer gravitated toward urban areas. Instead, it was hypothesized that a mass deconcentration was underway, leading to a more even distribution of population across space. If this were the
case, some argued, counterurbanization would eventually result in the complete abandonment of traditional urban development patterns and lifestyles (Champion 1989).

With the onset of the 1980s, it became clear that the so-called "clean break" had not materialized. This was evidenced in two ways. First, the turnaround period came to an end as internal migration began to favor metropolitan areas once again. This revealed that the process of deconcentration had not replaced urbanization as the dominant force shaping the distribution of the nation's population. Second, counterurbanization had not resulted in radically different settlement patterns or lifestyles. Instead, much of the nonmetropolitan growth produced development patterns very similar to those of more urban or suburban settings, except at much lower densities. In addition, many of the people relocating to rural settings continued to maintain functional ties to metropolitan areas and did not engage in traditional rural activities. In sum, although counterurbanization occurs as people relocate in search of lower densities and access to the countryside, it is not the product of a rural renaissance or back to the land movement.

This distinction is important for two interrelated reasons. First, it indicates that a large proportion of nonmetropolitan growth consists of urban residents relocating in search of rural amenities. In many cases, this has resulted a reconfiguration of the traditional urban form, as metropolitan areas spread outward to claim progressively larger areas (Blumenfeld 1986; Nelson 1992b; Nelson et al. 1995). Second, because counterurbanization is attributable to the relocation of urban residents, planners--and the planning discipline in general--associate the process with urbanization. This causes very large rural areas to be viewed as outlying extensions of the urban core. Davis et al. (1994, p. 45) surmise this perspective, stating that "[i]f sustained, counterurbanization will result in a new urban form which may dominate the American landscape
by the first part of the next century. That urban form may be characterized as the exurb.” This view is shared by many other commentators and, as described in Chapters 4 and 5, has had a significant impact upon the methodology of nonmetropolitan planning.

3.3 Explanations for Counterurbanization

As it became clear that counterurbanization was not the product of a rural renaissance, researchers began to seek other means of explaining nonmetropolitan population growth. This has led to three explanations for counterurbanization: the period explanation, the regional restructuring explanation, and the deconcentration explanation (Frey 1993). Each provides a different interpretation of the nonmetropolitan turnaround, and offers a different prediction for nonmetropolitan population growth trends.

3.3.1 Period Explanation

The period explanation attributes the nonmetropolitan turnaround to the unique demographic and economic characteristics of the 1970s (Frey and Speare 1992). These include three factors. First, the oil shortage triggered an energy crisis and resulted in extensive development of extractive industries—particularly in the Mountain West. Second, the decentralization of employment reduced employment growth in metropolitan centers and shifted many jobs to nonmetropolitan areas (Long and DeAre 1982; Fuguitt et al 1989). Finally, the growth of college and retirement-aged cohorts precipitated growth in small college towns and retirement destinations (Frey 1989, 1993). In short, the period explanation describes the countertrend of the 1970s as a short term aberration that should have subsided once associated social and economic dislocations stabilized.
This view has led some to label the 1970s as a “transition decade” (Frey and Speare 1988, 1992). It is widely acknowledged that much of the nonmetropolitan population growth of the time was enabled by several factors which culminated during the 1960s and 1970s. These include the completion of the interstate highway system, the expansion of state university systems, improvements in communications, the decentralization of knowledge-based industries, and the increasing demand for recreation and retirement homes (Fuguitt et al 1979; Popper 1981; Daniels et al 1989; Fuguitt et al 1989; Flora et al 1992; Frey 1993). There is little doubt that the convergence of these factors with the demographic characteristics of those two decades helped initiate widespread nonmetropolitan growth in the United States.

3.3.2 Regional Restructuring Explanation

The regional restructuring explanation attributes nonmetropolitan population growth to the expansion of the global economy and the rise of multinational corporations. It agrees with many of the conclusions of the period explanation, maintaining that the economic decline faced by metropolitan areas during the 1970s was a “short term episode--leading toward a new spatial organization of production” (Frey 1993 p. 743). This restructuring was facilitated by improved communications, production, and transportation technologies which enabled multinational corporations to take advantage of opportunities previously unavailable outside of metropolitan areas (Shumway and Davis 1996). In sum, corporations are now free to locate wherever they choose without risk of loosing competitive advantage.

The geography of employment has been restructured by the locational decisions of multinational corporations. Consequently, many nonmetropolitan areas have witnessed an increase in the importance of service sector industries and a decrease in the importance of more traditional
resource-dependent and manufacturing industries. The regional restructuring explanation holds serious implications because the multinational corporation becomes the key determinant of population distribution. If this is the case, growth and change in metropolitan and nonmetropolitan areas alike become dependent on the decisions of private industry (Frey 1989, 1993; Shumway and Davis 1996).

3.3.3 Deconcentration Explanation

The deconcentration explanation views nonmetropolitan population growth as the combined outcome of residential preferences for low density living and the spatial expansion of labor and commodity markets. Improved communications and transportation technologies have resulted in a "loosening of spatial constraints," decreasing the importance of distance in locational decisions. People may now live wherever they choose, without regard for proximity to urban centers. At the same time, most forms of employment now have a similar level of flexibility, and subsequently, are able to relocate according to the preferences of the work force (Frey 1987, 1989, 1993; Frey and Speare 1992; Lichter 1993; Fuguitt and Beale 1996; Shumway and Davis 1996). The process is exemplified by the number of "high-tech" industries that have located in the Mountain West in response to the large and growing educated work force (Starrs 1995).

Of the three explanations, the deconcentration perspective comes closest to maintaining the spirit of the "clean break" interpretation of counterurbanization. It does not account for the revival of metropolitan population growth that occurred in the 1980s but, instead, predicts that nonmetropolitan population growth should have continued through that decade. Some researchers have discarded the theory in favor of a combination of the period and regional restructuring explanations, which predict a return to sustained growth in metropolitan areas (Frey

Others agree with the deconcentration hypothesis, and apply a period explanation to the reversal which occurred in the 1980s (Johnson and Beale 1994). According to this perspective, the decade’s economic recession led to reduced prices for agricultural, energy, and mineral commodities and caused a decline in manufacturing employment. As a result, it became difficult to make a living in nonmetropolitan areas, forcing many people to migrate to metropolitan areas (Frey 1993; Johnson and Beale 1994; Shumway and Davis 1996). By the end of the 1980s, the impact of many of these influences began to subside and nonmetropolitan population growth began to recover again (Beale and Fuguitt 1990). This assessment is reasonable given the recent revival because it implies that the widespread nonmetropolitan decline of the 1980s simply reflects a lag in the overall process of counterurbanization.

The deconcentration perspective provides the best explanation for nonmetropolitan population growth, especially given the regional selectivity of the current trend. It differs from period and regional restructuring explanations in two ways. First, it points to the role that consumer motivations play as a determinant in the reconfiguration of population distribution patterns. Second, it predicts that areas of high amenity—such as the Mountain West—will attract large numbers of migrants. In sum, the unequal distribution of nonmetropolitan population growth across regions—and sub-regions—is accounted for by their relative attractiveness as places to live. The outcome is a special form of consumerism that responds to remote high amenity locations in the Mountain West.
3.4 Summary and Conclusions

This chapter reviewed recent nonmetropolitan population change. It demonstrates that the process has been cyclical, affecting different regions of the country disproportionately, and that it is primarily the product of urban residents relocating to rural areas. Widespread nonmetropolitan growth began with the turnaround of the 1970s when, for the first time in recent history, rural areas of the country gained population more rapidly than urban areas. This countertrend appeared to reverse during the 1980s, when internal migration once again favored metropolitan areas. But recent evidence indicates that there has been a revival in nonmetropolitan growth, leading some researchers to argue that the decline of the 1980s reflects a lag in the overall process of population deconcentration. This assessment is reasonable given the strength of the current trend and the regional selectivity of nonmetropolitan growth and decline over the 25 year period.

In contrast to most other regions, the Mountain West has been less sensitive to population downturns, and has experienced consistent growth rates in recent years. People from all other parts of the country are drawn to the region because of its high desirability as a place to live. As a result, the nonmetropolitan Mountain West continues to grow through the arrival of large numbers of urban residents who bring with them metropolitan-style settlement patterns and a way of life generally new to the region.

The overall trend is best explained through the deconcentration theory of nonmetropolitan growth, which points to consumer motivations as a key determinant in population redistribution trends. In sum, due to a “loosening of spatial constraints,” people may now live where they choose. This freedom leads them to seek out remote, high amenity locations found only in specific regions of the country such as the Mountain West. The role played by consumer
motivation is particularly important because, in combination with the conceptual definition of rurality presented in Chapter 2, it sets the stage for the process of rural residential development in the Mountain West.
Chapter 4
Nonmetropolitan Land Development and Planning in the Mountain West

Thus far, this thesis has delivered three important points related to land use regulation and population growth in nonmetropolitan areas. First, rural areas remain comparatively free from land use regulation because rural landowners typically place a high value upon the property rights of the individual. Second, the process of nonmetropolitan population change during the last 25 years has been cyclical, favoring some regions of the country over others. In particular, the Mountain West has experienced a high rate of growth even while other regions have faced severe decline. Finally, this selectivity is best explained on the basis of consumer motivations, which have led people to relocate to the region due to its high desirability as a place to live.

This chapter builds on these concepts in order to develop an explanation of the rural residential development process in the Mountain West. The discussion has four objectives. First, the demand and supply mechanisms which drive rural residential development are outlined, establishing that growth in the region hinges on a special set of circumstances which leads consumers and developers to seek out remote, high amenity locations. Second, the product of rural residential development—exurbanization—is described. Third, the implications that the process holds for land use planning are documented. Planners have developed their own explanations for exurbanization, which have led them to approach the problem through the use of traditional regulatory controls. The chapter concludes by presenting a conceptual model that summarizes the rural land development process in the Mountain West. The model demonstrates that the outcome of the planner's approach has been to inadvertently perpetuate the consumption of rural land and open space.
4.1 Counterurbanization and Rural Land Development in the Mountain West

Counterurbanization in the Mountain West has been facilitated by the "loosening of spatial constraints" prescribed by the deconcentration theory of nonmetropolitan population growth. Improvements in communications and transportation technologies have facilitated the extension of urban labor markets into rural areas, and people engaged in forms of employment formerly associated only with urban areas may now live virtually wherever they choose. Much of the region's population growth consists of urban residents relocating as they search for rural living and, as a result, there has been a corresponding increase in demand for rural land.

The demand for rural land—and rural living—in the Mountain West derives from two factors. First, much of the desire to live in rural locations comes from American's long standing attachment to the "Jeffersonian" lifestyle of the agrarian individualist (Nelson and Dueker 1990; Nelson 1992, 1995; Davis et al. 1994). When making relocation decisions, Americans fulfill this attachment by choosing areas which are located in the countryside, but still within close reach of an urban center. For example, a recent study documented that 77% of all respondents ranked natural open space as their highest priority for new communities (Diamond and Noonan 1996). Shumway and Davis' recent (1996) analysis of the region supports this finding. They indicate that the highest rates of population growth are occurring in counties with high amenity values.

Second, the decision to locate in rural areas is also driven by the comparatively low cost of rural land. Rural land is less expensive because, in general, land is viewed as a commodity, with its worth based upon anticipated returns to investment. In rural areas land has traditionally been used for productive purposes such as agriculture, or simply left in its natural state. In the first case, land is very susceptible to development when it comes under high demand because it
rapidly becomes revalued above its worth for productive capacity (Doherty 1984; Lapping et al. 1989; Geisler 1995). This is evidenced through the rapid conversion of agricultural land to residential, commercial, and other urban land uses. In the second case, conversion of natural open space occurs even more readily because there is no prior use that can lead to competitive bidding, and because it is abundant in the Mountain West. Methods for assigning economic value to open space based on its intrinsic worth are still in their formative stages and only beginning to appear (Hanink 1995).

The supply for rural land in the Mountain West is fueled in part by opportunism on the part of land developers and land speculators. The high demand for rural living creates enormous market opportunities for land developers and raises potential returns for land speculators. In the first case, land developers are drawn into the rural land market because returns to investment are considerable. The demographics of the country, including the aging of the baby boom generation, combined with the growing attractiveness of rural living and the desire to participate in the “frontier spirit” of the West, are clear signs of potential earnings in the region. In the second case, land is purchased on the basis of its potential for urbanization or non-farm use, and often held as an inflation hedge (Healy and Short 1981).

Three factors contribute to this opportunism. First, rural settings are easy to develop because rural land is typically subject to a lesser degree of regulation than urban land (Mantell et al. 1989; Nelson and Dueker 1990; Nelson 1992b). As described in Chapter 2, rural dwellers have a deep-rooted attachment to property rights and self determination. Land use regulation is often a very controversial issue in rural areas because it is viewed as unfair and a hindrance to the fundamental rights of property owners. This belief system is very applicable to traditional uses of land which
require that considerable discretion remain in the hands of the individual, but becomes problematic when that land is sold for the purpose of development or investment (Popper 1979; Garkovich 1982; Daniels et al. 1989, 1995; Wright 1993; Starrs 1995).

Second, rural dwellers have an increasingly reduced obligation towards retaining land. The same loosening of spatial constraints that has facilitated counterurbanization has also created new opportunities for long-term rural dwellers, leveling many of the socioeconomic characteristics that have distinguished rural areas from urban areas in the past. As a result, most rural land owners are no longer obliged to rely upon land for their livelihood (Fuguit et al. 1989; Flora et al. 1992; Lichter 1993; Daniels and Lapping 1996). As the economy of rural places becomes more dependent upon service industries, and less dependent upon agriculture and other more traditional industries, land loses its importance as a means of production, employment, and social status (Geisler 1995). Rural people are left with a reduced commitment towards land ownership, although they still harbor a strong aversion for land use controls.

Finally, patterns of land ownership in rural areas tend to be expansive, typically consisting of large tracts of contiguous open space. Farming and other traditional uses of rural land often require an extensive area, but as these practices become less important to the rural economy, there is a strong motivation for land owners to sell off unused portions of their property. When land is sold, the purchaser acquires not only a large amount land which is inexpensive and under high demand, but also a preponderance of development rights. Even as land ownership becomes more concentrated, low levels of land use regulation remain in place (Geisler 1995).

The presence of outsiders in the rural land market is well documented over a long period of time
Lassey 1977; Fuguit et al. 1979; Healy and Short 1981, 1983; Stephenson 1983; Doherty 1984; Flora et al. 1992; Nelson 1992b; Pfeffer and Lapping 1994). Common characteristics of their actions include the use of credit in purchasing land and interaction between supply and demand conditions in determination of land price (Daniels et al. 1989). Both are clear indicators of the investment driven motives upon which land developers and land speculators act.

4.2 The Commodification of Place

Opportunism on the part of land developers also surfaces as they move rapidly to supply the demand for low density, high amenity living environments. The situation enables developers to create a marketable product--rural living--that is attuned to the locational and environmental preferences of consumers of place. The sustained population growth of the nonmetropolitan Mountain West is the product of the commodification of place, wherein place entrepreneurs (land developers) utilize the natural rural landscape as a marketable product. This marketing has the effect of increasing the attractiveness of the region, thereby perpetuating its growth. In this sense, rural land development may be viewed as a spatial extension of Molotch's (1976) urban "growth machine," which encapsulates the mentality behind this type of entrepreneurialism

According to the growth machine framework, the city is characterized as an engine for growth that is perpetuated through the exchange of land (Pfeffer and Lapping 1994). The theory holds that community growth and development are endorsed and actuated by coalitions of land-based elites, or members of a rentier class, who have in mind a certain future that conforms to their own profiteering interests (Molotch 1976; Logan and Molotch 1987; Logan et al. 1997). The basis for these interests is found in the exchange value of land, which is realized through the commodification of place.
In the view of growth machine theory, "any given parcel of land represents an interest and... any given locality is thus an aggregate of land-based interests" (Molotch 1976, p. 310). Place entrepreneurs are engaged in the pursuit of the highest possible exchange value for their land and often compete among themselves in an effort to realize their own purposes. But they agree on the issue of growth itself because of the market opportunities embedded in the subsequent increase in the demand for land. The ideology of these actors is founded upon "a doctrine of value-free development- the notion that free markets alone should determine land use" (Logan and Molotch 1987, p. 32). The growth machine apparatus therefore benefits from sympathy on the part of regulatory entities who possess a means of detracting from the exchange value of land through land use controls. Its constituents secure this regulatory cooperation through use of political leverage, lobbying for the support necessary to maintain an environment favorable to growth.

This form of entreprenurialism is well suited for the rural land market because the exchange value of land is maximized in the absence of land use controls. Land is not committed to a specific use, and may be developed according to market demands. Place entrepreneurs benefit from dealing in the rural land market because regulatory powers typically do not extend as far from metropolitan core areas as the demand for land does (Pfeffer and Lapping 1994). It is therefore in the explicit interest of the development sector to engage in the rural land market, and to promote counterurbanization in order to sustain the demand for rural residential development.

The vitality of such pro-growth coalitions and their entrepreneurial interests in the Mountain West cannot be overstated. In several states of the region--Arizona, Colorado, Idaho, Nevada, New Mexico, and Wyoming--ownership is very concentrated, with 5% of the population owning
80% of all privately held land (Geisler 1995). Yet political support for land use regulations in the region remains unsubstantial, contributing to a situation which unwittingly supports the development rights of these very few.

4.3 Exurbanization in the Mountain West

The demand and supply mechanisms in rural land markets leads to exurbanization, a form of development that is neither rural or urban, but a combination of the two. Exurbanization occurs as metropolitan-style development patterns are transposed onto the nonmetropolitan landscape. This development is composed of a mixture of residential, commercial, and industrial development dispersed over large areas of rural land. The outcome is a patchwork landscape containing very low density urban development scattered over a mixture of farms, forests, natural open space, small towns, and wildlife habitat (Doherty 1984; Lapping et al. 1989; Yaro 1991; Nelson 1992b; Nelson et al. 1995; Daniels and Lapping 1996). By some accounts, exurban areas amount to almost a third of the land area of the 48 contiguous states, and are the fastest growing component of the urban form (Healy and Short, 1981; Nelson and Dueker 1990; Nelson 1992b; Davis et al. 1994).

In the Mountain West, the growth of the exurban realm is evidenced by an increase in the importance of the service sector economy in the region, and a decrease in the importance of more traditional industries such as agriculture and mining (Fuguit and Beale 1996; Shumway and Davis 1996). People employed in the service sector—and of retirement age—are arriving to the region in a steady stream, abandoning city life for places that are perceived as being safer, more healthy, and offering a higher quality of life (Starrs 1995). Many of these people retain socioeconomic ties to urban centers and commute long distances for employment, services, and other urban
amenities (Lamb 1983; Yaro 1991; Davis et al. 1994).

Exurbanization poses a serious land use problem at physical and social levels. In the first case, it is problematic because it disperses development over a very large area, reducing the efficiencies afforded by urban amalgamation (Nelson 1992b). Sprawling development consumes enormous amounts of land, and increases the costs of providing transportation, public services, and utilities. The resulting financial burden is often beyond the means of many rural and small town jurisdictions. In the second instance, conflict may result from differences in lifestyle between newcomers and local people. The effects of this are worsened as property taxes rise in response to the demands of newcomers who have come to miss the comforts of the urban setting that they left behind (Starrs 1995). Finally, exurban development often competes with more traditional land uses such as agriculture, and farmers and new residents do not always welcome each other as neighbors (Nelson 1992a).

4.4 The Implications of Exurbanization for Land Use Planning

The planning discipline has identified exurbanization as a continuation of metropolitan decentralization, where low density sprawl is the byproduct of residential preferences for rural locations (Lamb 1983; Lapping et al. 1989; Mantell et al 1990; Nelson and Dueker 1990; Yaro 1991; Nelson 1992a, 1992b, 1995; Davis et al. 1995; Daniels and Lapping 1996). The process commonly affects areas adjacent to cities, leading planners to identify the exurban realm as the "next ring of development around metropolitan areas" (Nelson et al. 1995, p. 72). Exurbanization occurs as development extends further into the countryside through the continuing deconcentration of metropolitan areas. Exurban development is therefore viewed as an extension of the urbanization process; it is urban by design and considered rural only because of its location
This assessment is reasonable given that urban residents account for a large proportion of the demand for rural land. In short, planners recognize that counterurbanization has weakened many of the long standing distinctions between rural and urban areas. From the standpoint of planning, these areas are becoming less rural and more urban, and in turn, more in need of land use regulation.

This perspective has led planners to respond to exurbanization through the imposition of land use regulations. The outcome is that large quantities of rural land are placed under the charge of regulatory planning agendas. Some commentators note that the regulatory domain of planners now extends as far as 150 miles into the countryside around the largest metropolitan centers (Nelson et al. 1995). Accordingly, the planning discipline has reacted by developing techniques for mitigating exurban sprawl (Porter 1986, 1997; Mantell et al. 1990; DeGrove and Metzger 1991; DeGrove and Miness 1991; Kelly 1993; Nelson et al. 1995), and by setting planning agendas for rural and small town environments (Lassey 1977; Getzels and Thurow 1979; Brower et al. 1984; Lapping et al. 1989; Sargent et al. 1991; Flora et al. 1992; Ardent et al. 1994; Daniels et al. 1995; Galston and Baehler 1995; Nelson 1995). These include growth management tools aimed at restraining urban expansion, and schemes meant to assimilate outlying small towns with the greater urban region. The philosophy supporting the implementation of these programs is based on the notion that rural settlement patterns are malleable extensions of the urban environment.

Approaches of this type have met with limited success in rural areas because they operate on a reactive rather than proactive basis (Daniels et al. 1989). Land use planning and growth management tools such as zoning and subdivision regulations, urban growth boundaries, and
development phasing programs address the form and function of settlement patterns but neglect the underlying demand and supply mechanisms which foster development in nonmetropolitan areas.

In the Mountain West, incessant capitalization on the demand for rural residential development has created a form of manifest destiny for many planners. This has occurred in two ways, both of which involve extending land use regulations further into rural lands. First, planners have attempted to assimilate exurban growth with the greater urban scene by providing space for low density development within city limits. In this case, vacant land on the periphery of the city is zoned for low density land uses, with the idea that growth will occur in a contiguous manner, "filling in" the low density zones. Second, jurisdictions often actively promote growth for the sake of their own perceived well being. Many remote cities and places in the region have turned to the natural amenity of their surroundings as a resource for economic development, attempting to attract retirees and encourage growth in the tourism and service sectors (Galston and Baehler 1995; Daniels and Lapping 1996; Shumway and Davis 1996). In this case, land around the city is annexed in anticipation of future development in an effort to capture the tax revenues. At times, such policies become aggressive, leading to competition among jurisdictions (Logan and Molotch 1987) and to what Porter (1997) terms "zoning for sale."

The outcome of the planner's approach has been to inadvertently perpetuate the consumption of rural land and open space. This occurs for two reasons. First, once development enters areas of high natural amenity, that same development transforms the landscape, detracting from the pristine quality of the natural setting. In turn, new coming residents in search of pristine natural environments are forced to locate in even more distant places in order to obtain the quality of
environment they seek. Second, as planners impose land use regulation intended to control
development and preserve natural areas, developers relocate to even more distant rural locations
in an effort to escape land use regulation while continuing to supply consumers with the
environments they demand. Cities extend to claim ever larger amounts of land containing low
density development as attempts are made to regulate development in outlying areas.

4.5 Conceptual Model of the Rural Residential Land Development Process

Based on the preceding discussion, Figure 4.1 presents a conceptual model of the rural land
development process in the Mountain West (Esparza and Carruthers 1998). The model
illustrates that rural residential land development occurs in two distinct phases, each of which
results in the further transformation of natural landscapes. First, consumers of place seek out
high amenity rural areas, creating a demand for rural residential development. In response, land
developers move to supply and cultivate even higher levels of demand through the
commodification of place. The outcome of the balancing of demand and supply is exurban
development. Second, planners respond to exurbanization by attempting to control it through
land use regulation. Growth management programs and other more traditional forms of land use
regulation, such as zoning and subdivision regulations, are imposed in an effort to minimize
environmental degradation and promote orderly development, raising the costs of development.
At the same time, the conversion of once pristine natural open space deteriorates the
attractiveness of the area so that through exurbanization, the rural landscape is transformed into
an areal extension of the urban core. In response to the transformation, consumers and
developers seek out more remote locations which are yet unspoiled by development and remain
free from land use regulation. The process of transformation is cyclical, leading to the further
expansion of exurban areas.
Figure 4.1 Conceptual Model of The Rural Residential Land Development Process

Demand for Amenity-Rich Rural Areas

Exurban Development
Low Density, “Rural”

Supply: The Commodification of Place

Land Use Regulation:
Cost of Development

Erosion of “Place”

Transformation: Urban Environment

The conceptual model demonstrates that rural land development in the Mountain West is a complex process involving numerous actors and responses. The role that planners play in the process has led some observers to implicate them as part of the growth machine ideology. This argument dismisses growth management--and planning in general--viewing it as a sophisticated growth strategy (Molotch 1976; Logan and Molotch 1987; Vogel and Swanson 1989; Warner and Molotch 1995). This perspective is reasonable because, even if unintentional, the traditional planning approach creates an environment which perpetuates the cycle of land development as long as a supply of natural open space remains.

4.6 Summary and Conclusions
This chapter has established three key points regarding rural residential development in the Mountain West. First, the process is driven by a unique configuration of demand and supply mechanisms wherein access to the natural environment is a key commodity. This characteristic is important because it perpetuates the demand for development in remote areas with pristine surroundings. Land developers move rapidly to supply this demand because the potential for financial return is substantial, especially given the reduced level of land use regulation found in rural areas. Second, rural residential development in the region has led to widespread exurbanization, a low density form of urban development that consumes large areas of open space. Finally, planners have attempted to address exurbanization through the traditional practice of imposing land use controls. This approach, however, only perpetuates the process of land conversion because it overlooks the demand and supply mechanisms which lead to exurbanization in the first place. As planners impose land use regulations in an effort to promote orderly development, land developers are compelled to seek out more remote locations in order to escape that same regulation and still meet the demand for rural living.
The conceptual model summarizes this process and provides a foundation for conducting empirical research regarding rural residential development in the Mountain West. Chapter 5 develops the framework into a detailed study of exurbanization and land conversion in Cochise County, Arizona. At the heart of the matter lies the role that land use regulations—and land use planning in general—play in the process.
Chapter 5
Empirical Analysis: The Case of Cochise County, Arizona

To this point, this thesis has focused on developing a framework for understanding the rural land development process in the Mountain West. The discussion has delivered four key points. First, rural areas remain comparatively free from land use regulation, leaving them vulnerable to changes brought on by rapid population growth and land development. Second, nonmetropolitan growth has had a particularly significant impact upon the Mountain West because of the region's high natural amenity and vast quantities of available open space. Third, the outcome of rapid growth of the region has been exurbanization, a mode of development that is neither urban or rural, but instead, a combination of both. Finally, planners have inadvertently contributed to the problem of exurbanization by attempting to control it through traditional forms of land use regulation.

This chapter examines whether the conceptual model described in the previous chapter explains the rural land development process in Cochise County, Arizona. The analysis consists of three components. First, Cochise County is described. This shows that the county is an appealing setting for rural residential development. Second, quantitative data are used to document recent population and residential development trends in rural (unincorporated) portions of the county. Much of the population growth occurring over the last two decades has come in the form of net migration, bringing with it a steady rate of residential development which has resulted in the consumption of large amounts of natural open space. Finally, the planner's role in the rural land development process is documented through an analysis of land use policy and land development patterns in Sierra Vista, the largest city in Cochise County. Planners from Sierra Vista have
responded to population growth and rural residential development in their vicinity through a "managed growth" strategy consisting of traditional land use regulations. The outcome of Sierra Vista's policy has been to inadvertently contribute to the consumption of rural land and open space. As the city and the reach of its land use regulations continue to extend outward, so too does development, resulting in a sprawling, low density urban configuration.

5.1 Research and Data Collection

Research for the empirical analysis was conducted during the fall of 1997 and the spring of 1998. During that time, both quantitative and qualitative information regarding population growth and residential development in Cochise County and Sierra Vista were collected. Much of the quantitative data were obtained through the University of Arizona Economic and Business Research Library, the State center for economic and demographic data. Information gathered includes annual population data compiled by the Arizona Department of Economic Security, data on residential building permits from the Bureau of the Census’ Construction Statistics Division, and statistics regarding the amount of farmland in Cochise County from the Census of Agriculture. Additional demographic data were obtained through the Sierra Vista Department of Development Services, and the Sierra Vista Economic Development Foundation, which sponsored a regional study of the Sierra Vista vicinity.

Additional research was conducted at the Cochise County Assessors Office during December 1997. Specifically, data regarding the quantity and location of rural residential development in Cochise County were obtained through a review of subdivision records and the Office's annual abstract. These data were analyzed in order to determine the distribution of rural residential development in the county.
Finally, information was obtained through interviews with planners at the Cochise County Planning Department (January 1998) and the Sierra Vista Department of Development Services (February 1998 and March 1998). In the first case, the purpose of the meeting was to obtain qualitative information on growth and development occurring in unincorporated portions of Cochise County. In the second case, the purpose of the discussions was to acquire an overview of Sierra Vista's land use policy and copies of the city's land use planning documents. Both contributed to a working knowledge of the land use planning situation in Cochise County, facilitating the organization and implementation of this analysis.

5.2 The Setting: Cochise County, Arizona

Cochise County occupies 6,215 square miles in the southeastern corner of Arizona (Figure 5.1). Within the county are located a rich diversity of landscapes ranging from grassy plains to mesquite basques and mountain sky islands. Included in these landscapes are such unique environmental features as the Huachuca mountain range, the San Pedro Riparian Area and the Coronado National Forest, which contains the Chiracahua Monument. Throughout Cochise County are located numerous scenic vistas and vast expanses of open space. Those features combined with the county's remoteness, rustic environment, and climate—which is comparatively mild year-round—make it particularly attractive in the rural land market.

The current population of Cochise County is 115,000 people, with nearly 45,000 people living in unincorporated areas. The balance of the population resides in the incorporated cities of Benson, Bisbee (the county seat), Douglass, Huachuca City, Sierra Vista, Tombstone and Willcox. Smaller urban places are located throughout the county, but these are considered part of the unincorporated area. With a total population of just over 38,000 people, Sierra Vista is by
Figure 5.1 Site of the Empirical Analysis: Cochise County, Arizona
far the largest and most rapidly growing urban area in Cochise County. The only other city in
the county to exceed 7,000 people is Douglas, with a population of nearly 14,000. Cochise
County is transected by Interstate 10, a major national east-west route, that offers residents
excellent access to nearby Tucson, a major metropolitan center of over 750,000 people.

An important feature of Cochise County is that a large percentage of its land resides in private
ownership. Table 5.1 summarizes land ownership patterns in the county, and shows that 41%
of the total area is privately owned—a greater proportion than any other county in Arizona, and
more than twice the statewide average of 17% (de Kok 1996). The remaining 59% of the total
area is held by various branches of government, including the Forest Service, the Bureau of Land
Management, and the State of Arizona. This combination of land ownership increases the
attractiveness of Cochise County in the rural land market. The high percentage of privately
owned land insures that a large supply is potentially available for development, while at the same
time, vast government held properties permanently preserve natural open spaces and scenic
vistas.

5.3 Growth and Development in Unincorporated Areas of Cochise County

The population of unincorporated areas of Cochise County has grown significantly over the last
two decades. Figure 5.2 documents this trend by illustrating that between 1980 and 1996, the
rural population of the county increased from about 30,000 people to nearly 44,000 people.
This represents an overall increase of 48%, with an average annual growth rate of 2.8% over
those 16 years. The population characteristics for unincorporated portions of the county during
that time period are summarized in Table 5.2. Like other nonmetropolitan counties throughout
the country, population change in Cochise County has been sensitive to population downturns.
Table 5.1 Summary of Land Ownership in Cochise County, Arizona, 1994

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Area (1000 acres)</th>
<th>Area (square miles)</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest Service</td>
<td>490</td>
<td>766</td>
<td>12</td>
</tr>
<tr>
<td>Bureau of Land Management</td>
<td>376</td>
<td>588</td>
<td>9</td>
</tr>
<tr>
<td>State of Arizona</td>
<td>1372</td>
<td>2144</td>
<td>35</td>
</tr>
<tr>
<td>Privately Owned</td>
<td>1630</td>
<td>2547</td>
<td>41</td>
</tr>
<tr>
<td>Other Public Lands</td>
<td>112</td>
<td>175</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Area</strong></td>
<td><strong>3980</strong></td>
<td><strong>6219</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source: Adapted from Worden and de Kok, 1996.*
Figure 5.2 Population of Unincorporated Areas in Cochise County 1980 - 1996

Source: Arizona Department of Economic Services, selected years.
Column 1 depicts the total population of unincorporated areas of the county and shows that notable slumps in its growth occurred between 1981 and 1983, and again between 1987 and 1990.

Column 4 of Table 5.2 demonstrates that net migration has played a significant role in the cyclical pattern of Cochise County's population growth. Based on my estimates, net migration was negative during years when changes in population were slow or in decline, but positive during years of population increase. The relative impact of this is illustrated in Figure 5.3, which shows population change for unincorporated areas of the county as a function of net migration and natural increase. The rate of natural increase has been relatively stable over time, therefore the overall pattern of population change is largely dependent upon net migration. Since the downturn of the late 1980s, growth in the county has increased steadily, with 1995 and 1996 registering the greatest numbers of migrants during the entire 16 year period. This finding corresponds with recent studies of nonmetropolitan population change which show that rural areas are experiencing high rates of population increase nationwide, especially in the Mountain West (Johnson and Beale 1994; Economic Research Service 1995; Fuguitt and Beale 1996; Shumway and Davis 1996).

The amount of residential development occurring in unincorporated portions of the county during the same time period provides further evidence of population growth. Table 5.3 provides the number of dwelling units authorized for construction through residential building permits for unincorporated areas of Cochise County between 1979 and 1995. Like population growth, residential development has been cyclical, undergoing major downturns between 1981 and 1982, and again between 1989 and 1991. These slumps can readily be seen in Figure 5.4 which charts the number of permits issued over the 16 year period. More recently, there has been a notable
Table 5.2 Summary of Population Characteristics for Unincorporated Areas of Cochise County 1980 - 1996

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Population Change</th>
<th>Net Migration</th>
<th>Natural Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>29682</td>
<td>****</td>
<td>****</td>
<td>****</td>
</tr>
<tr>
<td>1981</td>
<td>31022</td>
<td>1340</td>
<td>622</td>
<td>718</td>
</tr>
<tr>
<td>1982</td>
<td>30920</td>
<td>-102</td>
<td>-186</td>
<td>84</td>
</tr>
<tr>
<td>1983</td>
<td>30492</td>
<td>-428</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1984</td>
<td>33058</td>
<td>2566</td>
<td>1824</td>
<td>742</td>
</tr>
<tr>
<td>1985</td>
<td>35273</td>
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<td>1472</td>
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</tr>
<tr>
<td>1986</td>
<td>35858</td>
<td>585</td>
<td>249</td>
<td>336</td>
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<td>1987</td>
<td>36317</td>
<td>459</td>
<td>73</td>
<td>386</td>
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<tr>
<td>1988</td>
<td>36113</td>
<td>-204</td>
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<td>1989</td>
<td>35956</td>
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<td>35561</td>
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<td>1991</td>
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<td>469</td>
<td>208</td>
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<td>1992</td>
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<td>1455</td>
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<td>1993</td>
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<td>114</td>
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<td>1994</td>
<td>39855</td>
<td>2685</td>
<td>2210</td>
<td>475</td>
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<td>1995</td>
<td>42530</td>
<td>2675</td>
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<td>549</td>
</tr>
<tr>
<td>1996</td>
<td>43995</td>
<td>1465</td>
<td>****</td>
<td>****</td>
</tr>
</tbody>
</table>

Source: Arizona Department of Economic Security and Arizona Center for Health Sciences, selected years.
Figure 5.3 Population Change in Unincorporated Areas of Cochise County
1981 - 1995

Source: Arizona Department of Economic Security and Arizona Center for Health Sciences, selected years.
Table 5.3 Residential Building Permits
Issued for Unincorporated Areas of
Cochise County 1979 - 1995

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Dwelling Units</th>
<th>Year</th>
<th>Number of Dwelling Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>320</td>
<td>1988</td>
<td>243</td>
</tr>
<tr>
<td>1980</td>
<td>230</td>
<td>1989</td>
<td>162</td>
</tr>
<tr>
<td>1981</td>
<td>185</td>
<td>1990</td>
<td>126</td>
</tr>
<tr>
<td>1982</td>
<td>175</td>
<td>1991</td>
<td>149</td>
</tr>
<tr>
<td>1983</td>
<td>229</td>
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<tr>
<td>1984</td>
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<tr>
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<tr>
<td>1987</td>
<td>329</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Bureau of the Census, Construction Statistics Division, Building Permits Branch, selected years.
increase in the number of building permits issued, corresponding to the high level of net migration in recent years, with 1994 registering the greatest number of permits issued to date.

Population growth and residential development in unincorporated areas of the county has caused vast quantities of farmland and open space to be converted to residential land uses. Between 1974 and 1992, the total amount of farmland in the county declined by 11%, for a loss of over 220,000 acres (United States Census of Agriculture 1978, 1992). This decline is significant because agriculture is considered to be one of the primary industries in Cochise County.

Table 5.4 shows more direct evidence of open space consumption as an outcome of rural residential land development. Column 1 lists the total number of parcels dedicated to residential use in the county over the 1983-1996 time period. During those 14 years, the number increased by 8,573 parcels, at an average rate of 2.9% per year—a pace very close to that of the county’s population growth. Table 5.3 also shows (in column 2) that at the same time, the number of privately owned, “unimproved” parcels—land consisting of natural open space—has declined from 77,567 to 73,265. This decrease of 4,311 parcels amounts to an overall loss of 5.5% of the county’s total privately held open space. The combined effect is reflected in column 4, which shows that the total number of all taxable parcels in unincorporated portions of the county has increased over time. This increase is the outcome of the continuing subdivision of rural land for the purpose of residential development.
Figure 5.4 Number of Dwelling Units Authorized for Construction in Unincorporated Areas of Cochise County 1979 - 1995

Source: United States Bureau of the Census, Construction Statistics Division, Building Permits Branch, selected years.
Table 5.4 Number of Privately Owned Parcels in Unincorporated Areas of Cochise County 1983 - 1996

<table>
<thead>
<tr>
<th>Year</th>
<th>Residential Parcels</th>
<th>Unimproved Parcels</th>
<th>All Taxable Parcels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983</td>
<td>20742</td>
<td>77567</td>
<td>100101</td>
</tr>
<tr>
<td>1984</td>
<td>20768</td>
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<td>102497</td>
</tr>
<tr>
<td>1985</td>
<td>21402</td>
<td>78033</td>
<td>103399</td>
</tr>
<tr>
<td>1986</td>
<td>22238</td>
<td>77993</td>
<td>104167</td>
</tr>
<tr>
<td>1987</td>
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<td>78011</td>
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</tr>
<tr>
<td>1988</td>
<td>24079</td>
<td>78237</td>
<td>106031</td>
</tr>
<tr>
<td>1989</td>
<td>24561</td>
<td>78099</td>
<td>106334</td>
</tr>
<tr>
<td>1990</td>
<td>25029</td>
<td>77550</td>
<td>106430</td>
</tr>
<tr>
<td>1991</td>
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<td>104645</td>
</tr>
<tr>
<td>1993</td>
<td>26938</td>
<td>74110</td>
<td>104323</td>
</tr>
<tr>
<td>1994</td>
<td>27815</td>
<td>73728</td>
<td>104327</td>
</tr>
<tr>
<td>1995</td>
<td>28376</td>
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<td>105646</td>
</tr>
<tr>
<td>1996</td>
<td>29315</td>
<td>73256</td>
<td>106295</td>
</tr>
</tbody>
</table>

*Source: Cochise County Assessors Office, 1984 - 1997 tax years.*
All three trends are depicted graphically in Figures 5.5a (residential parcels), 5.5b (unimproved parcels), and 5.5c (all taxable parcels). Between 1990 and 1991, the total number of parcels in the county (5.5c) declined dramatically due to the recombination of numerous small parcels. This event is also reflected as a sharp drop in the number of unimproved parcels (5.5b), indicating that it was probably the result of the abandonment of an unimproved subdivision. It is significant because it speaks to the magnitude of land subdivision projects attempted in outlying portions of the county.

A final indication that rural residential development is having a negative impact on open space in Cochise County is documented through evaluation of land value over time. Table 5.5 lists the mean value in real dollars of residential and unimproved parcels in the county between 1983 and 1996. Over that time period, the mean value of residential parcels rose from $31,762 to $35,136 (an increase of 11%), while the mean value of unimproved parcels fell from $4,941 to 4,025 (a decrease of 19%). The growing worth of residential properties points to a sustained demand for rural residential development. At the same time, the declining worth of unimproved land indicates that a steady supply is reaching the marketplace. If the supply of open space were decreasing, because of retention on the part of the agricultural industry for example, the price of unimproved properties would likely increase over time.
Figure 5.5a Number of Privately Owned, Residential Parcels in Unincorporated Areas of Cochise County 1983 - 1996

Source: Cochise County Assessor’s Office, 1984-1997 tax years.
Figure 5.5b Number of Privately Owned, Unimproved Parcels in Unincorporated Areas of Cochise County
1983 - 1996

Source: Cochise County Assessor's Office, 1984-1997 tax years.
Figure 5.5c Total Number of Taxable Parcels in Unincorporated Areas of Cochise County
1983 - 1996

Source: Cochise County Assessor's Office, 1984-1997 tax years.
<table>
<thead>
<tr>
<th>Year</th>
<th>Residential Parcels</th>
<th>Unimproved Parcels</th>
<th>All Taxable Parcels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983</td>
<td>31762</td>
<td>4941</td>
<td>12752</td>
</tr>
<tr>
<td>1984</td>
<td>32431</td>
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<td>1991</td>
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<td>14032</td>
</tr>
<tr>
<td>1995</td>
<td>33813</td>
<td>3843</td>
<td>18131</td>
</tr>
<tr>
<td>1996</td>
<td>35136</td>
<td>4025</td>
<td>18714</td>
</tr>
</tbody>
</table>

Source of Data: Cochise County Assessors Office, 1984 - 1997 tax years.
The data reported above indicate that the population of unincorporated areas of Cochise County has grown considerably in recent decades. Because the rate of natural increase has remained stable over time, most of this growth is attributable to either the arrival of people from areas outside of the county or the outward expansion of cities within the county. In either case, population growth has been accompanied by a steady rate of residential development, which has consumed vast amounts of the county’s rural land and natural open space.

5.4 The Role of Planning and Land Use Regulation: The Case of Sierra Vista

The quantitative evaluation above illustrates that population growth in unincorporated areas of Cochise County has escalated the demand for rural residential land. In turn, this demand has been met by the local real estate industry, as evidenced through the steady rate of housing production and the conversion of a large tracts of farmland and open space to residential land uses. While these data demonstrate the scale of exurban development occurring in the county, they reveal little about the role that planners and land use regulations have played in the process. The purpose of this section is to examine that role through an evaluation of land use policy and development patterns in the vicinity of Sierra Vista.

The analysis consists of three components. First, a detailed description of Sierra Vista illustrates that the city and its vicinity claim a large proportion of Cochise County’s total population and residential development. Second, changes in land use policy and land use regulation over time are evaluated. This demonstrates that as Sierra Vista has grown, planners have responded by attempting to manage growth through the imposition of land use controls. Finally, documentation of the outcome of the planners’ approach reveals that in response to increasing level of land use regulation, residential development has been located progressively further from
the city’s urban center.

### 5.4.1 Sierra Vista

Sierra Vista is located in the southwestern corner of Cochise County, along the eastern edge of the Huachuca Mountains (Figure 5.1). It was chosen for this analysis because as the largest and most rapidly growing of Cochise County’s cities, it is the most likely to generate outlying exurban development. As a city of significant size, it offers residents excellent access to most urban services, while at the same time being remotely located. A large proportion of Sierra Vista’s area is occupied by Fort Huachuca, a United States Military installation. The Fort was annexed in 1971, but because it is not a land use relevant to the discussion at hand it has been excluded from the analysis.

The population of Sierra Vista has grown considerably over the last several years. As Figure 5.6 illustrates, the city’s population has increased from slightly over 25,000 people in 1980 to nearly 40,000 people in 1997. This represents an increase of 58% during that 17 year period, or an average annual growth rate of 3.4%. Table 5.6 summarizes this growth trend by listing the actual population for each year (column 2). Table 5.6 shows that the city has consistently claimed about 30% of the county’s total population.

In addition to its internal growth, Sierra Vista captures a large proportion of the county’s growth in the form of exurbanization. Most of the rural residential development reviewed by the Cochise County Planning Department occurs in close proximity to Sierra Vista (Cochise County Planning Department, personal communication, January 1998), and the Sierra Vista Economic Development Foundation (1997) documents that in 1990, nearly 71,000 people—greater than
Figure 5.6 Population of Sierra Vista 1980 - 1997

Source: Arizona Department of Economic Security, selected years.
### Table 5.6 Population of Sierra Vista, Arizona 1980 - 1997

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Percent of County Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>25016</td>
<td>29.19</td>
</tr>
<tr>
<td>1981</td>
<td>25742</td>
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<td>1982</td>
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<td>1983</td>
<td>27228</td>
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<tr>
<td>1984</td>
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<td>30.90</td>
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<td>1985</td>
<td>28819</td>
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<td>1986</td>
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<td>31472</td>
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<td>33.67</td>
</tr>
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<td>1996</td>
<td>38310</td>
<td>33.33</td>
</tr>
<tr>
<td>1997</td>
<td>39405</td>
<td>32.93</td>
</tr>
</tbody>
</table>

*Source: Arizona Department of Economic Security, selected years.*
twice the urban population of 33,000—lived within a twenty five mile radius of the city. Although this area extends into adjacent Pima and Santa Cruz Counties, the bulk of it lies within Cochise County. Thus, 50% or more of the county’s total population lives in the vicinity of Sierra Vista. Estimates indicate that this proportion will continue to grow, and that by the year 2000, 91,000 people are expected to resided in Sierra Vista and its exurban realm.

5.4.2 The Evolution of Land Use Policy in Sierra Vista

Evaluation of Sierra Vista’s land use policy reveals that as the city and its outlying areas have grown, planners have responded by attempting to manage growth through the use of traditional land use controls. Over the last two decades, Sierra Vista has made two revisions to its comprehensive plan, adopted a development code, revised its zoning ordinance, and implemented an aggressive annexation policy aimed at limiting growth on the periphery of the city. These measures are intended to increase the quality of development throughout the city and insure that all new growth occurs according to the city’s standards (Sierra Vista Department of Development Services, personal communication, March, 1998).

Sierra Vista’s original comprehensive plan and zoning ordinance were adopted in 1965. In 1985, the comprehensive plan was replaced by a revised version entitled VISTA 2000. In 1986 the original zoning ordinance was abandoned in favor of a Development Code which included updated zoning designations. More recently, in 1995, VISTA 2000 was exchanged for the city’s current comprehensive plan, VISTA 2010. While VISTA 2010 maintains the goals of its predecessor, it is more concise and intended to be easier to use. Except for several minor amendments, the Development Code has not been replaced or formally revised since it was adopted.
The evolution of Sierra Vista’s comprehensive plans reflects an increasing consciousness of the city’s growth and impact on the surrounding environment. Through VISTA 2000 and VISTA 2010, the city has moved to control its growth at the scale of the entire urban area, and at the scale of individual development. Specifically, VISTA 2000 provides that Sierra Vista will address its growth through the use of “[e]xisting growth management techniques, as well as any ‘new’ techniques that may be necessary to achieve a balance between the environment, population growth, and the local economy” (Sierra Vista Department of Development Services 1985, p. 30). The intention to manage growth is also expressed through the document’s statements on the city’s land use policy, which employs such phrases as “energy efficient,” and “environmentally sensitive” to convey the desired outcome of development. Concern for the natural environment becomes more prominent in VISTA 2010, which refers to the “beauty” and “fragile nature” of the city’s setting. While VISTA 2010 does not contain language referring specifically to growth management, the document makes direct reference to the problem of “leapfrog” development, and to the need to develop in a contiguous manner. These provisions are noteworthy because they speak to the increasing propensity of development to skip over tracts of vacant land within the city, locating in more isolated areas instead (Sierra Vista Department of Development Services 1985 1995).

The goals and policies of Sierra Vista’s comprehensive plan are implemented through the Development Code, which establishes the city’s development guidelines and zoning districts. Prior to the adoption of the Development Code, development guidelines were implemented through the city’s original (1965) zoning ordinance. The revised document expands upon the original, significantly increasing the degree of regulation affecting residential development within the incorporated area. Development must now comply with heightened design guidelines and
subdivision platting procedures, as well as performance standards (for noise, heat, and glare), increased requirements for signage and outdoor lighting, and water conservation measures (affecting pluming in all new structures). In short, the Development Code has significantly raised both the cost and complexity of residential development within city limits.

In addition to increasing development requirements within the city, the Development Code added two new zoning designations to those of the original zoning ordinance. The first, recreational vehicle (RV), is significant because it points to the increasing popularity of Sierra Vista—and the Southwest in general—as a place of seasonal residence. The second, urban ranch (UR), is even more significant because it allows the city to provide space for low density, rural residential development within its incorporated area. Lots are required to be a minimum of one acre in size, and agriculture of all types—including the keeping of livestock—is permitted in conjunction with residential use.

Sierra Vista's comprehensive plan, Development Code, and zoning designations converge in the form of a managed growth strategy through the city's annexation policy. The city's strategy is to annex land at the edge of the urban area, creating an envelope of vacant land for its own growth. Table 5.7 documents the implementation of this policy, showing the number of acres annexed by the city (column 2), as well as the total size of the incorporated area (column 3) for each year between 1975 and 1997. Over the 22 year time period, the area occupied by the city grew from 8.68 to 20.53 square miles, for a total increase of nearly 14 square miles. The bulk of this growth occurred in 1987, 1989, 1995, and 1997—years following revisions to the comprehensive plan. Taken together, these 4 years account for nearly 10.5 square miles, or 75% of the city's total expansion over the 1975 - 1997 time period. The outcome is illustrated in
Table 5.7 Summary of Growth Indicators for Sierra Vista, Arizona 1975 - 1997

<table>
<thead>
<tr>
<th>Year</th>
<th>Acres of Land Annexed</th>
<th>Total Size of Incorporated Area (sq mi)</th>
<th>Overall Density (pop/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>0</td>
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<td>6.91</td>
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<td>3330.77</td>
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<td>1433.53</td>
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<td>1990</td>
<td>6.75</td>
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<td>1994</td>
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<tr>
<td>1997</td>
<td>502.37</td>
<td>20.53</td>
<td>3.00</td>
</tr>
</tbody>
</table>

Source: Sierra Vista Department of Development Services, 1998.
Sierra Vista’s planning approach rests upon the perspective that rural development consists of low density extensions of the urban environment. In view of the urban character of much of the rural residential development occurring in outlying areas of the city, planners have responded by attempting to control it through traditional means of land use regulation. Annexation has been used to place large areas of rural land and contiguous open space under Sierra Vista’s jurisdiction, extending the city’s regulatory influence to encompass the outlying exurban realm. The expectation is that development will occur in a contiguous manner, filling in the area now zoned
Figure 5.7 Growth of Sierra Vista Incorporated Area, 1980 - 1997

Source: Sierra Vista Department of Development Services, 1998.
Figure 5.8 Approximate Extent of Low Density Buffer Zone, 1997

Source: Sierra Vista Department of Development Services, 1997.
for rural residential use, not "leap frogging" over it to occur at the city's periphery. The provisions for this policy are contained in VISTA 2010, which states that "[e]very opportunity should be taken to pursue the development of currently vacant lands, to minimize the problems associated with 'leap frog' development," and that the city will "[d]evelop and implement a policy to annex contiguous undeveloped lands" (Sierra Vista Department of Development Services 1995, p. 8).

5.4.3 Urban Policy and the Consumption of Rural Land

The outcome of Sierra Vista's planning policy has been to inadvertently perpetuate the consumption of natural open space and rural land. This has occurred in two interrelated ways. First, the city has added large quantities of vacant land to its incorporated area, committing that space to eventual intensification. Second, rural residential development continues to occur outside of the incorporated area, bypassing the low density zone created by the city (Figure 5.8) in favor of county lands which are subject to less stringent land use regulation. In short, Sierra Vista's managed growth strategy has resulted in the very type of leapfrog development that it set out to avoid. Ultimately, this leapfrogging will force the city to further expand its incorporated area, and eventually to rezone the vacant land left behind in order to promote infill development and form a contiguous urban area.

The process begins as large amounts of vacant and newly developed land are added to Sierra Vista's incorporated area through annexation. Figures 5.9 and 5.10 are based on an evaluation of land subdivision records obtained through the Cochise County Assessors office. They show the extent of Sierra Vista's city limits between the 1980 - 1989 and 1990 - 1997 time periods and all outlying sections in which land subdivision occurred during those same time periods. The maps
Figure 5.9 Land Subdivision Activity Occurring in Outlying Areas of Sierra Vista 1980 - 1989

Figure 5.10 Land Subdivision Activity Occuring in Outlying Areas of Sierra Vista 1990 - 1997

demonstrate that as the city extends its boundaries to incorporate outlying development, growth continues to occur in rural (unincorporated) areas. The process is cyclical, with each advance in the extent of the incorporated area precipitating development progressively further away from the urban center (essentially the area occupied by the city in 1980). In this way, Sierra Vista's policy of managing growth through annexation forces it to continue expanding in a constant effort to keep up with outlying development.

At the same time, the rate of residential development within Sierra Vista has slowed. Both factors are closely associated with the adoption of VISTA 2000, the first revised comprehensive plan, and the implementation of the Development Code, which substantially increased the degree of land use regulation within the city. Table 5.8 lists the number of residential building permits issued within Sierra Vista between 1975 and 1995. The peak years of housing production occur in the late 1970s and mid-1980s, with 1985 registering a total of 1,209 permits, the largest number of the entire twenty year time period. During the decade prior to 1986, an average of 480 permits were issued per year, more than twice the average of 194 permits per year that were issued in the following decade.

As the combined outcome of annexation and decreased residential development, a large and growing quantity of land within Sierra Vista's incorporated area remains undeveloped. Between 1985--when the city was at its highest density--and 1997, the average number of people per acre fell from 6.17 to 3.00, a decline of 51%. Had the city maintained its 1986 density, it would require more than 81,000 people to populate the area that it now occupies. Instead, a similar number of people is shared between the incorporated area and its outlying exurban realm.
### Table 5.8 Residential Building Permits
Issued for Sierra Vista, Arizona 1975 - 1995

<table>
<thead>
<tr>
<th>Year</th>
<th>Residential Building Permits Issued</th>
<th>Year</th>
<th>Residential Building Permits Issued</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>198</td>
<td>1987</td>
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</tr>
<tr>
<td>1976</td>
<td>315</td>
<td>1988</td>
<td>60</td>
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*Source of Data: Bureau of the Census, Construction Statistics Division, Building Permits Branch, selected years.*
The resulting urban configuration is illustrated in Figure 5.11, an adaptation of a recent land use map prepared by the Sierra Vista Department of Development Services (1997). Residential development within city limits ceases to occur at the edge of the low density buffer formed by the UR and SFR 36 zoning designations. It resumes again on the opposite side of the buffer zone, just outside of the incorporated area. The low density zone created by the city through the use of the UR and SFR 36 designations has not produced the intended effect of integrating rural with urban development. Instead, it has created a divide between the central urban area and the outlying exurban area, which continues to develop. Future annexations will extend Sierra Vista’s boundaries further to the south and east (Sierra Vista Department of Development Services 1997), leaving large tracts of vacant land in the center of the incorporated area.

The downfall of Sierra Vista’s approach stems from two important oversights which arise from planners’ perceptions of rural development. First, the consumer motivations which drive exurban growth and rural residential development remain overlooked. New residents are initially drawn to the area in search of a remote location and a pristine natural environment that is at the same time within reach of an urban area. But urban land itself—however attractive and plentiful—is, by definition, no longer remote or pristine; even when it is zoned for very low density use, land within the city looses much of its appeal to the consumer because it is already destined for future development and is therefore no longer part of the urban frontier. In short, living within the city limits does not fulfill the consumer’s attachment to the ideal of the Jeffersonian individualist. In order for this to occur, the living environment must be perceived as unique, and truly rural.
Figure 5.11 Approximate Configuration of Urban Development in Sierra Vista and Surrounding Area, 1997

Source: Sierra Vista Department of Development Services, 1997.
Second, Sierra Vista’s approach overlooks the opportunism that is hidden within the motivations of land developers. There are significant benefits to be gained from engaging in the rural land market as opposed to the urban, and in the case of Sierra Vista, the divide between the two is quite clear. All land within the incorporated area is subject not only to zoning--dictating its use and density--but also to strict development guidelines, which raise both the cost and complexity of development. It does the city little good to create an area designated for a planned rural environment, because an abundance of true rural land lies only a stone’s throw away, just outside of the incorporated area. Extending the reach of the city and its regulatory jurisdiction has the effect of driving development further into rural areas as developers relocate in a continuing effort to escape land use regulations. Ultimately, the city remains better off by not annexing land in anticipation of future development if rural preservation remains a goal.

5.5 Summary and Conclusions

The empirical analysis demonstrates that the conceptual model (Figure 4.1) explains the rural residential land development process in Cochise County, Arizona. The quantitative component of the analysis shows that unincorporated portions of the county have grown considerably in recent years, and that the increase in population is primarily attributable to net migration. At the same time, large amounts of land and natural open space have been consumed by rural residential development. This is evidenced by an increase in the number of privately owned residential parcels and a decline in the amount of land dedicated to agricultural use and open space in the county. These variables establish that there is a high demand for rural living in Cochise County, and that this demand has been met by land developers--resulting in exurbanization. The assessment of land use policy in Sierra Vista reveals that planners have responded to exurbanization by imposing traditional forms of regulation. Through its comprehensive plan,
development code, and annexation policy, the city has implemented a managed growth strategy aimed at assimilating exurban development with the greater urban form. Large quantities of vacant and newly developing land have been added to the incorporated area in an effort to promote orderly and contiguous development. Meanwhile, development continues to occur in areas beyond city limits which remain comparatively free from land use regulation. The process is perpetual, with further expansion of the urban areas leading to further dispersion of exurban development. In short, the desired outcome has not been achieved. Instead, the result has been a fragmented urban form that perpetuates the consumption of rural land and commits large amounts of open space to eventual intensification.

In view of the insights provided by the conceptual model and empirical analysis, there is significant rationale for revisiting the practice of nonmetropolitan land use planning. While planners should not to be blamed for perpetuating the consumption of rural land and open space, the role that they play in the process is clear. It does little good to impose traditional forms of land use regulation in areas where those regulations can be avoided by simply relocating to areas lying beyond their reach. While this thesis does not provide any hard and fast solutions to the situation, the next chapter advances several principles which should be taken into account when redeveloping the rural land use planning framework.
Chapter 6
Policy Recommendations

The empirical analysis concluded by noting that there is considerable rationale for revisiting the practice of nonmetropolitan land use planning. While this observation is not new or unique, the land use situation that has materialized in the Mountain West underscores its immediacy. The growing popularity of rural living, the emerging form of amenity-based land consumerism, and the rapid consumption of irreplaceable natural open space in the region are clear signals of the mounting importance of the issue. Combined with the ineffectiveness of traditional planning methods, these indicators demonstrate a clear need for a revised framework. At the heart of the matter lies a need to implement an approach which is aimed at managing development through the preservation of open space and the natural environment.

This chapter introduces three methods which should be considered when developing a revised approach to rural land use planning in the Mountain West. First, nonmetropolitan land use planning should be based on a regional approach that takes both urban and rural areas into account. The primary benefit is that urban and rural land uses are recognized as separate components of an integrated whole, allowing relevant land use policies to be developed for each. Second, rural land use planning should seek to incorporate the economic concept of value. An emerging array of land valuation techniques allow open space to be valued in terms of its intrinsic worth, and not just for its developed potential. Such measures would allow for better qualification of the preservation of land and natural open space. Finally, rural land use planning in the Mountain West should seek to minimize the need for land use regulation whenever possible. This is best accomplished through the use of large minimum parcel sizes, performance
standards, and land preservation techniques such as conservation easements. These techniques are well suited for rural settings because they aim to preserve the integrity of the rural landscape as well as the lifestyles of rural people.

6.1 Regional Approach

The ideal foundation for rural land use planning is state-level legislation which enables the implementation of growth management and land preservation programs. An excellent example of this approach is the state of Oregon, which has legislated 19 state-wide goals in order to provide a single legal framework for coordinating and implementing land use planning and growth management throughout the state (DLCD 1995). Instead of each municipality and/or jurisdiction developing its own set of land use goals and regulations, they are established by the state, and thereby remain consistent throughout. The outcome has been effective preservation of land and open space because the state as a whole is treated as an integrated region that is composed of both urban and rural areas. Separate goals and land use policies have been developed for each, instead of the conventional approach, which leaves outlying rural areas at the mercy of metropolitan planning agendas.

The state of Arizona--as well as other states of the Mountain West--however, has no state-based land use legislation (Burns and Onderdonk 1993). And in most cases, chances of obtaining a framework such as Oregon’s are very slim because political support is weak, if not all together absent. A major reason for this is that the bulk of the states’ populations are concentrated in rapidly growing metropolitan areas--Phoenix and Tucson in the case of Arizona--where pro-growth and urbanistic attitudes prevail. As a result, more remote rural areas do not receive the attention they need in order to accomplish effective open space preservation because the issue is
not popular enough politically. In sum, the development of an effective framework for state-level land use planning and growth management is hindered by the rural/urban divide.

In the absence of a state-level framework, the responsibility of developing and implementing regional land use planning efforts in the Mountain West should fall under the jurisdiction of county-level governments. The reason for this is twofold. First, states in the region are very large and composed of few counties which claim expansive areas. Within these areas are located a wide variety of natural as well as human-made landscapes. This large scale places county-level government in the best position to determine the most appropriate land use planning goals and strategies for their own particular region. Second, allocating regional planning responsibilities to individual counties fares a much better chance of attaining local political support, because residents will feel more confident that their particular interests are being looked after. This is especially important in the Mountain West, a region where the property rights of the individual remain very much at the heart of the rural identity.

6.2 Land Use Planning and the Economic Concept of Value

Rural land use planning in the Mountain West should be designed to incorporate the economic concept of value. As discussed in Chapter 4, one of the key factors leading to the conversion of open space in the region is that it often lacks an alternative use value. This compares to other regions of the country such as the Pacific Northwest, where rural land is used for agriculture or other productive purposes such as forestry; in the Mountain West, and particularly in the arid Southwest, rural land is simply considered vacant. While some of it is used for agricultural purposes, the majority of it remains in a natural state, consisting of desert or mountainous environments. But these areas are not merely "vacant" or "rural," they are unique natural
environments which have substantial intrinsic value.

Direct evidence of this intrinsic value lies in the very mechanisms which Chapter 4 demonstrates lead to exurbanization and the conversion of rural land in the Mountain West. People are drawn to the region because of its abundant open space and high natural amenity—in short, they place a high value on these qualities. Land developers have identified this, promoting the conversion of rural land in order to supply consumers with the open space and amenities they demand. The process perpetuates itself because once land is developed, its natural amenity and intrinsic worth are diminished, leading developers and consumers alike to seek out new areas. In sum, the intrinsic value of open space lies at the very heart of the commodification of place in the Mountain West, even if the specific dollar value in question remains unidentified prior to development.

In order for land use planning to address the process properly, there is a critical need to refine techniques aimed at placing an economic (dollar) value on open space. At present, most techniques remain in their infancy because an actual market for open space is virtually nonexistent (Hanink 1995). Even still, there is a rapidly growing array of methods and empirical tests available for land valuation, most of which are based on one of two concepts. The first, option value, is based on the notion that people gain a substantial amount of satisfaction—utility—from the mere knowledge that natural environments exist in a preserved state. The concept was originally advanced by economists in the 1960s who noted that many people are willing to pay for land preservation in order to retain the option of possible future use. This sentiment extends to existence value, which considers that other individuals gain satisfaction from the preservation of natural environments, even though they have no desire to actually see or use them (Krutilla
1967; Walsh et al. 1984). The second concept, *use value*, is perhaps more tangible. Several studies have found that people are willing to pay substantial fees for the use of pristine natural environments. In this case, access to open space is valued for its recreational purposes, and actual valuation is based on a measure of "willingness to pay" (Diamond and Noonan 1996; Faushold and Lilliholm 1996).

Unfortunately, methods for actually measuring these values remain theoretical. Once further developed, there is excellent potential for using them to demonstrate that land consumption takes a tremendous toll on the satisfaction of the public as a whole. Land use planning could thereby incorporate the concept of intrinsic value by placing open space preservation in the direct interest of the public health, safety, and welfare. While this view is commonly held already, the extent to which it is true—in an economic sense—remains unknown.

6.3 Minimizing the Need for Land Use Regulation

Chapter 5 demonstrated that the use of urban-based land use regulations perpetuates the consumption of rural land and open space rather than preventing it. This dilemma lies at the heart of rural land conversion throughout the Mountain West; the imposition of land use controls increases both the cost and complexity of the development process, compelling land developers to seek out more remote areas. With this in mind, land use planning in rural areas should aim to minimize the need for traditional forms of regulation. There are several ways of accomplishing this, all of which work in conjunction with a regional planning approach and the economic valuation of open space described above.

First, minimum parcel sizes in unincorporated areas should be kept very large, between 10 - 20
acres in most areas, and even larger in others (Yaro 1991). This compares to the minimum parcel size of 4 acres that is permitted in unincorporated portions of Cochise County and throughout the state of Arizona. Lots of this scale should be avoided at all costs—especially adjacent to urban areas—because they promote the consumption of land and open space. Four acre parcels permit large quantities of land to be converted very rapidly through exurbanization, while at the same time not being large enough to truly preserve the integrity of rural areas. Increasing minimum lot sizes has much potential for preserving rural environments, particularly because it does not interfere with traditional rural land uses, which typically require large areas in the first place. Used in combination with a regional planning approach, large minimum lot sizes would work effectively to contain the expansion of urban areas. Disallowing intensive development beyond city limits forces land developers to remain within incorporated areas because it is not as worthwhile—from an economic standpoint—to pursue large acre subdivisions. In turn, once the city decides that it is ready for further expansion, land can then be annexed and rezoned for denser development.

Second, wherever possible, development should be regulated through the use of performance standards rather than more traditional methods such as zoning and subdivision ordinances. Performance standards are especially well suited for nonmetropolitan areas for several reasons. First, they regulate development based on its impact upon its surroundings rather than by simply dictating its form and function. The emphasis is on qualitative aspects, requiring development to be better attuned to its surrounding environment, and promoting more creative design techniques (Mantell et al. 1990; Porter 1996, 1997). Second, performance standards may be specifically tailored to the particular environment that they are intended to protect. Planners, ecologists, wildlife specialists, agriculturalists, and even members of the development community should all
play an active role in their development and implementation. Third, performance standards can be tied to valuation schemes, allowing them to reflect those environmental qualities which are most highly valued by the public at large. Finally, performance standards are less likely to come into conflict with the ideology and lifestyles of rural dwellers who are resistant to land use regulation. In sum, performance-based land use regulations offer a viable approach to rural land use planning because they have an inherent flexibility which enables them to reflect the specific environmental, economic, and social characteristics of nonmetropolitan areas.

Finally, rural land and open space can be preserved through the use of conservation easements (Mantell et al. 1990; Wright 1993). In contrast to the two approaches described above, conservation easements are not a form of government intervention. Instead, they are formed when individual land owners voluntarily sell or donate certain land use rights pertaining to their property. In this case, the best example is development rights, although others such as grazing rights are often involved. A conservation easement effectively splits the ownership of the property, with the original land owner retaining possession and use of the actual property, and an independent party—often a nonprofit organization such as the Nature Conservancy—holding the development rights. The land owner benefits from the process in two ways. First, they insure that their land never comes under demand for development; for example, an organization of farmers can effectively prevent the intrusion of development into their area well before it arrives by mutually parting with the development rights to their properties. Second, in the eyes of the Internal Revenue Service, the value of land is depreciated in the absence of development rights, lowering property taxes for the land owner. Again, open space valuation comes into play, as there is a significant need to attach economic values to conservation easements, especially when they are being sold by the land owner.
6.4 Summary and Conclusions

This chapter presented three principles which should be taken into account when developing land use planning programs for nonmetropolitan settings in the Mountain West. First, rural land use planning should be administrated within a regional framework in order to insure that rural areas receive equal treatment with urban areas. Both should be viewed as components of a greater whole, each with its own land use planning requirements. This moves away from the conventional approach which leaves rural areas subject to the outcome of metropolitan planning agendas. Second, land use planning should incorporate the economic concept of value in its approach to preserving open space. This point is particularly important because at present, land dedicated to open space has little or no value in the market place which can allow it to compete with its value in a developed state. Nonetheless, open space should be conserved, because in the eyes of the public at large, it is a highly valuable commodity. Finally, wherever possible, rural land use planning should seek to minimize the use of regulation. This can be accomplished through the use of large lot sizes, performance standards, and conservation easements.

In effect, these three principles call for a reinvention of the role that land use planners play in nonmetropolitan settings. Their implementation rests heavily upon public education and outreach planning--especially in the case of conservation easements which cannot be imposed by government--and public education. In addition, their potential for success relies heavily upon planners setting aside their urban biases which lead them to view rural areas as outlying extensions of the urban environment. At the heart of the matter is the notion that open space should be viewed as a land use of its own--even when integrated with urban development. The case is not that all development should be prohibited outside of urban areas, or even that large portions of rural land should not be dedicated to low density residential land uses. On the
contrary, development should be allowed to proceed, but in a manner that is sensitive to the
intrinsic value and unique character of the natural environment. But as earlier chapters of this
thesis have shown, this goal cannot be met through the traditional planning approach which
attempts to control outlying development by imposing land use regulations. Achieving effective
preservation of rural land and the natural environment requires that the planner becomes more of
a custodian of open space and less of a regulator of development.
7.1 Thesis Summary

This thesis has fulfilled its objectives by examining the role that land use planners play in the rural residential development process. Building on the background discussion in Chapters 2 and 3, Chapter 4 developed a conceptual model describing the rural residential development process. Chapter 5 demonstrated that the conceptual model explains the rural residential development process in Cochise County, Arizona. Finally, based on the findings of the empirical analysis, Chapter 6 delivered several recommendations which should be considered when considering a new approach to nonmetropolitan planning.

The background discussion contained in Chapters 2 and 3 delivered several important points relating to rural residential development in the Mountain West. First, it supplied a working definition of rurality by demonstrating that a fundamental characteristic of rural areas is an ideological orientation which places a high value on land ownership and the property rights of individual land owners. As a result, many rural places remain comparatively free from land use regulation, leaving them susceptible to changes brought on by rapid population growth and land development. Second, recent national-level patterns of population change were reviewed by documenting that the process has been cyclical, and has affected different regions of the country disproportionately. In contrast to other regions, the Mountain West has experienced a consistent rate of nonmetropolitan growth, even as some continue to face severe decline. Third, much of this growth is the product of urban dwellers relocating in search of idealized rural living while maintaining urban lifestyles. Finally, the regional selectivity is best explained through the
deconcentration explanation of nonmetropolitan growth, which accounts for the role that consumer motivations play in relocation decisions. In sum, the rapid pace of nonmetropolitan growth in the Mountain West is attributable to its high desirability as a place to live.

Building upon these concepts, Chapter 4 developed an explanation and conceptual model of the rural residential development process in the Mountain West. The chapter consisted of four components. First, drawing on concepts from Molotch’s (1976) “growth machine” theory, the chapter demonstrated that rural land development in the Mountain West is driven by a unique set of market circumstances which lead consumers and land developers alike to seek out low remote areas of high natural amenity. These include the abundance and comparatively low cost of rural land in the region, and the relative absence of land use regulation found in remote areas. Together, these conditions create an environment which enables land developers to maneuver with relative ease, compelling them to promote an even greater demand for rural residential development through the commodification of place. Second, the rapid pace of growth in the region has resulted in widespread exurbanization, a mode of development that is neither urban or rural, but a combination of both. Low density, urban-style development has spread across the rural landscape, consuming large quantities of land and irreplaceable natural open space as it progresses. Third, planners—and the planning discipline in general—view exurban development as a spatial extension of the traditional urban form, leading them to attempt to control it through the use of urban-based land use regulations. The chapter concluded by presenting a conceptual model of the rural residential development process in the Mountain West (Figure 4.1). The model demonstrates that the outcome of the planner’s approach has been to inadvertently perpetuate the consumption of land and open space in the region.
Chapter 5—the empirical analysis—established that the conceptual model explains the rural residential development process in Cochise County, Arizona. The quantitative assessment showed that unincorporated portions of the county have grown considerably in recent years, primarily through net migration. As a result, large amounts of rural land and open space have been consumed by residential development. This was evidenced by an increase in the number of parcels dedicated to residential land uses and a decline in the amount of land dedicated to agriculture and open space in the county. Together, these findings established that there is a high demand for rural residential development in Cochise County, and that that demand has been met by the local development industry, resulting in exurbanization.

The planner’s role in the process was assessed through a detailed analysis of land use policy and land development patterns in Sierra Vista. Planners have responded to the rapid pace of exurbanization in outlying areas of the city by imposing traditional forms of land use regulation. Through its comprehensive plan, development code, zoning designations, and annexation policy, Sierra Vista has implemented a “managed growth” strategy aimed at integrating exurban development with the greater urban form. Large quantities of vacant and newly developed land have been added to the incorporated area in an effort to promote orderly and contiguous development. Meanwhile, development has continued to occur outside of city limits, locating progressively further from the urban center as the city expands its boundaries. The resulting urban configuration was illustrated in Figure 5.12 and demonstrates that the outcome of the planner’s approach has been to inadvertently promote the very form of development that they set out to prevent.

In view of these insights, Chapter 6 presented several principles which should be considered
when developing a revised approach to nonmetropolitan planning. First, rural land use planning should be founded on a regional framework. The primary benefit is that taken in a regional context, urban and rural land uses may be viewed as separate components of an integrated whole, ensuring that the specific land use needs of both urban and rural areas are taken into account. This moves away from the traditional approach which leaves rural areas subject to the mercy of metropolitan planning agendas. Second, nonmetropolitan planning should incorporate the economic concept of value. At present, land dedicated to natural open space has little or no value which can allow it to compete with its value in a developed state within the rural land market. Even still, much of the open space in the Mountain West has substantial intrinsic value—as evidenced through its rapid rate of consumption—even if the actual dollar amount remains unknown. An emerging array of land valuation techniques are available for assessing the worth of land in its developed state, but unfortunately, they have yet to be formalized. Further development of such measures holds considerable merit because they would allow the preservation of open space to be qualified in terms of economic benefit. Finally, planning in the nonmetropolitan Mountain West should seek to minimize the need for regulation wherever possible. This is can be accomplished through the use of such measures as large lot sizes, performance standards, and conservation easements.

The primary contribution of this thesis has been to demonstrate that there is a need to reevaluate the way that planners—and the planning discipline in general—view rural land use issues. In effect, the principles proposed in Chapter 6 call for a reinvention of the planner's role in nonmetropolitan settings. The potential for developing a more successful approach to rural land use planning and open space preservation rests heavily upon the willingness of planners to set aside their biases which lead them to view rural land as an outlying component of the urban
environment. At the heart of the matter is a significant need to rethink the traditional conception of land and to begin to view open space as a land use of its own. In sum, achieving effective preservation of rural land and the natural environment requires that the planner becomes less of a regulator of development and more of a custodian of open space.

7.2 Recommendations for Future Research

While the empirical section of this thesis raised substantial evidence of the role that planners play in the rural land development process, it nonetheless faces several limitations, all of which suggest avenues for further research. First, the case study focused only on Cochise County in Arizona. While it seems clear that the traditional planning approach has been ineffective in Sierra Vista, it is unclear that the situation would be the same elsewhere in the Mountain West. Future research should seek to incorporate more counties, preferably in different states of the region. Second, this thesis lacks an analytic component, and was thus unable to present statistical evidence regarding the strength of the correlation between the planner's approach and continuing consumption of rural land. Raising this type of evidence would require that the sample size—the number of counties—be increased and developing some type of measure for comparing the relative amount and/or intensity of development occurring both inside and outside of incorporated areas. Finally, qualitative data regarding how planners and land developers perceive the rural land development process would add substance to the argument. In other words, the best way to ascertain whether land developers do indeed take active measures to avoid land use regulations is to simply ask them. This would require the development of an appropriate survey framework, and again, a sample size large enough to allow for comparative analysis. While this thesis has left a number of questions unanswered, it has taken a positive step in the direction of a revised framework for nonmetropolitan planning.
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Personal Communication
