

ABSTRACT

Title of Dissertation: ANALYZING MUNICIPAL ANNEXATIONS:
CASE STUDIES IN FREDERICK AND CAROLINE
COUNTIES OF MARYLAND, 1990-2010

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Municipal annexations play an important role in converting undeveloped land to development, influencing landscape change. However, the existing literature does not explore the links between annexation and development. An additional inadequacy is the failure to consider environment/landscape aspect of annexation. Therefore, this dissertation proposes a new theoretical framework that is drawn upon political ecology and structuration theory to examine annexation phenomenon processes: environmental/landscape sensitivity and its causal social structures. Frederick and Caroline counties in Maryland from 1990 to 2010 were the two case-study areas because both counties experience increased annexation activities and are representative of suburban and exurban settings at rural - urban continuum of the United States.

The data used in this qualitative research were collected from multiple data sources, including key-person interviews, a review of Maryland's annexation log, annexation applications and meeting minutes, and observations at public meetings. Triangulating content analysis, discourse analysis, and social network analysis, this research finds that environmental/landscape is not considered more widely in annexation practices. Although environmental mitigation measures are considered at site level if a property has site environmental elements, the overall environmental/landscape sensitivity is low. It is also found that the economic-centered space remains dynamic in the annexation processes determining annexation approvals and low-density zoning. In addition, the triangulated analyses reveal that current social structures are not conducive to environmental-conscious landscape planning because environmentally oriented non-profit organizations and residents are injected at a later stage of annexation process and is

not being fully considered in the evaluation process. Power asymmetry in current annexation structures is due to a lack of environmental voice in annexation processes. The voice of such groups needs to be institutionalized to facilitate more tenable annexation practices.

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by

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Dissertation submitted to the Faculty of the Graduate School of the
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List of Abbreviations

CASM	Conceptual Annexation Structuration Model
MSLL	Maryland State Legislative Library
MSAL	Maryland State Archival Library
CACMM	Commissioners/Alderman/Council Meeting Minutes
PCMM	Planning Commission Meeting Minutes
BAZMM	Board of Appeals/Zoning Meeting Minutes
CTY	County Government
MUN	Municipality Government
LDO(s)	Land Owners
DEV(s)	Developers
EMCG(s)	Environmental Groups/Organizations & Environmental-Oriented Civic Groups
RIMs	Residents inside a Municipal
RUA(s)	Residents Residing in Unincorporated Areas
EIS	Economic-Interest Space
EMIS	Environmental-Interest Space
CQoLIS	Community/Quality of Life-Interest Space
SNA	Social Network Analysis
ESLC	Eastern Shore Land Conservancy
CBF	Chesapeake Bay Foundation
FoFC	Friends of Frederick County
BOCC	Board of County Commissioners (Frederick County)

Chapter 1: Introduction

1.1 Background

Annexation is used municipalities to incorporate proximate unincorporated areas to enlarge their administrative boundaries. In the United States, municipal annexation is one of the most common types of boundary change¹. The U.S. Census Bureau reports that, from 1990 to 2005, nearly 61,000 annexation events occurred nationally and these events involved 4.6 million acres of land and 1 million people (U.S. Census Bureau 2005). Municipal annexations in Maryland resemble the national trend. The Maryland Department of Planning reports that, from 1997 to 2005, the state as a whole gained 27,453 acres of incorporated land² (11% increase) and some municipalities have grown by 50% to 200% or even more in total land area via annexation (Maryland Department of Planning 2005).

On development, the extent of developed land has been rapidly increasing (Gobster et al., 2004: 149). Environment Maryland, a statewide citizen-based environmental advocacy organization, reports that land development activity in Maryland has continued at nearly the same pace as before 1997³ (www.environmentmaryland.org 2010). The state's Land Use Task Force⁴ predicted approximately 650,000 acres of countryside could be converted by the development in the next two decades (planning.maryland.gov/YourPart/773/Task_Force.shtml 2010). This raises a number of

¹ Other boundary changes include incorporation (a dense settlement being incorporated) and consolidation (a consolidated city-county is a city and county that have been merged into one unified jurisdiction). Smith Russell and Keith Debbage are the geographers who conduct extensive research on municipal incorporation in U.S. in the recent years.

² Howard and Baltimore counties are not included because both counties do not have municipalities.

³ According to the 2009 Annual Report, it is estimated, from 1998 to 2007, 175,000 acres of land had been consumed by residential and commercial development.

⁴ The Task Force was formed by state law in 2006 to study land-use issues through December 2010. It is composed of twenty-one members meet regularly discussing land use issues in Maryland.

questions: what are the drivers of such development trends? Is development related to annexation? If so, how are they related? Does annexation impact environmental quality or not? If so, then how? The answers to these questions are important in assisting the communities foresee what the future of Maryland's landscape is going to be.

Annexation research primarily focuses on the topology of state annexation laws (Galloway and Landis 1986; Meligrana 2004; Palmer and Lindsey 2001; Sengstock 1960; Wheeler 1965), political motivated annexations (Briffault 1990a; Edwards 2008; Fleischmann 1986a and 1986b; Gonzalez and Mehay 1989; Meligrana 2004), and economic aspects of annexations (Cho 1969; Edwards 1999 and 2008; Knaap and Juelich 2005; Liner and McGregor 1996; MacManus and Thomas 1979; Meligrana 2004 and 2007; Ulfasson 2006). Recently, several researchers have investigated annexations, sprawl and growth control (Edwards 2011; Meligrana 2007; Reynolds 1992; Rusk 1993 and 2006). While the debate on whether annexation can be used as an effective tool for growth management continues, as a land use decision-making, annexation is a complex process, involving multiple stakeholders across private and public sectors exerting influences on the larger-than-annexed landscape. Yet, annexation remains a poorly understood phenomenon. John Meligrana holds that this inadequate attention to the annexation phenomena is due to a lack of a strong theoretical framework (2004: 1).

In addition to the annexation literature, sprawl is a relevant area that needs to be explored for possible relationships. Sprawl is increasingly linked with negative impacts on society (Torrens 2006), however, an agreeable definition of sprawl is still lacking. This dissertation uses two characteristics of sprawl as the basis to link annexation and development. These two characteristics are that it is consumptive (Mason 2008) and

consists of low-density development (Ewing 1994; Galster et al. 2001; Mason 2008). Municipal annexation activities that occurred in the recent years continue, involving substantial acreages of land and people, which raises the question of how land as a unique resource can and should be managed. Studying annexations would allow capturing the links between the two and are useful in understanding the underlying causes and resultant challenges of protection of forests, agricultural land, and other resource lands.

Many issues underlying landscape change are rooted in human nature (Gobster et al. 2004: 149). The USDA Forest Service, North Central Research Station argues that “development-related landscape change - problems and effects are human in nature, thus, a solid grounding in social sciences is needed.” This dissertation is thus grounded in human geography and investigates the underlying linkages - agency and structure between the two. By investigating the agency and structure (who, what, and how) of contemporary municipal annexations at urban-rural continuum, the complexity of competing interests were able to be captured. Although this dissertation is not directly concerned with sustainability, the notion that sustainability generally refers to the interdependence of ecological, social, and economic systems (Hutchins 2010: 4) was assumed.

By investigating the agency and structure (who, what, and how) of contemporary municipal annexations at urban-rural continuum, this research will make several contributions. First, a contribution is made to filling the void in the topical area. Filling this void allows a deeper understanding of the complexity and dynamic of annexation processes. Second, this research provides a geographic perspective by analyzing the spaces and relationships among the stakeholders, networks embedded in annexation

processes, and power configuration. In combining political ecology and structuration theory, this research provides an innovative theoretical framework that is integrative in this third epoch of environmental movement⁵ (Mazmanian and Kraft 2009: 15). By applying such a new theoretical framework, this dissertation was able to minimize the limitation of separate disciplinary fields providing a fresh perspective in understanding land use change dynamics, conditions and ramifications Third, this topic is important in that it provides insight implications on whether and how recent annexation events may have or have not affected Maryland, a state with a national reputation for its Smart Growth initiatives that were launched in 1997.

This qualitative research developed a descriptive model that characterizes the agency and structures, based upon political ecology and structuration theory - the Conceptual Annexation Structuration Model (CASM). The CASM was able to illustrate the processes of the three contested spaces. More importantly, the CASM was able to unpack the networked spaces and power organization in land use decision making such as annexations. The CASM was telling in that, of the three spaces, the economic/development-centered space is the most powerful one as to the stakeholders in public and private realms were networked and structurally powerful in rendering land use change decision. In addition, Fredrick and Caroline counties have significant amounts of unincorporated land available located adjacent to their municipalities that are ripe for annexation. Lastly, the employment of a mixed and triangulated methodological approach helps to minimize the limitations of using a single data source and a sole method of analysis method, therefore maximizing the benefits of each type of data source

⁵ This refers to Smart Growth and Sustainability movement in the United States since the late 1990s.

and analysis method. It has provided the qualitative and quantitative understanding about the structures embedded in the annexation processes.

In sum, this dissertation investigates processes and patterns of annexation events in Frederick and Caroline counties of Maryland from 1990 to 2010. The CASM model was developed and proposed for characterizing the typology of the multiple stakeholders in both private and public sectors at multiple levels. As such, the conversion of agricultural land to low-density development is complex.

1.2 Research Problem Statement

Contemporary municipal annexation is a land use issue that is dynamic and complex at the rural-urban continuum of the United States. However, what these dynamics are and what impacts are not known. In addition, in Maryland, one of the highly urbanized states and possessing a national reputation for its Smart Growth initiatives⁶, experienced an increase in municipal annexation activities. What the dynamics are that drive the increased trend of municipal annexation activities and what impacts, if any, that result from these annexations in Maryland is not clear. These problems provide this dissertation a research opportunity to investigate annexations.

1.3 Research Purpose Statement

The purpose of this dissertation is to provide an updated account from a geographical perspective that examines the underlying structures driving annexation events stated in the proposal. The two case study areas - Frederick County and Caroline

⁶ Maryland's Smart Growth initiatives were initially launched in 1997, aiming to curb sprawl and reduce the loss of resource lands.

County of Maryland from 1990 to 2010 were examined, analyzed and interpreted. In doing so, this research project fills a void to the existing literature in facilitating better understanding of the dynamics of local land use practices and its underlying structures and thus fosters better policies that are forward-looking by capturing dynamic process elements positively affecting landscape at broad scales.

Because this dissertation deals with resource use and management, it uses the definition of the stakeholder developed in natural resource management for its inclusiveness. Two of such examples are Gass et al. (1997) who defines that stakeholders are “any individual, group and institution who would potentially affect, be affected, whether positively or negatively, by a specified events, process or change” (122) and Buanes et al. (2004) who offers his definition in a similar way, which is stakeholders are “... any group or individual who may directly or indirectly affect – or be affected -... planning to be at least potential stakeholders” (211).

Agency is defined as the capacity of an agent to act and who are knowledgeable and skillful in taking routine actions independently (Giddens 1984: 9; Stones 2005: 25; Tucker 1998: 81).

Structure refers to an abstraction of virtual space and is the outcomes of interplay between and within individuals, groups, and institutions. Rather than static, it is a continuous process (Stones 2005: 9). Giddens explicitly defines that structures are “virtual orders of transformative relations, allowing linking time and space” (1984: 17).

1.4 Research Question

While the overarching research question of this dissertation is not framed as a traditional experimental question, the underlying hypothesis can be stated as the following:

- Annexation is a fair process involving participation by multiple stakeholders that positively influences landscape change.

In a broad sense, the overarching question that this research project seeks to answer is:

- **How do the sources, conditions, and ramifications of annexations contribute to landscape change in Frederick and Caroline counties of Maryland from 1990 to 2010?**

To answer this question, three sub-area questions are:

- 1) What are the dynamics of the stakeholders' relationships in annexation processes of Frederick & Caroline counties of Maryland from 1990 to 2010?
- 2) What are the changes in land use via annexations in the two study areas?
- 3) Do annexations encourage sprawl?

1.5 Case Study Areas

Why Frederick & Caroline Counties?

Given the research questions enumerated in this chapter, two geographically disparate areas - Frederick and Caroline counties (Figure 1.5.1) were selected as case study sites.

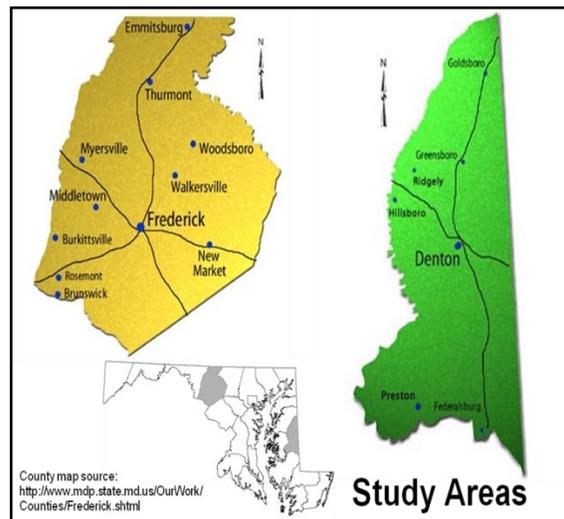


Figure 1.5.1 Location of study areas

Three reasons explain why these two counties were the most appropriate choices. First, these two counties were representative due to the number of annexation events, the quantity of annexed land, and the annexation rates from 1990 to 2010. Frederick County annexed a large amount of unincorporated land from 1997 to 2005, increasing in land by 14% (3,381 acres) as compared to the average of 11% annexed land at state level (Maryland Department of Planning 2007). Municipalities in Caroline County, from 1997 to 2005, experienced the largest percentage increase in annexed land (a 49% increase involving 2,388 acres) among all Maryland's counties. Second, their relative locations make them subject to growth pressures, thus providing excellent laboratories for investigating the linkage among annexation events, processes, and patterns. Frederick County represents a typical suburban setting that serves as a bedroom community of Washington D.C. and Baltimore Metropolitan regions due to its proximity to both. Caroline County is an example of an exurban setting⁷ that is characterized by small towns in rural areas providing rural amenities (Davis and Nelson 1994: 46). Comparing and contrasting annexations in these two study areas will lead greater insight regarding these two different urban forms. The third reason is due to these two counties are unique counties and important in assessing Maryland's Smart Growth policies.

Methodological reasons also contribute to why choosing two case study areas rather than one is necessary. The first addresses a common criticism of qualitative research, which is that qualitative research too often only considers one case which has limited rigor. The use of two case study areas offers a counter-criticism adding rigor and the ability to "explor[e] how findings generalize to various types of cases" (Montello and

⁷ Judy Davis and Arthur Nelson defines an exurban landscape provides "rural amenities, large house lots, longer drivers to work, and living in small towns" (1994: 46). They divide ex-urban settlement into two categories: exurban rural landscape and ex-urban small towns that dot the exurban landscape (ibid).

Sutton 2006:125). With the use of two study areas, this dissertation more easily avoids “spurious conclusions drawn from the idiosyncratic cases one might have happened to choose in single-case design” (ibid). Another reason for choosing the two case study areas for this dissertation is due to combination of purposes and serendipity, where “sometimes we find a case, and sometimes a case finds us. In either instance, [the] selection [should] combine purposes and serendipity” (Bradshaw and Stratford 2000: 41). Lastly, long-term personal research interests on the topics of urban sprawl and living in the suburban areas have also prompted this research project.

Frederick County, located in western Maryland, is the largest county in the state. The county falls in the two physiographic regions: the undulating Piedmont region in the eastern portion and the mountainous Blue Ridge region in the western portions.

Frederick County contains twelve incorporated municipalities (Figure 1.5.1): Brunswick, Burkittsville, Emmitsburg, Frederick City, Middletown, Mount Airy, Myersville, New Market, Rosemont⁸, Thurmont, Walkersville, and Woodsboro. Together they account for less than 1% of the County’s total land area and the rest of the County’s land is unincorporated. The population in the twelve incorporated municipalities increased from 38% in 1980 to 42% in 2000 and decreased to 40% in 2010 (Frederick County 2010 Comprehensive Plan). As of January 2010, the County’s population density was 354 persons per square mile housed in 88,006 existing dwellings (U.S. Census Bureau 2010).

⁸ Rosemont has no planning authority and Frederick County planning assumes this responsibility for the town.

Figure 1.5.2 (a) Annexed Land by Acres in Frederick County's Municipalities

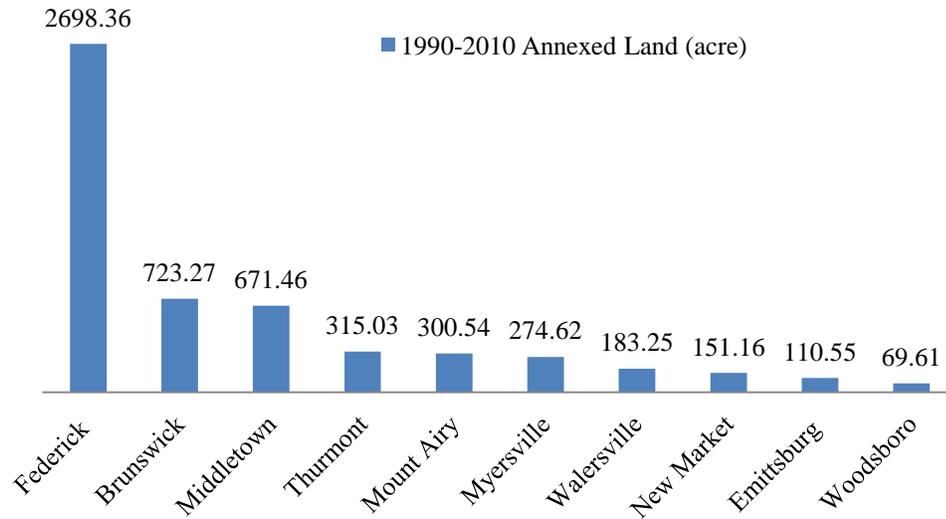
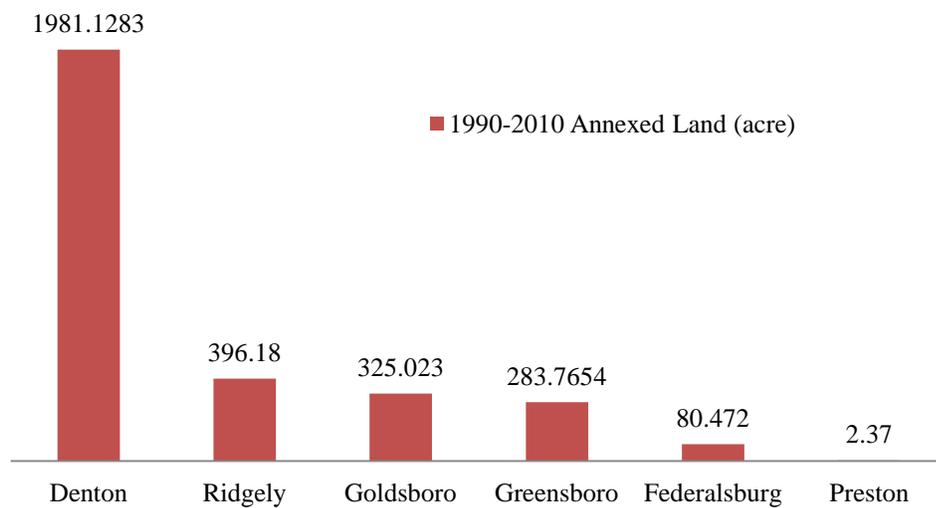


Figure 1.5.2 (b) Annexed Land by Acres in Caroline County's Municipalities



Source: Annexation Log fom MSL, Annexation Reports from Frederick and Caroline County libraries.

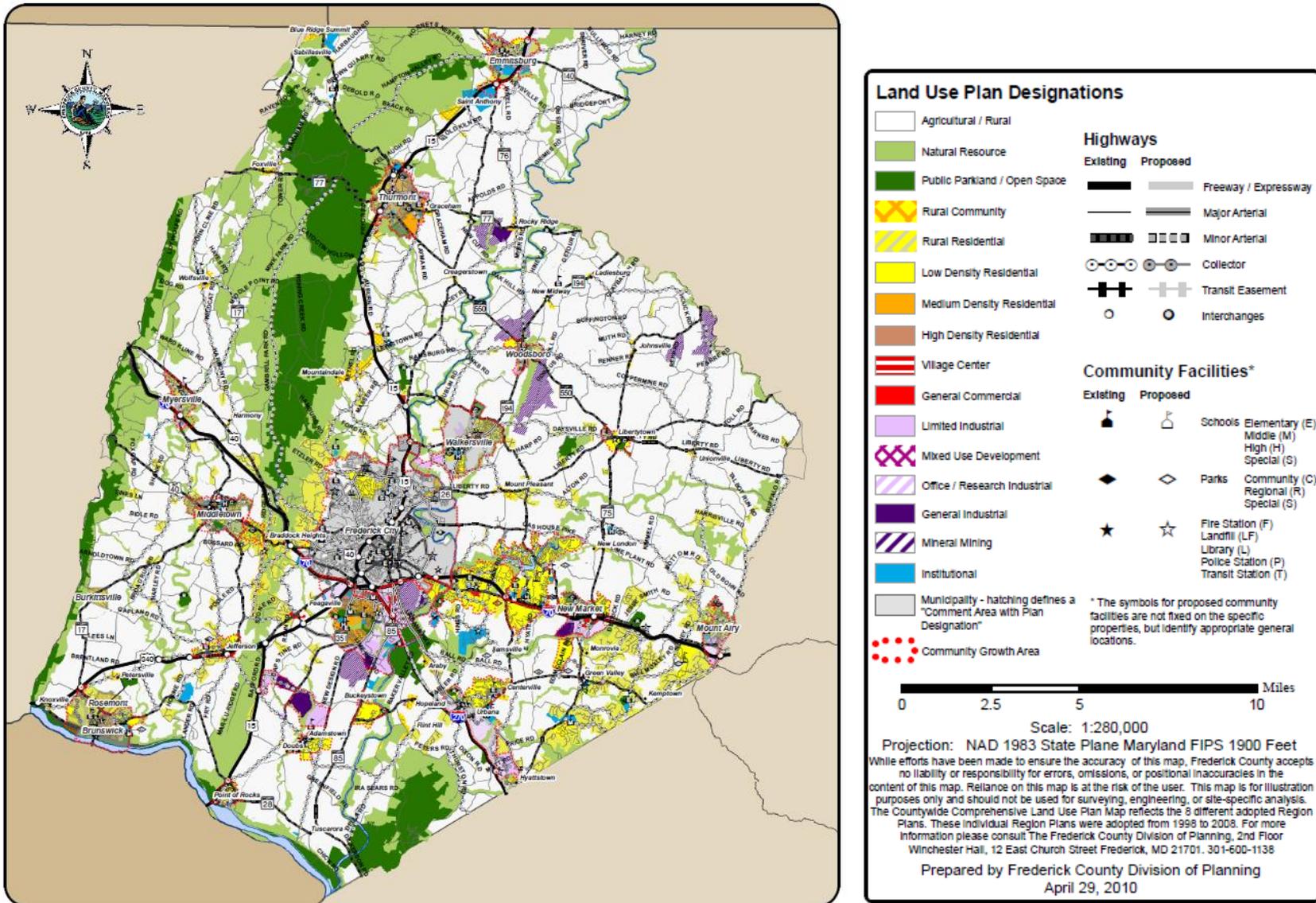
Annexation Events at Municipality Scale: Figure 1.5.2 (a) and (b) presents the annexation events database at municipality level in terms of the number of events and acres of annual annexed land from 1990 to 2010. As the figures illustrated, the County seat of Frederick County, Frederick City annexed the largest amount of land, a total of 2,698.36 acres. Brunswick was second, with 723 acres annexed. Middletown was third.

The land use and land cover (Figure 1.5.3) in Frederick County is dominated by agricultural land use (64.3%), which is reflected by that Frederick County is the Maryland's largest dairy producing county for the last decade. Forest land is the next largest land cover category with 65,528 acres, a share of 15.4% concentrating in the Catoctin, South Mountains and Sugarloaf Mountain areas. Open space and public land are grouped together with 22,886 acres, approximately 5.3% of the entire county. With respect to development, there are 43,723 acres (or roughly 10.3%) of land in residential use. This is followed by 2.5% institutional land use and 2.2% commercial use (Frederick County Comprehensive Plan 1998⁹).

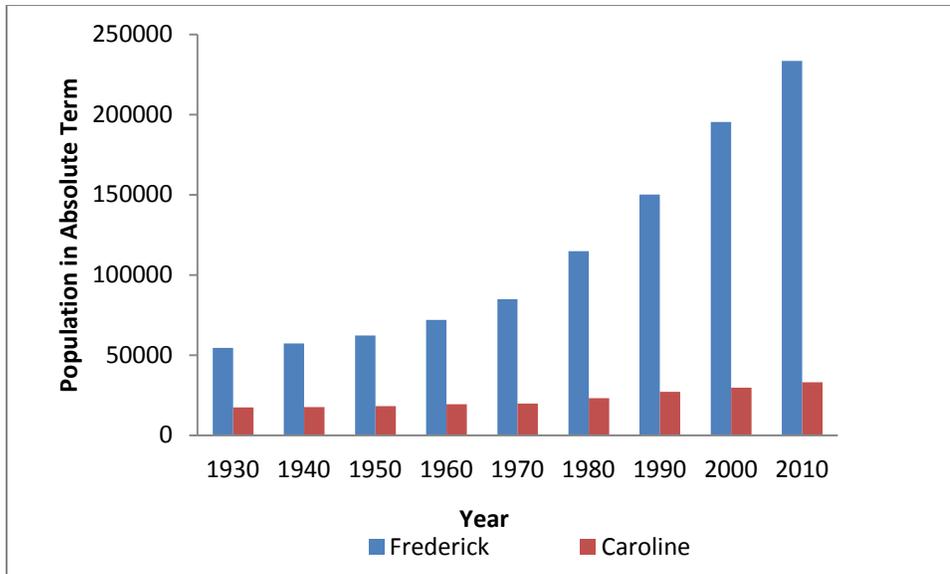
From 1990 to the present, Frederick County's population has shown growth in both absolute and relative terms, as shown in figure 1.5.4 (a) and (b) in blue. In 1990, the county's total population was 150,208. This number increased to 195,277 (30% increase) in 2000 and reached 243,220 (24.5% increase) by 2010, which is equivalent to an average of 4,240 people every year since 2000 (Frederick County Comprehensive Plan 2010: 8). It is projected that the county's population will reach 326,224 by 2030 (U.S. Census Bureau 2010).

⁹ Frederick County comprehensive plan was in the process of updating when the interviews were conducted.

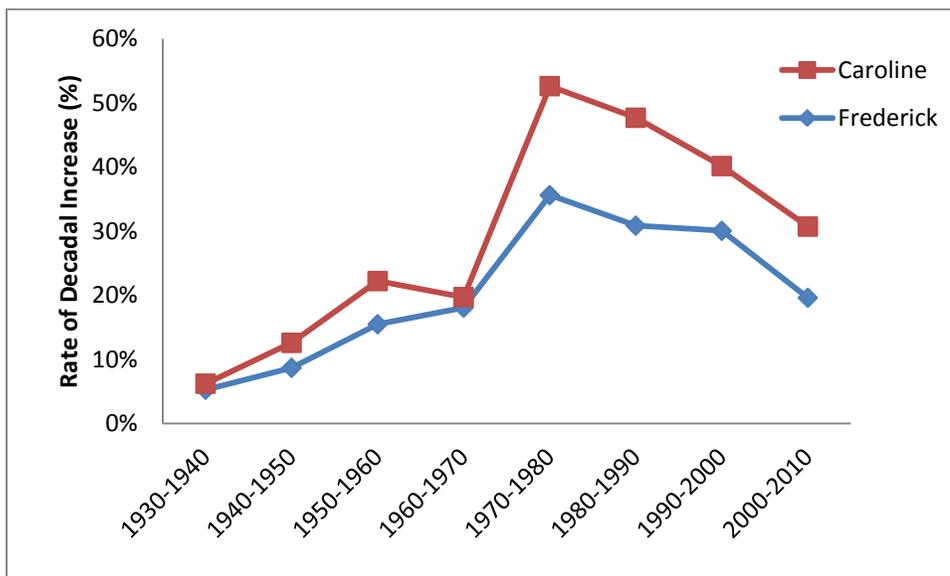
Figure 1.5.3 Land Use and Land Cover of Frederick County of Maryland, 2010



Sources: Frederick County Comprehensive Plan. Frederick County Planning Office



(a)



(b)

Figure 1.5.4: Population Increase in Frederick and Caroline counties since 1930 in (a) absolute terms; and b) relative terms. Source: U.S. Census Bureau.

Due to its geographical proximity to the Washington D.C. (50 miles) and Baltimore (43 miles) metropolitan region both of which are growing rapidly, Frederick County is a typical suburban area that serves as a bedroom community. It continues to face great development pressures. As Frederick County 2010 Comprehensive Plan puts, “[Frederick County] is the incorporation of the County

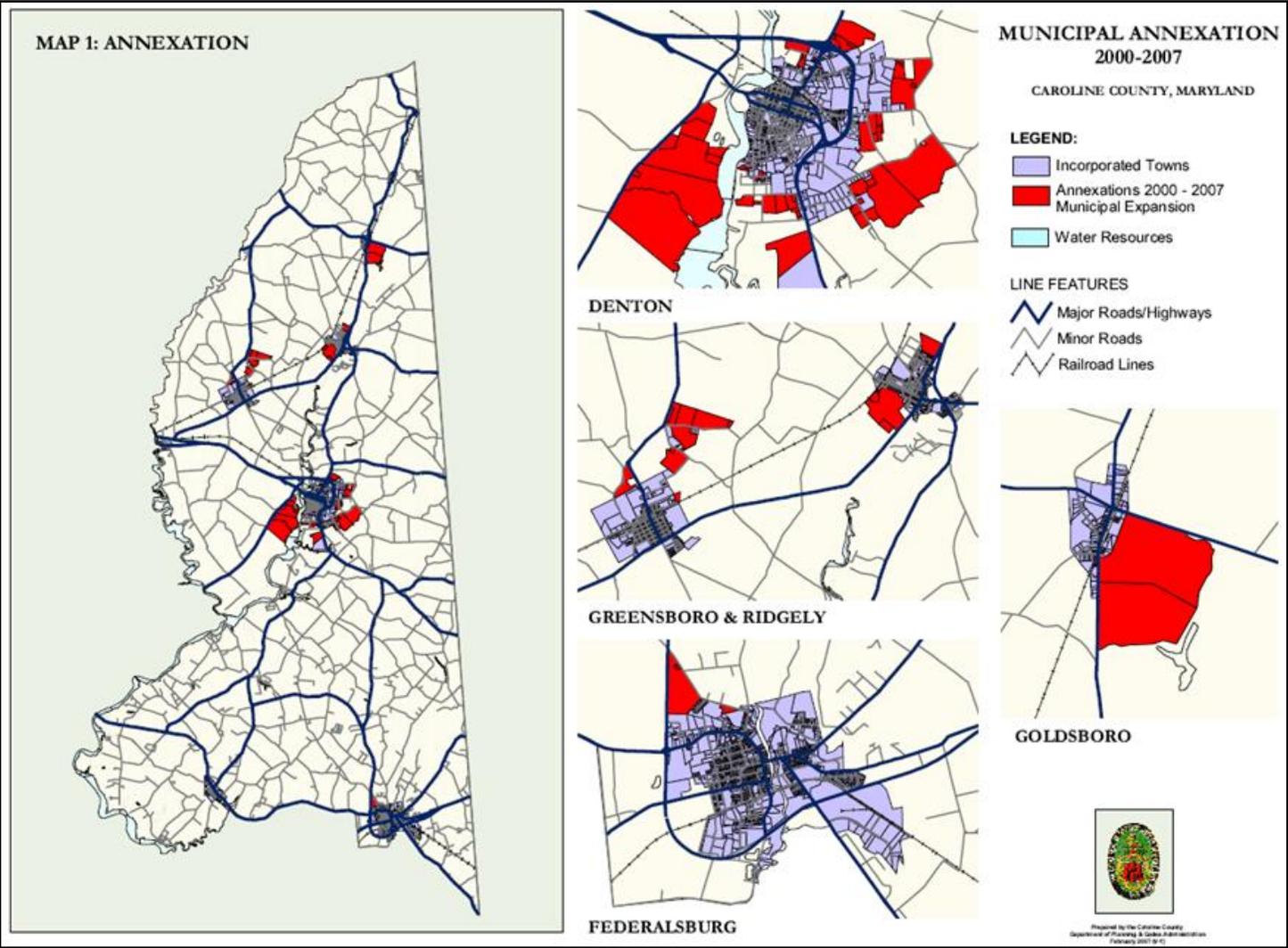
into the Washington metropolitan region's economic and cultural community. Frederick County, once securely located in the agricultural economy and political alliances of Western Maryland, is now more closely linked than ever before to the employment centers and housing markets of the Washington metropolitan region" (Frederick County Comprehensive Plan 2010: 2).

Caroline County, located in the eastern-central part of the Delmarva Peninsula, covers an area of 208,678.4 acres (326.06 square miles). The county's general physical geography consists of its relatively flat terrain with 2% of the area as water features. The two main physical features within the County are the Tuckahoe Creek and the Choptank River. Historically, it was a tobacco country in the 1600s and switched to mixed farming in the 18th century. Today, the County is primarily a rural landscape.

There are ten municipalities in Caroline County. Together they cover 4,864 acres or 3% of the County's land area. The remaining 97% of the County's land is unincorporated land and rural in character. The ten municipalities are Denton (the County seat), Federalsburg, Goldsboro, Greensboro, Henderson, Hillsboro, Marydel, Preston, Ridgely, and Templeville. 67% of the County's population resides in the unincorporated areas. As of 2010, the population density at the county level was 101 persons per square mile and 13,482 housing units (U.S. Census Bureau 2010).

As shown in figure 1.5.5, Caroline County has Denton designated as the county seat that experienced the largest amount of annexed land with a total of 1,981.13 acres. The town of Ridgely was second with a total of 396 acres. Goldsboro was third, with a total of 325 acres of land annexed.

Figure 1.5.5



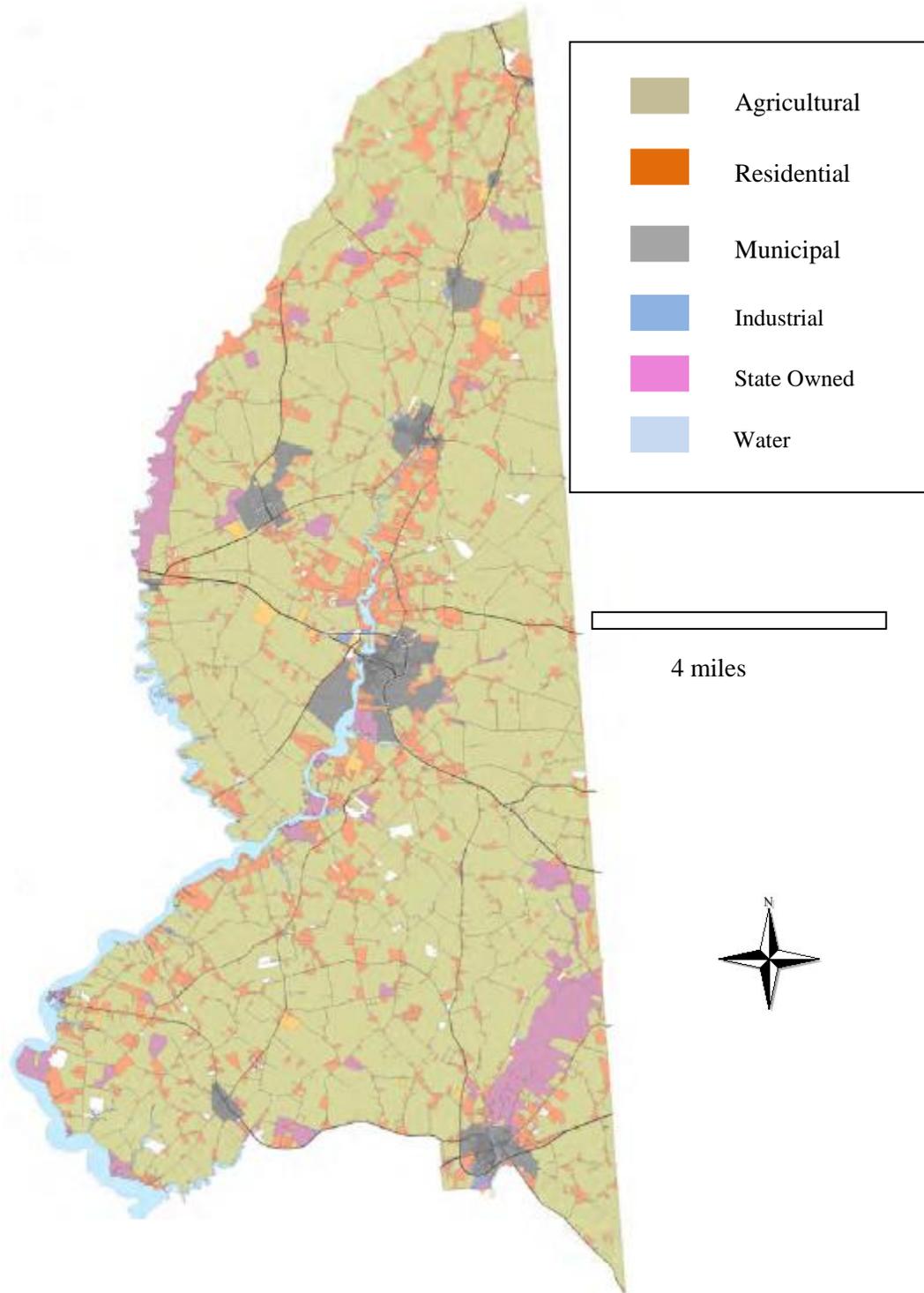
The zoning map was provided by Caroline County Planning and Codes. The figure shows the town's boundaries in 2000 in purple and annexations from 2000 to 2007 in red. Largely, these annexations occurred in Denton, Greensboro, Ridgely, Federalsburg, and Goldsboro. Denton, the County seat, had most of annexations. The single largest annexation took place in the southwest Denton located on the west bank of Choptank River (see Figure 1.5.7). As shown in figure 1.5.5, Caroline County has Denton designated as the county seat that experienced the largest amount of annexed land with a total of 1,981.13 acres. The town of Ridgely was second with a total of 396 acres. Goldsboro was third, with a total of 325 acres of land annexed.

The land use and land cover in Caroline County (Figure 1.5.6) reflects its rural nature, comprising a majority proportion of unincorporated land, which is illustrative an exurban small town landscape. The largest land use category is agricultural, accounting for 154,785 acres (77.5%), with forestland included. The next major land use is residential, with 27,372 acres (13.7%). This is followed by commercial land use category, with 2,562 acres (1.28%) and industrial use with 507 acres. 'Exempt' is a special category of state owned land¹⁰ comprising 11,187 acres (5.6%) (Caroline County Draft Comprehensive Plan 2009).

Caroline County's population has been increasing since 1990 (see Figure 1.5.4 a & b). The population in 1990 was 27,035, and this number climbed to 29,772 (10% increase) in 2000 and 33,066 (11% increase) in 2010. It is projected that Caroline County will have 43,300 people in 2030 – 31% increase (U.S. Census Bureau 2010).

¹⁰ State owned land areas are Tuckhoe State Park, Matinak State Park, and Idylwild State Wildlife Management Area.

Figure 1.5.6 Land Use in Caroline County, 2010



Sources: Caroline County Comprehensive Plan. Caroline County Department of Planning, Codes, and Engineering

The two study areas are similar in their steady growth in both absolute and relative terms after the 1930s. Figures 1.5.4 (a) and (b) on page 13 show the general population trends in the two counties from 1930 to 2010. Figure 1.5.4 (a) illustrates the decadal population growth trend in absolute terms, and figure 1.5.4 (b) shows the decadal population growth trend in relative terms. For example, Frederick County's population gained 178,945 persons; this gain represents a 329% growth during the time period. In the decade of 1970-1980 both counties experienced the largest population growth, and in the decade of 1930-1940 both had the smallest decade population growth. There are differences between the counties too. Frederick County is projected to have some of the largest population growth rates - 74% in the state through 2030 (U.S. Census Bureau 2010). In terms of relative growth, Frederick County grew at a higher rate – of 20% as compared to Caroline County, Caroline County's growth rate of 8.6%.

Because these two counties are representative of the two different urban forms – suburban and exurban settings – for the post World War II counter-urbanization processes, and because they each represent different contested landscapes where annexations are prevalent, the selection of these two sites as the case study areas will provide rich and wide-ranging insights into the processes that contribute to contemporary American landscape change at a large scale.

1.6 Overview of Research Design

This research project is a two-county case study and draws upon data collected from multiple document/textual data sources from 1990 to 2010. Interviews and observations were also used to collect additional data to complementary document/text data in order to get more

complete databases for annexation events. Triangulated analysis methods, including content analysis, discourse analysis, and social network analysis were used to identify, analyze, and interpret patterns and themes of annexation practices and land use planning.

1.7 Organization of Chapters

This dissertation is organized into five chapters. Chapter 1 introduces annexation as a research topic. Research problem statement, research purpose statement, and research questions are then provided. The background of the two case study areas is then presented providing the premise of this research project.

Chapter 2 begins with a brief overview treatment that contextualizes annexation. It then presents a literature review on the existing body of annexation literature. The reason why a geographical perspective of annexation is needed and suitable follows next. The following section discusses the gaps between annexation practices and land use planning, further contextualize this research project. A new theoretical framework is then proposed to frame and conceptualize current municipal annexation practices. It ends with a summary for the chapter.

Chapter 3 offers the overall investigative strategy, research design, and data. While the overall research strategy provides the necessary premise of this dissertation, discussions of the specific research design and data collected are helpful in laying out the roadmap, navigating through what was completed and how this research was conducted. It concludes with a discussion of limitation, biases, and research quality control.

Chapter 4 presents the findings, analysis and synthesis in the order of the research questions proposed in this dissertation. A Conceptual Annexation Structuration Model

(CASM) that was developed in the proposal was refined for characterizing and assessing the underlying structures and landscape sensitivity.

Chapter 5 summarizes the major findings and conclusions. While this research makes major contributions in topical, theoretical, and methodological areas, future research directions and conclusions are provided.

Chapter 2 – Literature Review and Theoretical Framework

This chapter begins with a brief treatment that contextualizes annexation in temporal and spatial patterns and reviews Maryland's statutory annexation requirements. A literature review of the existing body of annexation research, related scholarship on sprawl and land use planning then follow to identify the major theories that are utilized by scholars and to present the key literature relevant to this dissertation. The identified deficiencies in this section provide an entrance to a geographical perspective examining annexation events from a process point of view. A new theoretical framework, which combines political ecology and structuration theory, is proposed to analyze recent annexation events in relation to land use planning in general.

2.1 Contextualizing Annexation

Annexation has been playing an inseparable role in forming the hierarchical urban system, significantly shaping and reshaping landscape in the United States. This inseparable role is manifested by the pervasive physical expansion of the large cities at the top tiers of the America urban system prior to the 1950s (Bollens and Schmandt 1965; Edwards 2008). For example, Chicago grew from 10 to 190 square miles and Philadelphia expanded from 2 to 130 square miles. In the post-World War II period, subsequent urban decentralization lead to rapid suburbanization and continued physical expansion of cities through annexation, thus modifying the American urban system and landscape. For example, Klaff and Fuguitt (1978) reported that there was a 40% physical expansion in urban land nationally from 1950 to 1960 and 44% increase from 1960 to 1970 (10); Miller (1993) reported that the same trend

continued throughout the 1980s (103); and Edwards (2008) says that although the number of annexation events at a national level has been declining, the annexed land in terms of acres and population involved during the 1990s remained substantial (121; U.S. Census Bureau 2000 and 2010).

Annexation events at the national level are shown in terms of the number of events and amount of land being annexed in the United States on figure 2.1 (a) and (b). Figure 2.1 (a) shows a total of 113,606 annexation events between 1990 and 2010 during which some fluctuations occurred. Figure 2.1(b) shows that a total of 7,985,090.1 acres (12,476.7 square miles) of land being annexed during the same time period. On a decadal scale, the years from 2000 to 2010 experienced a higher number of annexation events and amounts the land being annexed than that of 1990 to 2000. That is, nearly 83,921 annexations (involving approximately 1,975,000 acres) occurred nationwide from 2000-2010 and there were 29,685 annexations involving more than 2 million acres of land from 1990-1999. The year 2005 had the highest number of annexation events and 2006 was just slightly lower number than this. The years 2002 and 2006 were the two years that annexation activities had the highest acreages of land being converted from unincorporated to incorporated status.

Table 2.2 shows the variations in the regional patterns in the categories of cumulative annexation events, annexed land by acres, and annexed land by square mile from 1990 to 2010. The regions of the South, the West, and the Mid-West experienced the high number of annexation activities while the Northeast had the least annexation events due to earlier automatic designation of the leftover land. The U.S. Census Bureau designates Maryland as being within the South.

Figure 2.1 (a)

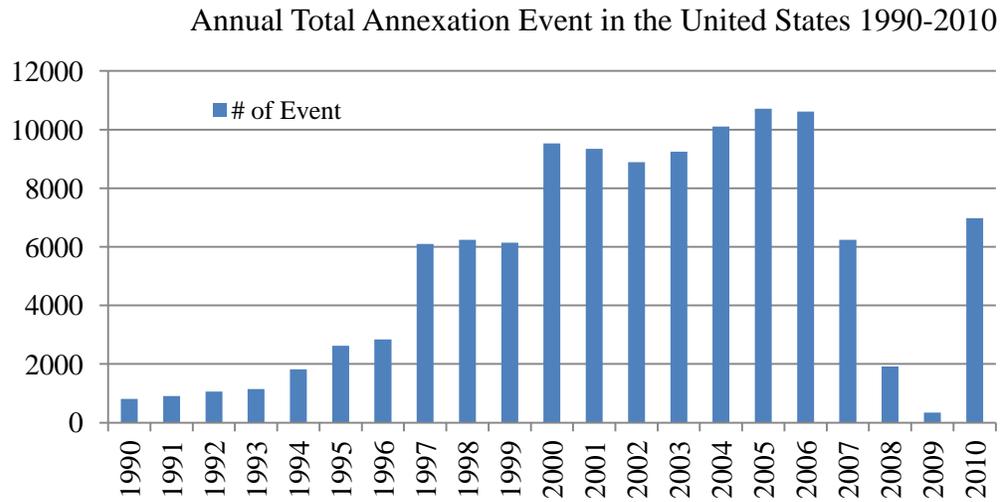
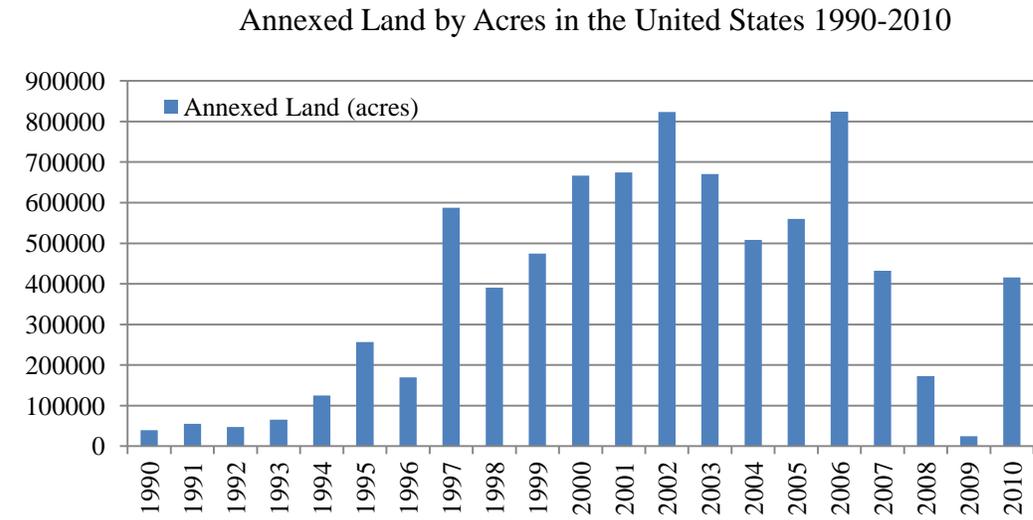


Figure 2.1 (b)



Source: Created by author. Data from U.S. Census Bureau (1990s via email and 2000s via the website)

Region	Number of Annexation Events	Annexed Land by Acres	Annexed Land by Square Miles
West	15,317	1,901,703	2,971
Midwest	24,926	1,109,465	1,734
South	46,934	3,448,133	5,388
Northeast	130	2,901	5
Total All Regions	87,370	6,462,202	10,097

Data Source: U.S. Census Bureau. Boundary and Annexation Survey, 1990 – 1999 and 2000-2010, Washington DC: U.S. Bureau of the Census, Geography Division.

2.2 Literature Review on Annexation, Sprawl, Land Use Planning

Sprawl, along with sustainability, civic culture, economic cost/benefits, and social and environmental equity, are among the most pressing challenges confronting land use planning in the United States (Mason 2008:283; Birch and Silver 2009:115). Whether these challenges can be adequately addressed or not depends on the utility of planning, or planning's appropriate social role as to land use planning decisions having real distributional consequences (Jacobs and Paulson 2009: 140).

The continuing trend in annexation activities embraces more complexity than those in the past, reflecting the challenges in land use decision deliberation processes today that respond to the interplay of ideas, societal trends, and development of authority over growth management involving distributing and redistributing benefits of land use. Marando observes the impacts of such distributing and redistributing: "in the aggregate, (municipal) annexations have affected more people and greater area than any form of governmental reorganization" (Galloway and Landis 1986: 25).

The fragmented nature of the existing annexation literature provides a less coherent understanding due to the absence of investigations on environmental and social aspects in contemporary annexation events. The disciplines that traditionally study annexation are political science, public administration and law. In terms of motivations that drive the stakeholders participation in the process, major research has been done on annexation as a politically driven action (Austin 1999; Dye 1964; Moser 1982; Fleischmann 1986a and 1986b; Gonzalez and Mehay 1989; Briffault 1990; Barlow and Wastl-Walter 2004; Meligrana 2004; Heim 2006; Litcher et al. 2007; Edwards 1999); the other main focus is on annexation as an economically driven action (Cho 1969; Muller

and Dawson 1976; MacManus and Thomas 1979; Mehay 1981; Breen et al. 1986; Edwards 1999; Meligrana 2007 and 2004; Edwards 2009). For example, Edwards states that municipal governments use annexation as an important tool for power, political control, and influence gaining (2008: 121). On the front of economically driven annexations, economic motivations are coined into the terms such as fiscal impact and tax revenues (Bollens 1949; Cho 1969; Cotrell and Stevens 1979; Bromley and Manton 1979; Fleischmann 1986a; Heim 2006; Knaap and Juelich 2005; Edwards 2008 and 2010). Liner specifically argues that this perception is “the predominant force driving annexations in cities during the 1960s [was the] attempts to preserve the revenue base; [it] is [still] the predominant force driving annexations today” (1996: 71). Similarly, Meligrana states that the potential of generating property tax is helpful to local government’s economic base (2004: 66). On the other side of support, Edwards opposes and questions whether these economic benefits are true. She made her argument by stating whether the perceived economic benefits are in actuality remains “unclear” (2011: 327).

That the existing body of annexation research lacks of research effort on environmental aspects is further evident by the fact that there is only one article published, which is on air pollution by Gramm published back in 1969. The absence is noted by John Meligrana who puts it, “... public health, environmental, and other issues tend to be overshadowed by political, economic, and administrative issues” (2004: 68).

He further echoes this missing as in the following:

Environmental problems do not respect political boundaries, but in fact problems related to the management of water and air resources should constitute a strong argument for annexation. The importance of environmental aspects of annexation cannot be ignored anymore; and any

failure in the environmental aspects could lead to the deterioration of quality of life.

The existing body of annexation research also lacks research on annexation as a social process. This deficiency is in part due to a lack of an effective theoretical framework by which to understand contemporary annexation decision making that is driven by multiple stakeholders in both public and private sectors (Meligrana 2004: 2). These multiple stakeholders across the different spaces actively participate in the process of approving/disapproving annexation proposals. Who says what and in what context and their actions are important questions to better understand how sustainability that emphasizes the integration of environmental sensitivity is being implemented at local levels of governance. Contemporary annexations have a high level of complexity and thus require a new conceptualization that could capture the spatiality of annexation processes.

Presently, only a small amount of annexation research is linked to sprawl and growth control (Reynolds 1992; Litcher et al. 2007; Rusk 1998 and 2003). In his study, Reynolds argues that annexation could be used as a defensive strategy of city-county consolidation to fix spatial mismatch problems at the urban-rural fringe of metropolitan region (1992: 295). Similarly, Lane and LeFurgy (2007), Rusk (1993 and 2006), and Edwards (2011) link annexations with suburbanization processes and advocated that annexation can be used as an effective growth management tool because annexation allows orderly growth. While these research activities were conducted at large urban scales, at a micro level, almost every city of the United States experienced territorial growth today and have been under studied (Burchell et al. 1998: 1). Batty states that these

places – the smaller rather than larger cities – are “the best places to locate new growth” (2008: 769).

To curb sprawl, policy terms such as “smart growth” and “sustainability” have been generated and are standing at the forefront of planning since the 1990s. As such they are the important indicators of a changed institutional paradigm in the legal landscape. Smart Growth in Maryland is one of many state-of-art approaches¹¹ to growth management that is intended to combat the rise in sprawl-type development patterns. The 2010 Maryland General Assembly legislative session establishes the Maryland Sustainable Growth Commission, formally bringing sustainability into Maryland’s policy landscape. Although earlier research concerning a state’s legal landscape and annexation yielded no conclusive findings (Dye 1964; Galloway and Landis 1986; Liner 1990 & 1994; Liner and McGregor 1996; McManus and Thomas 1979; Wheeler 1965), research on the relationships between the two, conducted by Lindsey (2004), Carr and Feiock (2001), Facer (2006), Rice (2008), and Edwards (2011) in recent years suggests a connection. He started to reexamine it in terms of whether the “meaningful” effects of state annexation laws have a cause-effect link between a state’s annexation laws and the frequency of annexations (Edwards 2011; Galloway and Landis 1986; Lindsey 2004; Meligrana 2004; Norman and Green 1995; Wheeler 1965). From this perspective, this dissertation provides rich insights of the two, which are relevant to sustainability that is anchored on environmental philosophy demanding both the preservation of nature and society’s material basis and the equitable distribution of benefits.

¹¹ Other terms are “environmental stewardship,” “place-based planning,” “new regionalism,” and “collaborative management” (Mason 2008: 2)

2.3 Geographical Perspective of Annexation

A geographical perspective lies at spatial analyses. The spatiality of annexation refers to the idea that annexation processes are complex and changing over time and, during such processes, various spaces are formed and interacted. Yet, geographers have played a marginal role in researching this issue. To date, only a handful of annexation publications were by geographers (Smith 2007; Smith and Debbage 2007; Smirnova and Ingalls 2007; Purcell 2001; Cox and Jonas 1993). Smith and Debbage question that “This is all the more surprising, given the explicitly geographical dimensions of issue like metropolitan fragmentation, racial segregation, and land use patterns” (2007:110).

There are three explanations for why geographers have played a marginal role in annexation research. First is the long tradition of sectoral disciplinary boundaries. Annexation has been the core study subject for public administration and political science scholars, which can be reflected by publication journals such as *State and Local Government Review* and the *Journal of Politics*. Geographers are not familiar with them. While different disciplinary areas have provided their own unique lens in researching annexation, sectoral boundaries have made a complete understanding of annexation difficult. Second, intra-state variations of state annexation laws creates challenges to conducting any large-scale research activity (Smith 2007: 9; Smith and Debbage 2007; Smirnova and Ingalls 2007). Third, the procedures changes over time. A state’s annexation laws increases complexity of policy, which has added another dimension of conducting large-scale research. These later added procedural requirements add extra policy layers creating research difficulties. Meligrana states that “[this] temporal dimension of the redrawing of local government boundaries is often missed or neglected

by theories (e.g. public choice, consolidationist) that tend to view boundary debates as static” (2004: 237).

Geography concerns itself with making the connection between the social interaction and the physical environment and should continue to make such contributions (Kidder 2009: 309). For example, Harvey (1973, 1982, 1985, and 1989) asserted that “geographical positioning is relevant to the unfolding of individual biographies through constructing an unevenly developed political economy of space, varying access to resources, and produce and reproduce capital (Gregory 1994:7, Soja 1989: 15). In Molotch’s claims, the idea that urban areas are “growth machines” propelled by the financial interests of social actors who are in positions of power (Molotch, 1976: 17). Smith and Debbage call for that “a geographical understanding of such process is essential” because increasingly complex environmental and land use problems require geographers’ involvement and that this involvement should be substantial and can play a role in the philosophical debates (ibid). These geographers assert that physical environments do not merely grow; instead they are propelled by “the contemporary landscape which acts as a mediation of market forces and the determined concerns of what a place should be” (Zukin 1991: 37).

Today’s annexation events involve various actors whose interests are diverse. In combination with volatile local political and economic contexts, annexation needs a new theoretical framework to understand what the processes are, how these processes work, and what impacts these processes causes. Annexations are land use actions at local scales and carry environmental consequences that are geographical in nature, thus requiring an

effective and strong theoretical framework for thorough understanding of annexation (Meligrana 2004).

In summary, much about annexation remains unknown. The dual deficiencies that are evident in the literature reveal a call for more research such as this project which incorporates the interaction of ideas, economic restructuring, environmental movement, and societal changes. Thus the long overdue research need to investigate annexation processes and conditions permits this study and justifies its research perspective. A geographical perspective would provide a linkage between annexation processes and conditions in offering an integrated approach characterizing such complexity and dynamism of various aspects of annexations that are intricately connected processes.

2. 4 Proposed Theoretical Framework

Annexation processes are inherently spatial and temporal. Conducting this annexation research requires a new theoretical framework that must be inclusive and able to capture socio-spatiality of annexation. Currently, there is no such single theory. This research, thus, proposes a new theoretical framework, which combines the two theories: political ecology in contemporary geography and Structuration Theory in social theory. Such a combination is possible because of complementarity between the two theories.

2.4.1 Political Ecology

Rooted in the different strands of traditional Marxist Dependency Theory and World Systems Theory, political ecology is an approach for studying the interactions between ecological and human processes (Greenberg and Park 1994: 1; Hempel 1996:

150; Watts 2000: 257). Political ecology is based upon its underlying assumption which is that the physical environment is either partially or wholly socially constructed (Forsyth 2003; Greenburg and Park 1994; Robbins 2004; Turner 1999; Zimmerer & Bassett 2003). With this assumption, environmental issues and the changing ecological processes are inherently social and political. For example, the use and reuse of landscape by human beings lead to the conservation, restoration and/or degradation of the environment. Particularly relevance to today's theoretical reorientations of political ecology is, according to Harrill, that "political ecology is the inquiry into the causes and consequences of environmental change, with the goal of facilitating sustainable development through the reconstruction of social and political systems (1999: 67), which "focus[es] on the nexus of material and symbolic factors and how one conditions the other" (Biersack 2006). In sum, political ecology offers an alternative account for the interplay of the environment, political, economic and social factors. As Robbins states, political ecology has a "normative understanding that there are very likely better, less coercive, less exploitative and most sustainable way of doing things" (2004: 12).

Political ecology research has made major contributions integrating ecological social sciences with political economy in the broad scopes of social movements, marginalization and degradation, consumption and production, environmental conflict, and environmental identity (Robbins 2004: 14). Specific topical themes include conservation and control of natural resources, micro politics in resource use, the disenfranchisement of legitimate local land uses, the effects of limited state capacity, informal claims to resource use, and ambiguities of property rights, (McCarthy 2002: 1283 and 2005; Robbins 2002; Walker 2005). Similarly, Thomas Basset and his

colleagues analyzed wild game depletion in West Africa by conceptualizing game depletion as co-produced by a combination of habitat change and hunting pressure. A more fluid political ecology would offer a new angle investigating complex environmental problems (Biersack 2006: 5). For example, Thomas Basset's work has pushed geographers to "carefully conceptualize[ing] and articulate[ing] the relationships between structural processes and local contexts, and clearly establishing which methods and data may be best used to get at which aspects of these relationships" (Elwood 2010: 104).

While political ecology has been extensively applied in Third World settings since its inception¹², political ecologists are starting to explore its applicability in the First World setting. According to McCarthy, political ecology is "entirely relevant to research on human-environment relations in industrialized countries" (2005: 953). Current First World political ecology research covers three broad themes: "formal legal structures, rational choice models, or environmental science" (254). McCarthy argues that many analyses have overly confined their questions within these three areas. McCarthy contends that rural/urban settings and consumption in First World are suitable objects for political ecology research.

Political ecology's philosophical eclecticism leads to a consequent mixed methodological requirement. Political ecologists such as Karl Zimmerer, Paul Robbins, and James McCarthy provide excellent examples demonstrating the appropriateness of political ecology to study the intersection of ecological and human processes by

¹² The term "political ecology" was first coined by Frank Thone in 1935 (Nature Rambling: We Fight for Grass, *The Science Newsletter* 27 717, Jan. 5:14) and has been widely used since then in human geography but without a systematic definition. Anthropologist Eric R. Wolf gave the term a revival in 1972 (Ownership and Political Ecology

“examin[ing] intersecting human and physical processes and the engagement of individuals, institutions, and social groups within these processes” as a core methodological approach (Elwood 2010: 103). Karl Zimmerer (2003) observed biodiversity conservation in agriculture and questioned the effect of regional economies and networks of exchange on the availability and prices of seed and the impact of gender roles in the processes of responding and influencing the broad economy. Paul Robbins (2001a and b), another well-known political ecologist, offered his methodological stance of using mixed methods. McCarthy (2005) emphasizes that the notion of “talking to the people whose actions are in question is not necessarily detrimental.” Using a mixed methodological approach, they advocate how the mechanisms in human and environment systems are intertwined and interacted.

Annexation processes are land use decision-making where land can be treated as “objectifications of a cultural aesthetic” (Biersack 2006: 328). This dissertation applies political ecology as a conceptual proxy for synthesizing political and ecological concerns and potential becoming a productive area of inquiry for planning theorists (Harrill 1999: 68). Using this conceptual proxy, the conflicts and power asymmetry that constitute annexation approvals/disapproval can be properly framed. Annexation is a typical boundary change and political ecology can provide critical accounts including ideological orientation, the role of state, institutions, local resource use discourses and right to access and (re)distribute processes. Annexation is a perfect laboratory revealing where power relations lie and how each agent structurally plays in the relationships between human community and nature. That is, the agency that is particular socially produced and the discourses that are reflective of structural perspectives and manifestations of the form of

production and the associated class structure” can be found (Biersack 2006: 12). Such ability of political ecology to examine the underlying structural relations gives its flexibility that truly incorporates broader structural contexts and local contexts (Robbins 2002 and 2004). In applying political ecology, this study will offer a better understanding of how annexation decisions are made at local scales in the context of their political environment, economic pressure, and societal regulation. Considerations of analysis of the programs undertaken in turn helps in the promotion of different forms of environmental governance (Batterbury 2003) in the reconstruction of the human – environment relationship. Furthermore, a closer look at how unequal relations during America’s post-industrial era facilitate rapid landscape change is crucial in informing policymakers of the complexities surrounding environmental change and development, which will contribute to better environment governance across the various scales.

In political ecology, power and knowledge are mutually constitutive and revealing by the structural perspective that differentiates strong versus weak actors in annexation processes of land commoditization and allodevelopment (allocation development) at local levels. The question of actors and respective power relationships in land annexation decision-making processes should be conceptualized “typically [as] a struggle over ideas as to what constitutes ‘appropriate’ environmental use and management” (Bryant and Bailey 1997: 192). A diversity of actors makes various “statements within [their] social discourses rather than facts of reality” (Escobar 1996; Peet and Watts 2004). For example, an examination of environmental groups and how they function as part of agency operating at the interface of culture and the politics of annexation is important in understanding America’s suburban landscape change. Local government at the municipal

and county tiers manifest the hierarchical relationships in a society that is developed over long history and legitimization of government, however, competing functional priorities are the major challenges of contemporary local government.

The politics of planning is dependent of the politics of institutional decision making and public participation so planning is a normative practice every day at the local level. Particularly when integrating environmental landscape planning concepts like sustainability, actors in annexations are encompassed by politicians, officials, and citizens but they all heavily depend on planning professionals, as Harrill puts (1999:74):

“The issues of ecology, economy, and society are closely intertwined; it will soon become critical that planning theorists possess a basic understanding of eco-politics and political ecology as they influence environmental issues and the ever-changing concept of sustainable development. I have argued for a theoretical approach to political ecology in planning theory emphasizing a pragmatic exploration of community norms and values. Social learning is a key to sustainability as a method of cultivating a sense of collective obligation toward one another and the earth we share.

So planners and their actions offer the capacity of integrating and implement sustainable environmental landscape planning and directly addressing or balancing competing interests. According to Harrill, political ecology addresses the who and where sustainable development addresses the what and when (1999: 71).

Though political ecology offers a unique approach in framing annexation issue, it has limitations. Zimmerer (1996) pointed out that political ecology fails to take into consideration individuals’ decisions but, if used in conjunction with structuration theory, this deficiency is possible to avoid.

2.4.2 Structuration Theory

Originally developed by British sociologist Anthony Giddens (1984), Structuration Theory examines “how societies ... both exist, preexist and change across time and space” (Pinch 1996: 763). The appropriateness of Structuration Theory for studying recent annexation activities in Frederick and Caroline counties of Maryland from 1990 to 2010 lies at its focus directly on the processes and practices involved at the point of this intersection. Because Structuration Theory is a process-orientated theory, it is useful in providing a new perspective counting for the causes and consequences of social practices like annexations. Using Structuration Theory along with political ecology, the larger forces in the dimensions of temporal, geography, and social structures can be properly framed; and in the meantime, meso-level networks of relations that are situated within the annexation practices of individual agents can be identified.

The core concept of Structuration Theory is the duality of structure. With this core concept, Structuration Theory holds agency and structure¹³ are linked through phenomenology, hermeneutics, and practices that enable each other; subsequently, social reproduction across space and time occurs continually (Giddens 1984: 29; Stones 2005: 4). The core concept of duality of structure permits a balanced view in which action and social structure are interdependent (Stones 2005:4).

The structure generation has to go through a 3-step process from time 1 to time 2: System of Interaction, Modality, and Structure. Giddens explains that the interaction between agency and structure must be understood in the following: agents communicate, exercise power, and sanction to produce and reproduce structures through signification,

¹³ According to Giddens, agency is defined as various human actors, ranging from individuals to groups. Structure is abstraction in virtual space and can be expresses by rules and resources (1979).

legitimation, and domination (Giddens 1984). Figure 2.4.2.1 shows, first, System of Interaction involves communication, power, and sanction. Then, three modalities are operated through interpretive schemes, resources, and norms where an interpretative scheme refers to the “stock of knowledge” mediating communication, functioning to either facilitate or constrain communication; Resources are the means associated with power and are intentionally set up as goals for power distribution; and Norms are the rules that decide the legitimacy of interaction and are under constant manipulation by a society. The bottom layer – Structures consist of Signification, Legitimation, and Domination where Signification refers to a coding process that produces meaning through organized webs of language such as semantic codes, interpretative schemes, and discursive practices. Legitimation is a process that produces a moral order via social norms, values and standards through legal institutions. Domination is an exercise of power that is originated for resource control and allocation.

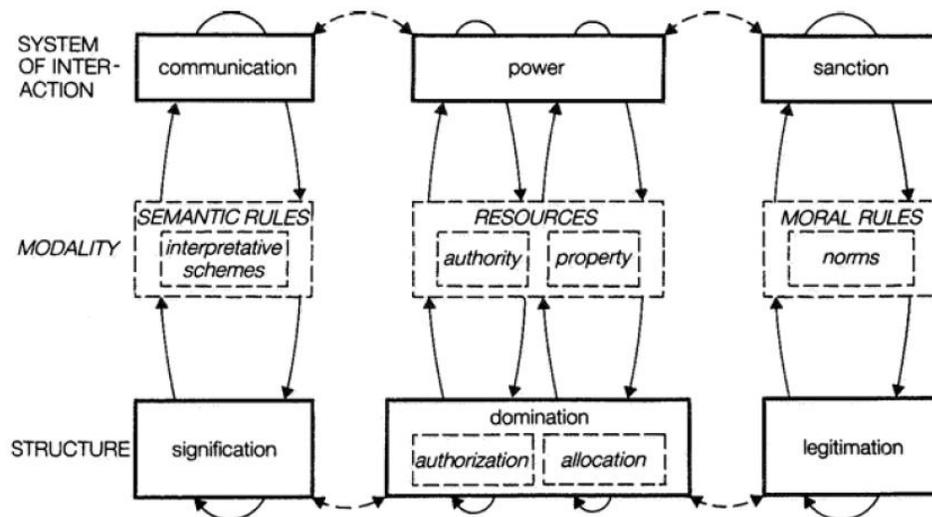


Figure 2.4.2.1 Conception of Giddens' Structuration Theory on interaction between agency and structure. Source: Giddens 1984: 29

Temporally, each interaction is affected in some way by what went before and will in turn also influence in some way what comes next (Pinch 1996: 767) reproducing

part of next generational institutions. Taking a long time, the new generational institutions, it in turn, negates the earlier generational institutions (Giddens 1981: 26-29). As such, the system must be continuously ‘performed’ (Pinch 1996: 767). Figure 2.4.2.2 (a) and (b) demonstrate how Structuration Theory views social practices across space and time. Figure 2.3(a) explicitly shows the cyclic nature between action and structure in space. Figure 2.4.3 (b) shows such cyclic flows repeatedly occur in time between structure and action in time creating a certain time-space-structure (Rose 1999: 25).

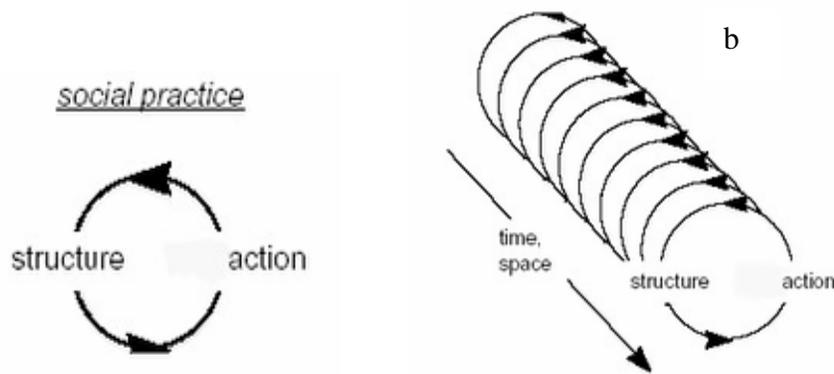


Figure 2.4.2.2 Diagram of Structuration Theory where (a), the left, shows structure and action of social practices in space and (b), the right, illustrates repeated interaction between structure and action in time. Source: Rose. 1999.

Giddens’ Structuration theory is criticized in at least two fronts: 1) by that lacking attention on the relations between his abstract ontology and his substantive socio-historical theoretical categories that reduces the explanatory power of structuration notion; and 2) institutional analysis that “retains no effective space for the ‘structural-hermeneutic’ nexus of structuration theory” (Stones 2005:43). So, Stones proposes “strong structuration” in Structuration Theory (2005:189) by arguing that, “essential to the notion of the duality of structure is a ‘structural-hermeneutic’ core in the way structuration characterizes and understands social processes and relations” (2009: 91). According to him, strong structuration can not only “bridging concepts between the

philosophical and substantive levels of structuration but also develop ontology-in-general and ontology-in-situ” (2005: 8).

By strong structuration in Structuration Theory, Stones suggests using a quadripartite cycle of structuration of duality of structure to capture “strong structuration in its unique capacity to illuminate some of the most central issues of social life” (2005: 189). Specifically, the four elements of the quadripartite cycle involve: (1) external structures as conditions of action; (2) internal structures within the agent; (3) active agency, including a range of aspects involved when agents draw upon internal structures in producing practical actions; (4) outcomes of actions. With this, Structuration Theory extends its explanatory power in bridging the understanding of the relations in both structuration as ontology-in-general and structuration as ontology-in-situ, thus becoming a stronger structuration at the meso-level among abstract, philosophical level and in-situ level.

Strong structuration theory requires that the meso-level of ontological scale in the dimension of temporal and spatial scale and should focus individual agents and social structures that are embedded in position-practice relations (2005: 128). Figure 2.4.2.3 displays the impact of large historical forces and conventional structures on agents and position-practice relations.

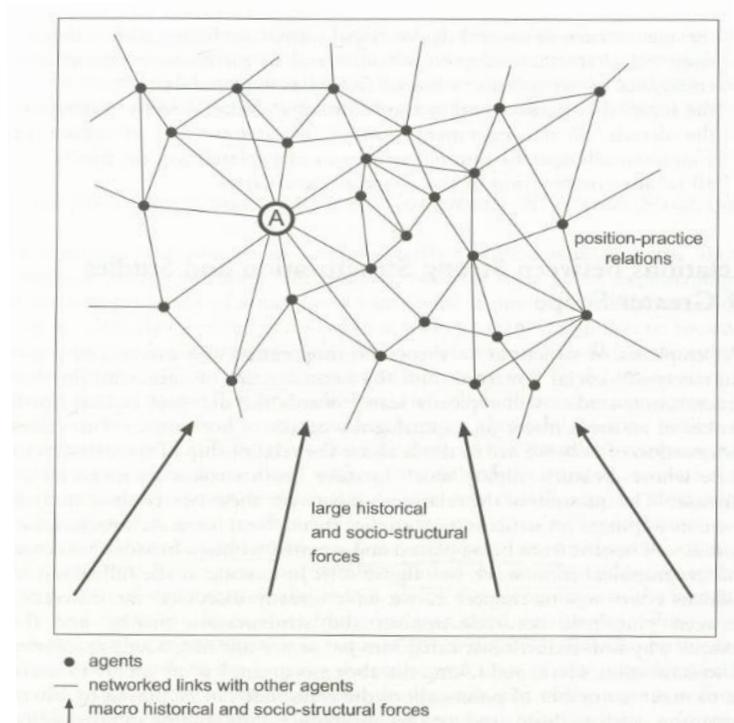


Figure 2.4.2.3 Agents, structures, and position-practice relations (Stones 2005: 128)

Examining the roles of agents in context analysis and agents strategic conduct analysis can provide explanations and better understanding of strong structuration in Structuration Theory (Stones 2005: 120).

2.4.3 Using the New Theoretical Framework Framing Annexation Research

While political ecology and Structuration Theory have been applied in different disciplines, they are particularly useful in the research of land use and community planning because they have a potential of integrating environmental/landscape aspect into local land use planning (i.e. annexations) in the United States. Based upon the proposed new theoretical framework, after examining annexation events in Frederick and Caroline

counties of Maryland from 1990 to 2010, this research conceptualizes an annexation event as a three-step process, which is illustrated on Figure 2.4.3.1.

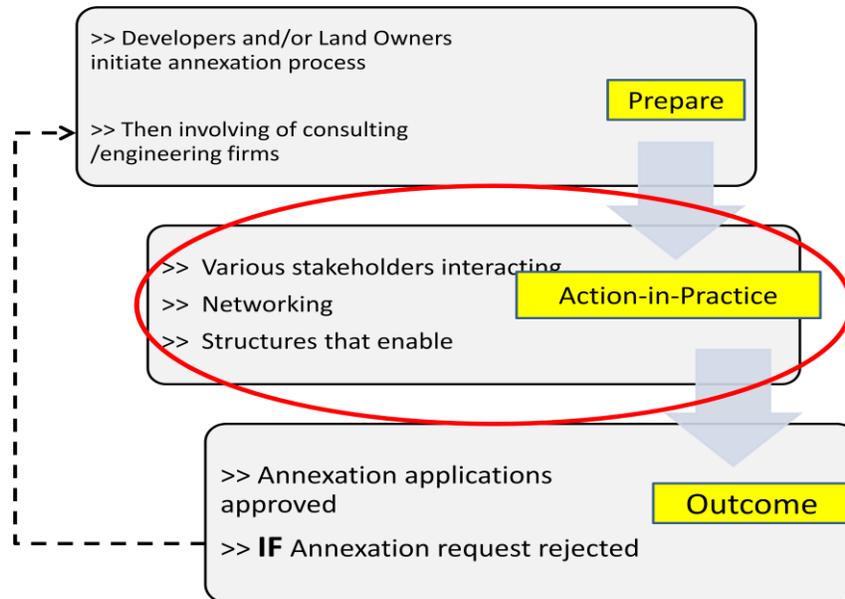


Figure 2.4.3.1 An annexation event in three-step process

While the primary question of this research project concentrates on step 2 – Action-in-Practice, the sub-questions 2 and 3 were designed to provide additional information for understanding complexity and dynamics of modern annexation events that are at the center of local land use practices.

Three reasons offer explicitly where the appropriateness of the proposed theoretical framework lies at. First of all, annexation offers an excellent platform for examining the structuration processes or lack of such between agency and structure in terms of environment. The identification of such structuration processes would provide insight discussions about the transition of shifting planning discourses, particularly from utilitarian towards sustainability. Second, annexation clearly involves the composite stakeholders who are dynamic, interacting and networking through interdependencies by

a number of different situated agents who contribute positively or negatively to the final outcomes of annexation decision making. Simply to say, the proposed new theoretical framework will help analyze the complex web of the interdependencies of external and internal structures within a distinctive socio-historical era in terms of agent-in-focus. Third, examinations of agent's context and conduct in annexation decision making process allows the various moments of annexation processes being captured because the processes in which their action continues to product subsequent affects. Lastly, in tune with the other tenets of structuration theory, a composite explanation involving structuration processes that stretch backwards in time and involve a plurality of spaces and networked actors together conditioning of the existence of approval of vast majority of annexation applications and future structures are made possible. As noted by Johnson (2008: 461),

“the effects of people's actions are not limited to micro-level face-to-face encounters and relationships. Instead, these effects spread outward beyond their micro-level social worlds and beyond their subjective intentions, particularly when aggregated or linked with the micro-level actions of others. Individuals' actions thus provide the foundation for the macro level institutional structures of society.”

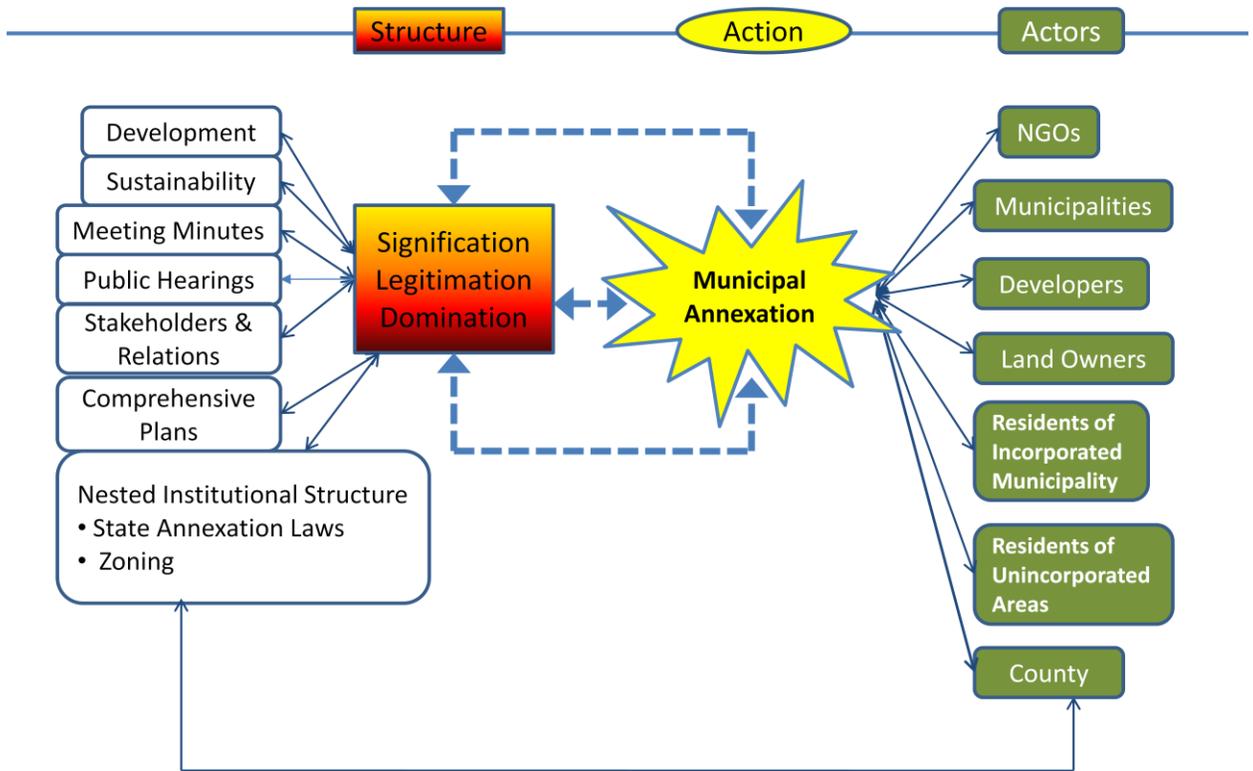
In a nutshell, the time-space structures in annexation practices in time 1 would be captured and then by taking a forward looking how these structures in time 1 will evolve toward time 2 can be analyzed.

A Conceptual Annexation Structuration Model (CASM) was developed to capture the high level of complexity and dynamism of contemporary annexation events at rural-urban continuum. Framing landscape as a process of social construction, this model particularly builds on the concept of agency and structure in the themes of signification, legitimation, and domination to imply broader political, social, economic and

environmental factors that continuously construct landscape. Illustrated in figure 2.4.3.2, the CASM consists of three segments from right to left: (1) actors (interchangeable with stakeholders) in green; (2) municipal annexation as an action node in yellow; (3) structures in orange that are expressed in structural properties in white. While the arrows denote two-way interrelationships, structuration is shown in thicker blue dotted arrows linking actors, annexation action and structure, signifying continuous processes.

Rural and urban environments are an interconnected continuum. Traditional planning treating rural and urban in a binary mode cannot effectively incorporate landscape impacts (Nassauer 1995; Musacchio 2009). Difficulties and challenges remain for rural-urban continuum (Irwin et al. 2009: 435).

Figure 2.4.3.2 Conceptualized Annexation Structuration Model (CASM)



As pointed out at the beginning of this chapter, this research is to address research needs caused by theoretical deficiencies. Specifically, this research proposes to use an integrative theoretical framework to study annexation at rural-urban continuum in Frederick and Caroline counties of Maryland from 1990 to 2010. This proposed new integrative framework uses Political Ecology to frame the reciprocal relationships between physical and human systems and power structures that shape and reshape landscape. Structuration Theory as the second theoretical component provides a theoretical grounding for including a diversity of agents across private and public spaces at both individual and collective levels and how they interact and network formulating the structures across time and space. Because of the intent of avoiding the limits that each theory has, the two theories were combined. As explicit suggestions made by Stones, Structuration Theory should “look for alliances with other theories that can help to frame or to address more cogently, particular questions and objects of study, or particular aspects easily” (2005: 194).

In summary, this proposed new theoretical framework is integrative and allows an in-depth examination of annexation practices from a fluid political ecology point of view and structuration processes. Using this new theoretical framework, a conceptual model characterizing such high complexity processes is made possible and thus filling the gap of the missing environmental aspects in annexation land use events.

Chapter 3: Qualitative Methodology, Research Design and Data

Epistemological purity doesn't get research done.

--- Miles and Huberman 1984: 21

Chapter 2 laid out the theoretical foundations of this dissertation by identifying the inadequacies and proposed a new integrative theoretical framework. In order to examine sources, conditions, and ramification of annexation processes, this dissertation used political ecology to frame the annexation dynamic problem and structuration theory (agency and structure) to conceptualize annexation processes. Triangulation was used for data collection and analysis. The qualitative methodology, research design, and data are provided in the following sections.

3.1 Triangulation Strategy

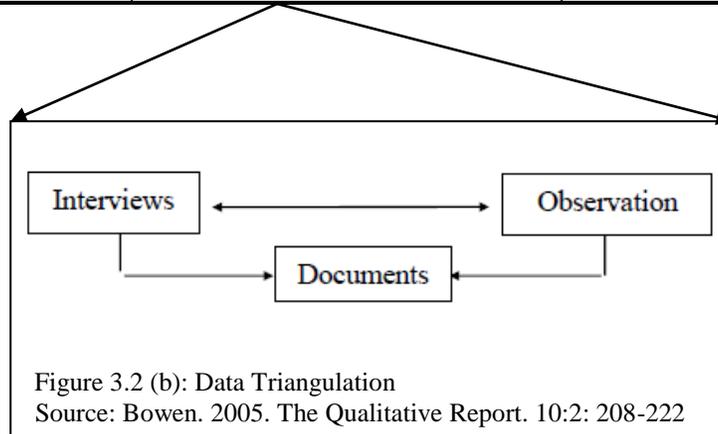
The research questions, enumerated in Chapter 1, dictate the employment of a qualitative methodology in this dissertation. Qualitative research is often being criticized by the use of single data source and the use of single analysis method. In order to overcome such limitations, this dissertation used a triangulation strategy to gain research rigor. According to Gaber and Gaber, triangulation is the use of multiple data sources and the use of more than one analysis method (Gaber and Gaber 2007:137). One of major benefits of employing this methodology is because such use can minimize the division and separation of quantitative and qualitative but also “highlight discrepancies in data or interpretation” (Creswell 2009: 210; Elwood 2010; Gaber and Gaber 2007: 141; Greene 2007: 13; Tashakkori and Teddlie 2003). Such benefits were achieved in maximum in this research.

3.2 Research Design

This dissertation was designed as cross-case study that uses thematic analysis across the two selected case study counties (Creswell 2002: 63). According to Berg, a case study is a product of inquiry leading to a deeper understanding of an issue or problem (2007: 13). For this reason, using case studies is instrumental. In addition, the limitation caused by using a single data source and analytical method would be minimized and thus research rigor is increased (Sealve 2004). In doing so, a thick cross-sectional investigation of the annexation activities was able to achieve.

Table 3.2 provides a summary of research design with respect to the research questions, data collection methods, and analytical methods, reflecting the essence of triangulation of data collection techniques and analytical methods.

Table 3.2 (a) Summary of Research Design		
Research Question	Data Collection Method	Analytical Method
Dynamics of stakeholders' relationships	<ul style="list-style-type: none"> • Documents/Text • Interviews • Observations • Field Visits 	<ul style="list-style-type: none"> • Content analysis • Discourse analysis • Network analysis
Landscape change before and after annexation		
Encourage sprawl?		



The data are those that reveal the patterns of annexation processes in Frederick and Caroline counties of Maryland. This dissertation covered the time boundary from

1990 to 2010. This time boundary is appropriate for comparing annexation activities before and after Maryland State's Smart Growth policies in 1997. Concurrent data collection was used through the author's intensive fieldwork (from August 1, 2010 to the mid-August, 2011). The data from document/text sources were from 1990 to 2010, providing a long term coverage of annexation events in terms of who, what, and why in actual annexation practices. The interview data were collected from August 2010 to February 2011. The observation data started from August 2010 and ended in August 2011. The overlapping time boundaries supplement the data collection by using multiple sources. Although a longer time period could be better, given the limited time, cost¹⁴, data availability, this temporal choice could best serve the purpose of capturing the patterns of annexation processes in Maryland.

The data collection was completed when data collection reached a saturation state (Hoggart et al. 2002: 151). According to Hoggart, when data collection is exhaustive, mutually exclusive, and enlightening, a researcher should stop data collection.

3.3 Data Sources

3.3A Data from Document /Text Sources

Both historical and contemporary "texts" that are in print, including policies, planning documents, maps, newspapers, annexation applications and resolutions, and meeting minutes are the representations of the real world because they show the words and actions of the agents in annexation activities and their social context. Using these print materials to generate data has long been used by urban scholars (Gaber and Gaber 2007).

¹⁴ According to Montello and Sutton (2006: 123), limited time and cost are the best justification of scoping a research project.

Annexation Events Database: This database was primarily built upon multiple visits to Maryland State Legislative Library (MSLL) that registers the approved annexations reported by the chartered municipalities. Not all charter municipalities submit their annexation reports on a yearly base. Also, the submission is voluntary. Because either one of the two or both situations may exist, annexation data were also sought by visiting Maryland State Archival Library (MSAL) and county and municipal planning offices. Historical newspapers were further used to assist in building the annexation event databases.

Stakeholder' Interests and Action Data from Newspapers: Newspaper-based data were collected mainly for the involved stakeholders' interests and their actions because the newspaper provides high quality information in terms of the stakeholders' experiences, perceptions, and attitudes that are essential for understanding the agency and structures. These newspaper-based data collected useful information in assessing the stakeholders' sensitivity about environment/landscape in general.

Major regional newspaper such as the *Washington Post* and *Baltimore Sun* and local newspapers including the *Frederick Post-News* and *Times-Record* for Caroline County were used. Because *Washington Post* and *Baltimore Sun* are the regional newspaper in nature, majority of data from the newspapers were from local ones. Websites searched for these sources were LexisNexis, Historical Newspapers, NewspaperARCHIVE, and Highbeam¹⁵. In addition, vertical files from Frederick County

¹⁵ The author purchased the newspaper database access because University of Maryland does not have historical records.

and Caroline County libraries were sought. Table 3.3 presents the basic information about the newspaper-based annexation data from the four newspapers. Frederick City of Frederick County and Denton of Caroline County that both are the county seat had the highest coverage.

Table 3.3 Total Number Entry and Duration		
NEWSPAPER NAME	DURATION	# of ENTRIES
<i>Baltimore Sun</i> (Statewide Coverage)	1966-2009	42
<i>Washington Post</i> (Statewide Coverage)	1945-2009	47
<i>Frederick News-Post</i> (Frederick Countywide)	1978-2010 ¹⁶	190
<i>Times-Record</i> (Caroline Countywide)	2008-2011	29

As indicated above, the database was constructed at three levels - state, combined and separate Frederick and Caroline counties, and municipality scales. The database at a state level provided a broad perspective to contextualize annexation events patterns within Maryland - the state that has a national reputation of smart growth initiatives. The database at the combined county level offered the information for the two and the separate ones were used for the comparison purpose. The database at a municipality level gave more focused information.

Annexation Discourse Data from Meeting Minutes of Frederick & Caroline Counties:

Annexation practices discourse data were collected by using the same newspaper records and, in addition, through three types of meetings minutes that are available online. These meeting were Commissioners/Alderman/Council Meeting Minutes (CACMM), Planning Commission Meeting Minutes (PCMM), and Board of Appeals/Zoning Meeting Minutes (BAZMM) because they are the most relevant ones to annexation and land use issues at a

¹⁶ Most of data collection stopped by August 2010.

local level. Table 3.4 (a) and (b) provide the basic information about the data in terms of the earliest, the most recent, duration, and average years. Although they started at the varying time and different on-line posting duration, an average of over seven years was derived. Although a longer time period would be better, the average of seven-year is effective in showing agents who were in action as land use decisions were deliberating in processes.

Land Use Planning Discourse Data from Comprehensive Plans: Comprehensive plans are important data sources for collecting land use planning discourse data that are supposed to policy guidance for growth and development in a community over a long-span of time. Table 3.5 shows the comprehensive plans in Maryland. Overall, Maryland’s local governments had their comprehensive plans created back in the 1960s and 1970s; only recently, these local governments have updated their comprehensive plans¹⁷ per state mandates.

Table 3.5: Comprehensive Plans				
	Frederick County ¹⁸	2010	Caroline County	2010
1	Brunswick	2009*, 2007, 1997, 1967	Denton	2010, 1997
2	Burkittsville	1996; 1976	Federalburg	2009,1991, 1986
3	Emmitsburg	2009,1998,1974	Goldsboro	2009, 1998
4	Frederick City	2010, 2004, 1995, 1979, 1964	Greensboro	2009 ¹⁹ , 1997
5	Middletown	2010, 1985, 1965	Henderson	2009
6	Myersville	2010, 1999, 1966	Hillsboro	2010
7	New Market	2005, 1992	Marydel	2009
8	Thurmont	2008, 1972	Preston	2005, 1973
9	Walkersville	2011		
10	Woodsboro	2008		

¹⁷ Maryland Department of Planning requires all counties update comprehensive plans every six years now.

¹⁸ Rosemont of Frederick County has no planning authority.

¹⁹ The updating is in process at present.

Table 3.4 (a): Basic Information of Meeting Minutes from the Three Document Sources					
<i>Caroline County*</i>	<i>URL</i>	<i>Start</i>	<i>End**</i>	<i># of Years</i>	<i>Total</i>
Caroline County Commissioners Meeting Minutes	http://www.carolinemd.org/governmt/minutes.php3	4/21/1998	8/2/2011	13	680
Caroline County Planning Commission	http://www.carolineplancode.org/boards/pc_meeting_minutes.html	2/8/2006	2/9/2011	5	51
Denton Town Council	http://www.dentonmaryland.com/government/minutes.asp	12/2/1996	7/11/2011	15	266
Denton BOA	http://www.dentonmaryland.com/government/commissions-boards.asp	3/9/2009	8/8/2011	2	10
Denton Planning Commission	http://www.dentonmaryland.com/government/commissions-boards.asp	1/27/2009	6/28/2011	2	36
<i>Frederick County</i>	<i>URL</i>	<i>Start</i>	<i>End</i>		<i>Total</i>
Frederick County Commissioners Meeting	http://frederickcountymd.gov/archive.aspx?AMID=31&Type=&ADID=	1/2/2003	7/14/2011	8	1472
Frederick County Planning Commission	http://frederickcountymd.gov/Archive.aspx?AMID=51	1/11/2006	7/13/2011	5	148
Frederick County BOA	http://www.frederickcountymd.gov/Archive.aspx?AMID=55	1/26/2006	6/23/2011	5	70
Frederick City Alderman & Mayor	http://www.cityoffrederick.com/sql/minutes/mayor_regular/minute_dates.php	12/4/2002	6/2/2011	9	217
Frederick City Zoning BOA	http://www.cityoffrederick.com/sql/minutes/zba/minute_dates.php	8/28/2001	6/28/2011	10	87
Frederick City Planning Commission	http://www.cityoffrederick.com/sql/minutes/planning/minute_dates.php	8/13/2001	7/11/2011	10	115
*Caroline County Board of Zoning Appeals has no posted minutes. No response after contacting Planning & Codes.					
**Data collection stopped as of August 2011 as to completion of 1 st draft.					3153

Table 3.4 (b): A Summary of the Three Meeting Minutes

County	Frederick County	Caroline County
Earliest	12/04/2011	12/02/1996
Most Recent	07/14/2011	08/02/2011
Maximum Years	10	15
Minimum Years	5	2
Average Years	7.9	7.4

Source: Meeting Minutes for Frederick and Caroline counties

3.3B Data Collected from Semi-Structured Interviews

The semi-structured interviews were conducted from August, 2010 to March, 2011 for additional data collection. This additional data collection effort was made because of an intention of generating more in-depth information about the stakeholders' past experiences, motivations for their actions, and interactions. More importantly, the information about the current states of the stakeholders' being was targeted to obtain. The interviews were conducted in a face-in-face format. Table 3.3B-1 shows the basic interviews statistics. The total interviewee numbers were 57 as potential participants. 48 of 57 (84.2%) were completed and 9 interviewees (15.6%) declined my interview requests.

Table 3.3B-1 Interviews Statistics			
	<i>Interview Completed</i>	<i>Interview Declined</i>	<i>Intended Total</i>
Count	48	9	57
Percentage	84.2%	15.6%	100%

3.3C Data from Direct Observations

Three types of meetings were chosen for direct observations. Observations of these meetings started before conducting the interviews and extended longer than the interviews (from August 2011 to September 2011²⁰). This was to capture the stakeholders' behavior patterns and how they interact with each other on land use related issues. The three types of meetings attended were: (i) county commissioners' meetings and municipal government meetings; (ii) Planning Commission meetings at both county and municipality levels; and (iii) Zoning Appeals Board meetings at county and

²⁰ Several earlier meetings were also participated but not counted in this table.

municipality levels. Table 3.3C-1 presents the basic information on dates of the meetings held, types of meetings and core themes at each meeting.

Table 3.3C-1: Meetings Attended for Direct Observations

#	DATE	MEETINGS OBSERVED	Annexation/ Development Land Use Related Issues
1	8/4/2011	Denton Town Council Meeting	Fearins Surety LLC. Issue Bonds Habitat for Humanity Together We Stand First Street One Way Traffic Survey Historical & Architectural Review Commission Appointment
2	8/8/2011	Denton Town BOA Meeting	5 Variances for Development of Heritage Visitor Center/Waterfront Restaurant at Crouse Park
3	8/9/2011	Caroline County Commissioners Meeting	Changing Forest Regulation from State & Storm water Management Planning Commission' Comments on PlanMaryland Recreation & Park, Summer Fest
4	8/10/2011	Frederick County Planning Commission Meeting	Variances for Site Plans for 8 development PlanMaryland Interpretation of 5-Year Rule on Annexation
5	8/11/2011	Frederick County BOCC & Municipalities Meeting	Tax Set-off Discussion Cheasapeake Bay TMDL Municipal Response on Five-Year Rule on Annexation
6	8/18/2011	Frederick City Mayor & Alderman Meeting	Environmental Committee Report to the Board Open Government Transparency Proposing Sustainable Maryland Certified Municipal program
7	8/23/2011	Frederick City BOA Meeting	Variance for T-Mobile Cell Tower Development Expansion
8	8/30/2011	Denton Town Planning Commission Meeting	Variance for Legion Road Development's Buffer Zone
9	9/7/2011	Caroline County BOA Meeting	Property Rights and Land Use
10	9/12/2011	Frederick City Planning Commission Meeting	Historical Preservation Overlay Zoning hearing
11	9/14/2011	Caroline County Planning Commission Meeting	North County Sewer Service Area PlanMaryland (Revised Draft) Extended Comment Period

3.4 Analysis Methods

Coding was performed before conducting analyses. Coding is the analytic process of clustering similar words and phrases. Systematic coding breaks down into 2 stages: mechanically and interpretatively organizing data into meaningful groups (Hoggart et al. 2002: 238). Both coding techniques were used in this dissertation. Keywords used include those from annexation, sprawl, and land use planning literature which were based upon study framework and research questions. Three steps of coding took place in this dissertation are: open coding, axial coding, and check-up coding. Open coding is the preliminary step to obtain a general sense, which was completed in the proposal. Axial coding was sub-grouping within a single category. Approximately four weeks in three times (November 2010, April 2011, and June 2011) were spent on this coding step. Check-up coding occurred in July 2011 to make sure grouping and sub-grouping were done best possible. December 2011 and January 2012 were spent for the additional checking.

3.4 A Stakeholder Analysis

This dissertation uses stakeholder analysis (SA), which is widely used in environmental studies and development research (Billgren and Holmén 2008: 552; Buanes et al. 2004; Grimble and Wellard 1997), to remediate this deficiency. This is because SA is one of the most commonly used methods in natural resource management. More succinctly, using SA is because the aims of it are (1) to identify and categorize the stakeholders that may influence and perhaps transform an organization or a system, (2) to development a understanding of why changes occur, (3) establish who can make changes happen, and (4) to discern how to best manage a natural resource (Billgren and Holmén

2008:552; Grimble and Wellard, 1997; Mitchell et al. 1997). The following content analysis and discourse analysis were performed for the stakeholders involved in annexation processes

3.4A -1 Content analysis

Content analysis is a systematic analysis of semiotic artifacts including spoken or written communication materials ranging from books, websites, transcripts, communication records and notes, policies, and published reports (Gaber and Gaber 2007:104; Montello and Sutton 2006:71 & 79). By counting key words, frequencies (Gaber and Gaber 2007: 110; Hay 2000: 125; Hoggart et al. 2002: 150; Sealve 2004: 368) are generated to offer a quantitative measure to answer questions such as who says what, to whom, why, to what extent and with what effect (Neuendorf 2002). This dissertation used content analysis in several occasions. One of the examples of such was provided in detail.

This dissertation utilized content analysis to identify the active agents that are the stakeholder. The specific steps of the analysis followed were (Reed et al 2009):

- (i) Identification of the stakeholders;
- (ii) Differentiation and categorization of the stakeholders;
- (iii) Investigation of the relationships among the stakeholders.

Similarly, the categorizations of the emerging themes were also able to be generated. They were Economic-Interests Space (EIS), Environmental-Interests Space (EMIS), and Community/Quality of Life-Interests Space (CQoLIS). The sub-categories of each were also identified in the subsequent coding procedure.

3.4A-2 Discourse analysis

Discourse analysis is a high level analysis. It is another useful analysis method in deconstructing the underlying interactions and relationships. It uses the systematic ordering of language involving certain rules, terminology and conventions by deconstructing their communication materials and practices (Doel in Clifford and Valentine 2005: 507; Sealve 2004: 373). Doel defines a discourse as “a specific constellation of knowledge and practice through which a way of life is given material expression” (2003: 508 in Clifford and Valentine 2003). Similarly, Sealve refers to a discourse as “a group of statements which provides a language for talking about – i.e. a way of representing - a particular kind of knowledge about a topic” (2004: 373). Humanistic geographers and political ecologists have been using this analysis technique to study social constructions consisting of actors’ narratives and their discourses regarding environmental change (Forsyth 2003: 9). It is important to recognize that a discourse needs to be placed within that social context. Seale emphasizes the importance of this social contextualization in the statement below:

Perhaps the easiest way to think about discourses as linking language, knowledge and power is to take the model of ‘expert’ languages. Doctors, for example, do not simply draw on their practical training when doing their job; they also draw on a medical language that allows them to identify symptoms make diagnose and prescribe remedies. This language is not readily available to people who are not medically trained.

Particular attention in this research will be given to examining the concept of smart growth and sustainability discourse in land use planning.

Therefore, the process of doing discourse analysis is data-driven and never “final” because of the need for social contextualization and recontextulization (Doel in Clifford and Valentine 2003: 508). Doel concisely supports this statement by saying that “a

geographical analysis of cultural texts and competing discourses [will] need to follow as rigorously as possible the spatial, temporal, and social traces of both real and imagined signifying structures: representations and practices” (in Clifford and Valentine 2003: 508).

3.4B Social Network Analysis

While content analysis was useful for generating count information, it remains as a first level analysis. The limitation is that it separates the count from the context so may not be able to capture the interactions. Therefore, Social Network Analysis (SNA) was used to supplement this limitation. Growing out of the fields of social anthropology and sociometry, SNA is useful in providing another level of analysis, and generating information about patterns and “invisible” relationships discernible at both individual actors and collective levels. Scholars have recently started to take an interest in how relationships among different actors and stakeholders facilitate and hinder societies in transforming the way they manage natural resources. Crona and Hubacek state that “... achieving [this] new form of resource governance is dependent on a fundamental understanding of important social processes at play. SNA helps in revealing the flows of resource, information and policy” (Crona and Hubacek 2010: 1; Peck 2010: 170).

SNA was used in this dissertation to measure density, centrality, and ties assessing the network structures, and how structures facilitate social actions, prompting previously unconnected actors to join with the existing social ties or look for new social ties (Holman 2008: 525; Scott 2000: 4; Wasserman and Galaskiewicz 1994: 259).

3.5 Research Quality Control

In order to maintain the quality of research, a number of techniques were used in proceeding the research. On average, three runs of contact via mailing letters, emails, and phone calls were performed. Then, a mid-point location for the interview setting was carefully chosen. For example, if an interviewee preferred to have the interview being conducted in Annapolis, the location where the interviewee wanted was used for the interviewee. Additional interviews were also performed if needed.

The soundness of a research project depends on the maximal use of validation procedures (Creswell 2009: 194). Both internal and external validation techniques were used. First of all, the employment of the overall research strategy of mixed methods and triangulation provides complementarity in generating a high quality dataset that is consistent. Hoggart and his colleagues argue that validity in qualitative research should be referred to as the “consistency of evidence” rather than as “validity” which is associated with positivism (Hoggart et al. 2002: 142). Specifically, the triangulation of data sources concerning annexation events in several different settings ensured multiple complementary forms of data and triangulation of analyses also complemented and verified the research findings (Sealve 2004: 511). For instance, comparison between the newspaper data and the observations were useful in validating data accuracy. Member checking was also used. Member checking provides chances to correct inadequate interpretations when interpreting the results. By doing follow-up consulting with the key informants, more subsequent phone conversations, and electronic communications were completed to ensure accurate information and interpretation. Validity checks with the dissertation adviser were additionally performed. These have provided quality control not only on the data but also on my interpretations.

Another important ethical question that qualitative geographers often ask is “what are the consequences a research project could have for the participants and the groups of people you are studying?” I plan on sending this work back to the communities which I studied²¹.

Last, but not the least, a researcher’s personal, philosophical, and theoretical beliefs may bias the research. Creswell suggests a researcher “[needs to] comment on past experiences, biases, prejudices, and orientations that have likely shaped the interpretation and approach to the study” (2007: 202). First, holding a master’s degree in Geography/Urban Planning from University of Akron prepared me with geography and urban planning background. My cultural identity which is being a Chinese American was helpful in soliciting the key informants’ willingness of participating this research project and genuinely sharing their opinions, experiences, and knowledge. Second, a philosophical ground that positions myself as a cultural geographer laid out the foundation and orientation of this research. Coursework at University of Maryland left me with a theoretical framework that is useful in investigating the socio-environmental nexus of annexation events in connection with broad landscape change.

3.6 Limitations

While as many as thirty-five trips were made to the two selected case study counties (See Appendix B and D) for a total of 8,085 miles (the total expense was estimated at \$4,700) to the two counties, the nature of qualitative data collection confronted some challenges. For example, although the extensive fieldwork worked out

²¹ Both counties’ planners expressed interests of reading my dissertation once completed.

in general, the attempt to some informants, particularly land owners, was not as smooth and successful as expected. For each attempt to interview a land owner involved in annexations, at least three letters were sent out, followed by emails and phone calls. This is indicative the sensitivity that land owners has on annexation issue. Developers were the other group that I had greater difficulties for scheduling interviews. Additional logistical difficulties include that often the meetings I attended held in late evenings, resulting in late night travel²² in hazardous weather condition.

The role of being an insider or outsider from a perspective of a researcher was also recognized. That is, being insider or outsider can affect a level of objectivity in data collection, analysis and interpretation. For example, interviews took place before attending to the local meetings. Being a Chinese American, the questions often asked were why I would want to study annexation and if there are any connections between U.S. and China were indicative of the interactions between the researcher and the researched. Questions like these affect willingness to share and the amount of information about annexation an informant wants to shares. Overall, great efforts were made to limit personal bias over participants so as not to influence their responses or actions.

²² Several late night of traveling were during the severe weather conditions.

Chapter 4: Findings and Analysis

Based upon the proposed theoretical framework in Chapter 2 and the methodology as detailed in Chapter 3, this chapter presents the findings and analyses in the two case study counties. Both quantitative and qualitative results were presented. Broader conclusions drawn from these findings and analyses are provided and synthesized in the next chapter.

Restatement of Research Question

In a broad sense, the overarching question that this research project seeks to answer is:

- **How do the sources, conditions, and ramifications of annexations contribute to landscape change in Frederick and Caroline counties of Maryland from 1990 to 2010?**

In order to answer this overarching question, the three sub-area questions are:

- (1) What are the dynamics of the stakeholders' relationships in the annexation processes in Frederick and Caroline counties of Maryland from 1990 to 2010?
- (2) What are the changes in the land involved in annexation in the two study areas?
- (3) Do annexations encourage sprawl?

4.1 Sub-Question 1

What are the dynamics of the stakeholders' relationships in the annexation processes of Frederick & Caroline counties of Maryland?

Two themes were examined and analyzed: the agents (the stakeholders) and interactions among the agents.

The Agents and Interests

The agents involved in the annexation events from 1990 to 2010 in Frederick and

Caroline counties generally consisted of the seven stakeholder groups:

- County²³ - county government; coded as CTY
- Municipality – municipality government; coded as MUN
- Developers – including developers and realtors; coded as DEVs
- Land Owners – are also property owners; coded as LDOs
- Residents of Incorporated Municipalities – general residents living inside a municipality boundary; coded as RIMs
- Residents of Unincorporated Areas – general residents living in the outside of incorporated limit - rural²⁴ areas; coded as RUAs
- Environmental/Civic Groups –also including civic and neighborhood groups who participated annexation processes with an environmental protection perspective; coded as EMCGs.

Table 4.1 also shows the findings of the stakeholders’ interests that motivate them in participating annexation processes.

<i>Table 4.1 Expressed Stakeholder Groups and Respective Interests in Annexation Events</i>	
<i>Stakeholder Groups</i>	<i>Interests in Annexation Processes</i>
County (CTY)	Jobs, growth, statutory obligations, control
Municipalities (MUNs)	Economic Development, improve tax base, control, local affair
Land Owners (LDOs)	Higher property value
Developers (DEVs)	Jobs, growth, development, economic, community benefits, spread sprawl
Residents of Incorporated Municipalities (RIMs)	Perceived decreased density so have better quality of life, increase tax
Residents of Unincorporated Areas (RUAs)	Wanting services being provided, sense of belonging, better quality of life
Environmental/Civic Groups (EMCGs)	Sprawl, too much growth, negative environmental impact, no growth control
Source: Local Newspaper, 1990-2010	

²³ Stakeholder groups are capitalized in this dissertation.

²⁴ Unincorporated is interchangeably used with rural in this dissertation.

Table 4.2 Themes and Frequency in terms of Primary Objectives in Annexation		
<i>ID</i>	<i>Primary Objectives</i>	<i>Frequency</i>
1	All about control	17
2	Increase town's tax base	13
3	Water/sewer services	10
4	Increase commercial/residential revenue	10
5	Improve fiscal improvement	7
6	Who controls town's destiny really matters	7
7	Conflicted objectives between CTY/MUN	7
8	County needs to weigh in	7
9	Gain economic opportunities/jobs/office space	6
10	Continue to provide "business friendly " environment	6
11	Need infrastructure/roads	5
12	Changing state laws over time	5
13	Need to subscribe Smart Growth principles	5
14	Annexation is municipality's job – annexed land should for development or preservation	5
15	CTY needs to provide school due to population growth	5
16	Increase property profit/value	4
17	Changing CTY's objective over time	4
18	Increase industrial	2
19	Don't like smart growth	2
20	Matters whose interest(s) being served	2
21	Community's benefits	2
22	Should continue to expand water & sewer	2
24	Scale of development is the most important issue in annexation	2
23	Different objectives between MUN & citizens	1
24	Meet what law says	1
25	Prefer town's small environment for businesses	1
26	Annexation is a political position taking	1
27	Progressive in planning	1

Table 4.3 the Emerging Themes

Themes (Total Frequency)	Numbers	Stakeholders Present (Frequency)
Economic-Development-Growth (56)	2,4,5,9,10,11,16,18,22,25	MUN (13), CTY (1), LDO(9), DEV (20), RUA(1), RIM(2), EMCG(10)
Control (46)	1,6,8,12,15,17,27	MUN (14), CTY(10), LDO(6), DEV(11), RUA(2), RIM(2), EMCG (1)
Interests (15)	14,20, 23, 7	LDO (3), DEV(1), MUN (5), CTY (6)
Smart Growth (7)	24,13,19	CTY (5), DEV(4)
Others (15)		
Annexation should be a political position taking	26	EMCG (2)
Scale of development is the most important issue in annexation	24	EMCG (2)
Water/Sewer services should be at the core of annexation	3	CTY (10)
Community benefits	21	EMCG (1)

Source: Answers from Interview Question One – Primary Objectives in Annexation, August 2010 – March 2011

The data collected from interview Question One on the primary objectives found the following themes presented on table 4.2. In total, twenty-seven themes were emerged from the respondents’ answers. After grouping them into broader categories, five themes were evident: (1) economic- development-growth; (2) control; (3) interests; (4) smart growth; (5) others. Theme One that economic-development-growth was the most important to the municipalities were expressed in the largest cluster. The overall consensus was that, in order to increase a town’s tax base and improve the fiscal condition, annexation increases development in residential, commercial, and industrial sectors would hap a municipality gain economic opportunities. The municipalities “want to grow” by “expand[ing] infrastructure and roads” and “expand water and sewer services” to continue to provide small town’s business friendly atmosphere. Land

Owners wanted to see their property value rise instead of going down. The second theme emerged was control. On Theme Two, in terms of control, the conflicted interests between county and municipality were apparent. For example, the statement that land use is a local issue so town is the most important to decide /control a town's destiny. Also, the response revealed local resistance toward state's smart growth policies. On Theme Three on interests, several statements made by the informants provided the examples of conflict-laden annexation issues, further the contradiction and dysfunction in the current hierarchical administrative system. The fourth theme is on Maryland's Smart Growth policies. While some County Commissioners stated that "local needs to subscribe Smart Growth policy and meet what the law says." At the same time, the other part of County Commissioners and Land Owners who agreed with being interviewed said that they do not care for Smart Growth. Lastly, four stand-alone themes were on "political position taking," "scale of development," "community benefits," and "water/sewer at core." The first three sub-stand-alone themes were solely expressed by the interviewees from environmental/civil groups and organizations and the last sub-stand-alone theme was put forward by county. This is because, more recently, the state of Maryland required municipalities create Municipal Growth Element as a newer wave of Smart Growth policies.

Some interesting interview quotes further exemplified these emerging themes in annexation practices.

Mayor 1: "Property's boundaries that are contiguous to town will be subject to be annexed because, if not, the location would block the town's further growth; they're the barriers. If they are not annexed, the benefits of development will not for town. Also, if a town's tax base is increased; the economic viability will be increased" (Interview, 22 November 2010).

County Commissioner 1: “Annexations are for tax base increase, industrial growth, and property for expansion” (Interview, 21 September 2010).

County Commissioner 2: “Annexations are property owners/developers initiated from and on-going processes” (Interview 21, September 2010).

Developer 1: “The primary objective of annexation is the increase in either residential or commercial revenue” (Interview, 4 October 2010).

Developer 2: “The primary objective of annexation is the tax base increasing” (Interview, 18 October 2010).

Property Owner 1: “I’m concerned about the area next to the Meadow. With the annexation that is going to mixed commercial and industrial, my property value would be reduced. As a county resident, the county should mitigate” (Interview, 20 September 2010).

Property Owner 2: “The Aldermen are the decision makers. I have witnessed errors and mistakes made by the County. My property had a planning objective for future development in mixed land use and transportation support for future Frederick City. But they changed that laterly” (Interview, 27 September 2010).

Environmentalist 1: “The primary objective of annexation is economic-driven, for example, town’s finance, real estate, and bonding” (Interview, 15 October 2010).

Environmentalist 2: “The primary objective is to increase tax base that’s cost out. Developers think it’s too difficult to build on infill” (Interview, 8 November 2010).

Land Owner’s Attorney 1: “The overriding objectives are control; control the destiny of the town. Another objective is fiscal aspect to increase taxes” (Interview, 6 October 2010).

The response from interview question two were also asked to identify who they perceive as primary stakeholders. Table 3.3B-3 displays the following findings: (i) Land Owners (LDOs) and Developers (DEVs) were tied with 100%, suggesting that Land Owners and Developers were uniformly seen as the most essential stakeholders by all groups; (ii) Municipal Government (MUN) was viewed as the second primary

stakeholder with 79.2%; (iii) County Government (CTY) was viewed as the third primary stakeholder with 62.5%. (v) Residents of Incorporated Municipalities (RIMs) was the next primary stakeholder group with 31.3%; (vi) Residents of Unincorporated Areas (RUAs), with 22.9%, was viewed as the fifth primary stakeholder; (vii) Environmental/Civic Groups (EMCGs) was ranked in the last place with 18.8%.

Table 4.4: Summary of Count for Primary Stakeholder Groups							
Stakeholder	MUN	DEVs	LDOs	RIMs	RUAs	EMCGs	CTY
	1	2	3	4	5	6	7
Count	38	48	48	15	11	9	30
Percent	79.2	100	100	31.3	22.9	18.8	62.5

Overall, multiple stakeholders across public and private sector at both individual and collective level were found in annexation practices. Generally, three sets of interests were prevalent: social, economic and environment (Berke et al. 2006: 19-20). This research modified them into three spaces: Economic-centered Space (EIS), Environment-center Space (EMIS), and Community/Quality of Life centered Space (CQoLIS). Some examples of the individual agent’s activeness were also evident in the following:

Developer 1: “City and county have different visions. Services cost is associated with residents in communities. 10-15 years positively contrive to tax revenue and for the existing residents, increasing density as well” (Interview 1 October 2010).

Developer 2: “Environmental groups like Friends of Frederick County is all about politics. It’s been destructive to Frederick. [The organization] is funded by the lawyers in DC. They violated the law by getting involved. Sustainability is not to force people to move to PA and WV. They’re not primary stakeholders” (Interview 6 October 2010).

Developer 3: “Environmental groups are watchdogs. They entitle to have opinions but are not stakeholders” (Interview 18 October 2010).

Mayor 1: “Environmental groups are watchdogs and they tend to go overboard and are overzealous” (Interview 8 October 2010).

Mayor 2: “85% of Frederick County’s population wasn’t here before 1985. Town and cities have been inundated by annexation requests, then water and sewer coming along. Developers by going to County to get a feel if their request will go through or not. County feels not having enough role to play in annexation now and they want more to play. This is not intended to ‘cause since Post War II County never has rights to veto the [annexation] approval by a city” (Interview 8 October 2010).

Property Owner 1: “Not much opposition until 2005. It seems they are more organized. When they take part into the processes, confrontation takes place. They’re more loosely organized on the Eastern Shore, different scale, and low profile. If [it’s] not waterfront development, [there is] no large opposition” (Interview 22 October 2010).

Property Owner 2: “Environmental groups are indirect stakeholders. Their participation was disruptive the relationships” (Interview 27 October 2010).

Environmentalist 1: “When we heard about the issue, it’s usually at public hearing that is too late to make any changes. Municipal officials say ‘either grow or die’. When developers come in they brought in big box commercials. 5-year rule didn’t work” (Interview 15 October 2010).

Environmentalist 2: “We’re the most active group..... but only meaningful in election process. [We] have minimum say in annexing land. Property owners, farmers, realtors, bankers are all in alliance with developers. Oh, Frederick County Farm Bureau is strong on development; in align with developers as well. Frederick Realtor Association and Frederick Chamber of Commerce are in line with developers” (Interview 13 November 2010).

County Planner 1: “Environmental groups are not stakeholders per se. Municipalities couldn’t mobilize civic organization to get involve” (Interview 20 August 2010).

City Planner 2: “Developers initiate annexation processes. Political level of support on reducing the land has been back and forth” (Interview 23 August 2010).

Attorney 1: “Environmental groups/organizations vary. Size, location, and nature of development in annexations decide them. They may be the dominant players but provide objectively faulty oppositions. Their participation is ineffective” (Interview 6 October 2010).

Table 4.5 shows the frequency difference of the stakeholders from 2008 to July 30, 2010 in the two case study counties. The higher the frequency is, the more active a stakeholder is. The overall finding was that Frederick and Caroline counties show that the top four stakeholders are County, Municipality, Planners, and Developers, and Land Owners, though a slight difference in rankings. This finding suggests that these stakeholders are more active than other stakeholders.

Table 4.6 presents the findings of the frequencies of a number of terms that each stakeholder referred to in annexation events. Overall, the frequencies from 2008 – July 2010 in Frederick and Caroline counties suggested that a mentality of economic development and growth was dominant and a relatively low level of environmental sensitivity. For example, in the both counties’ context, the higher frequencies of the terms such as “Growth,” “Development,” and “Housing” was evident.

Table 4.5: Frequency of Agents in Annexation Events, 2008-7/30/2010		
<i>Stakeholder Types</i>	<i>Frequency in Newspaper</i>	
	<i>Frederick County</i>	<i>Caroline County</i>
Local Government Officials		
County Commissioners	47	31
Town Council/City Alderman	81	19
Mayor	90	7
Planners	8	37
County/Town Attorneys	5	5
Land Owners & Attorneys for Land Owners	154	31
Developers	67	20
Citizens		
Citizens Residing inside Municipalities	8	0
Citizens Residing in Unincorporated Areas	0	0
Environmental /Citizen Groups	18	0

Table 4.6: Environmental Interest vs. Economic Interest in Frederick and Caroline Counties, 2008-July 30, 2010

<i>Environmental Terms</i>	<i>Frequency</i>			<i>Economic Terms</i>	<i>Frequency</i>		
	Frederick	Caroline	Total		Frederick	Caroline	Total
Farmland Preservation	10	6	16	Job/Job Creating/Employment	9	0	9
Good Water Quality	8	1	9	Growth	13	9	22
Potomac River	8	0	8	Develop/Development	38	21	59
Monocacy River	5	0	5	Expand Tax Base	3	1	4
Preserve/Protect	7	2	9	Water Use/Capacity	2	0	2
Environment(al Impact or Fee)	3	0	3	Commercial Development (Office Space)	51	6	57
Green	1	0	1	City gain/Benefit	1	0	1
Landscape	0	0	0	Tourism	0	1	1
Choptank River	0	8	8	Business(es)	4	1	5
Tuckahoe River	0	2	2	Economic	3	2	5
Environmentally Sensitive	0	1	1	Housing Units/Residential	48	12	60
Smart Growth	0	1	1	Waterfront Development/Use	3	5	8
Watershed Protection	0	1	1	Farm/Farmland/Agricultural Use	31	3	34
Column Total	42	22	64	Column Total	206	61	267

The Agents' Actions and Interactions

The agents' actions and interactions were measured by employing Social Network Analysis (SNA). SNA provided the quantitative indicators of the ties between the agents, if present and what the intensity of those ties.

Figure 4.1²⁵ presents the presence of relationships by the ties in assorted colors between the stakeholder groups.

The more lines are connected to the nodes, the higher the intensity of the relationship is. Of the seven stakeholder groups, Developers (DEVs) had as many as 15 ties, demonstrating the strongest associations with other stakeholder groups. Next the County (CTY) had 14 lines and landowners (LDOs) had 10 lines, representing the second and third strongest connections.

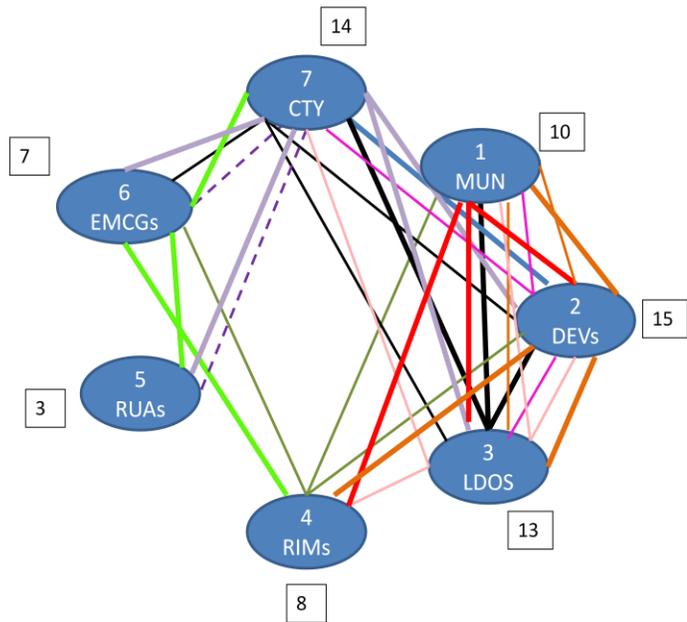


Figure 4.1 The Ties Based upon Interview Data

Centrality is a measure of how much structure numerically contributes to a node's importance within a network. In this study, degree of centrality (Freeman 1979) was calculated to measure how well the stakeholder groups were connected and have direct influences. Degree centrality of a node was computed by the equations below:

²⁵ SNA was also performed for each county in seeking for difference. However, no difference in flows, clusters, networks were found. The lines only show whether a tie is present or not. The color, thickness, and style of the lines have no special meaning.

$$C_D(a) = d_a \tag{Equation 1}$$

Normalized Degree Centrality of node a:

$$d_a/(n-1) \tag{Equation 1. 2}$$

Table 4.7 Display the Degree of Centrality		
Node	Degree Centrality	Normalized Degree Centrality
DEVs	15	15/6 = 2.5
CTY	14	14/6 = 2.33
LDOs	13	13/6 = 2.17
MUN	10	10/6 = 1.67
RIMs	8	8/6 = 1.33
EMCGs	7	7/6 = 1.17
RUAs	3	3/6 = 0.5

Table 4.7 displays the results of degree centrality for each stakeholder group. Of the seven stakeholder groups, the DEVs () scored 2.5, which is the highest centrality score, while residents in unincorporated areas (RUAs) scored 0.5, which is the lowest centrality score. This suggests the importance of landowners in the network due to their connectedness and ability to exert the most direct influence. In other words, the centrality of land owners indicate it (i) is the most active player, (ii) has an advantaged position, and (iii) may have alternative avenues to satisfy organizational needs, and consequently may be less dependent on others in annexation processes.

Outcomes of the Agency’s Action and Interaction in Annexation Processes

This research surprisingly found that little systematic record-keeping for all annexation applications, including rejected applications which would provide counter-factual explanations. The record-keeping of only approved presented a challenge because, often, if an application is being rejected, the original application package will go back to

developers and land owners who would work with engineering consulting firms to reprepare by taking into account of the recommendations made by the staff members or planning commission; then resubmit the revised package for another round of application (Personal Communication with Planners and County Commissioners).

While it was impossible to assemble complete databases of all annexation applications, the data collected from MSL, MSAL, and from the planning offices were sufficient enough to conduct this research project. These approved applications suggest that a mentality of economic development and growth have been occupying center stage in the approval of annexation applications. Figure 4.2 presents one example of the Planning Commission made an approval decision on annexing 126 acres of land with exemption of 5-year rule²⁶ in Brunswick of Frederick County. In spite of the property being zoned as Agricultural by the County's Zoning classification before filing for annexation the vote was all in favor for approving it with a waiver for 5-year rule²⁷.

County Commissioner: “Two points on annexation contributing to development process. First, developers extract the larger monetary profits from property owners by getting agriculture zoning to something; once the land is annexed, it's too late. Second, APFO comes too late. To reemphasize the first point, once developers got zoning, developers have no incentives talk to the town at all” (Frederick County BOCC Meeting, 20 September 2010).

²⁶ Taken effect on October 1, 2006, 5-year rule states that if the proposed zoning for a to-be-annexed land is substantially different or within 5-% denser the county zoning will be granted. However, a municipality may obtain a waiver to avoid the 5-year wait until the new zoning classification applies (Key Planning Legislation from the 2006 Session. The Maryland Department of Planning and The Maryland Department of the Environment.)

²⁷ In 2009, the state passed a law allowing municipalities to annex without obtaining public approval if a parcel is less than 5 acres.

Closer look investigations were conducted in Frederick and Caroline counties separately in order to see if there are any differences in the annexation approval processes in the last twenty years.

A Close Examination on Annexation Events in Frederick City: A database at Frederick City level in Frederick County showed the annexation events for the year of 2008 and 2009. Figure 4.3 and Table 4.3 show the locations and other relevant information for these approved annexations. During the two-year period, there were 14 properties filed annexation applications. These applications, totaling 2,287.98 acres of land, were reviewed by Planning Department of Frederick City and approved by the Mayor and Board of Aldermen of Frederick City. Of the 14 properties, the largest is 1004.11 acres, which is Glade Valley Property Landmark, noted as number 11 and located between MD 26 & MD 144. The smallest property is 7.10 acres, which is owned by Dowey Jordan, noted as the number 10 and located on Monocacy Boulevard. The average size of the 14 properties is 163.4 acres. Six of the 14 properties are larger than 100 acres with an average size of 327.38 acres. All of these acres were agricultural in land use prior to annexation. Of the rest of eight properties, the average of these eight properties is 40.43 acres. After examining the proposed land use by annexation plans submitted, 67% of these properties would be designated for the R4 and R6, which are both zoned for low-density residential land use, 25% for park and open space, and 8% for commercial land use. According to the Maryland Department Planning, the total incorporated land area in Frederick County was 24,402 acres in 1997, and this acreage was increased by 3,381 acres in 2005. This 14% change in acreage of the incorporated

land area at the county level suggests rapid increases of municipalities in size as a result of magnitude of annexations. Closer examinations of all approved annexation events in Frederick City of Frederick County from 2008-2010 found that, in more recent years, the annexed properties were getting larger and larger. Another finding is that the requested zoning is R4 or R6, which stands for low-density residential development.

**Figure 4.2: An Example of Frederick County Planning Commission Minutes –
Five-Year rule being waived**

Motion: McIntyre/ 2nd by White
Vote: 6-0-0-1
For: Brown, McIntyre, Wolfe, Hagen, White, and Forrence
Against: 0
Absent: 0
Abstain: Crum

BRUNSWICK ANNEXATION – COOPER (S. Lemonds)

Ms. Lemonds pointed out that Mayor Jones from the City of Brunswick was present. She explained that the request before the FcPc was a recommendation regarding the annexation of 126 acres into the City of Brunswick. Ms. Lemonds presented her staff report, which included a PowerPoint presentation. She advised that staff made the following findings with regards to the proposed annexation:

1. The request for R-1 (Low Density Residential) zoning on the subject property is substantially different than the existing County Agricultural (A) zoning classification.
2. The subject property is located within the City of Brunswick growth boundary as shown in the City of Brunswick Master Plan (2007).
3. The request for R-1 (Low Density Residential) zoning is consistent with the County's Brunswick Region Plan land use designation of LDR (Low Density Residential) and MDR (Medium Density Residential).

Ms. Lemonds stated that staff recommended that a waiver be granted for the annexation request.

Applicant

Attorney Jerome Offutt representing Gary Cooper and W. Kay Cooper advised that his clients are elderly and that they do not anticipate developing the property for a period of 10 years following its annexation. He requested approval of the waiver that staff has recommended to be granted.

Mr. Donovan Corum of Rodgers Consulting stated that the applicant has identified the following proffers: a 4 acre public park area (for ball fields), 10 acres to be combined with the City's existing 7 acres for an elementary school, the realignment of Souder Road, the annexation of Maryland 464 into the municipality so that they can begin to control speeds, and to provide local road connections to the existing Galyn Manor. He pointed out that the purpose of placing Ag zones was to create a holding zone so that they would grow in a logical and proper manner.

Public

Mayor Jones discussed how this farm is the most logical expansion and annexation for Brunswick. He pointed out challenges that they face such as schools and wastewater. Mayor Jones explained that they are trying to grow in an orchestrated way in order not to over extend themselves and not totally change Brunswick.

Mr. Hagen questioned why the waiver was needed since its only benefit is avoiding the 5-year waiting period.

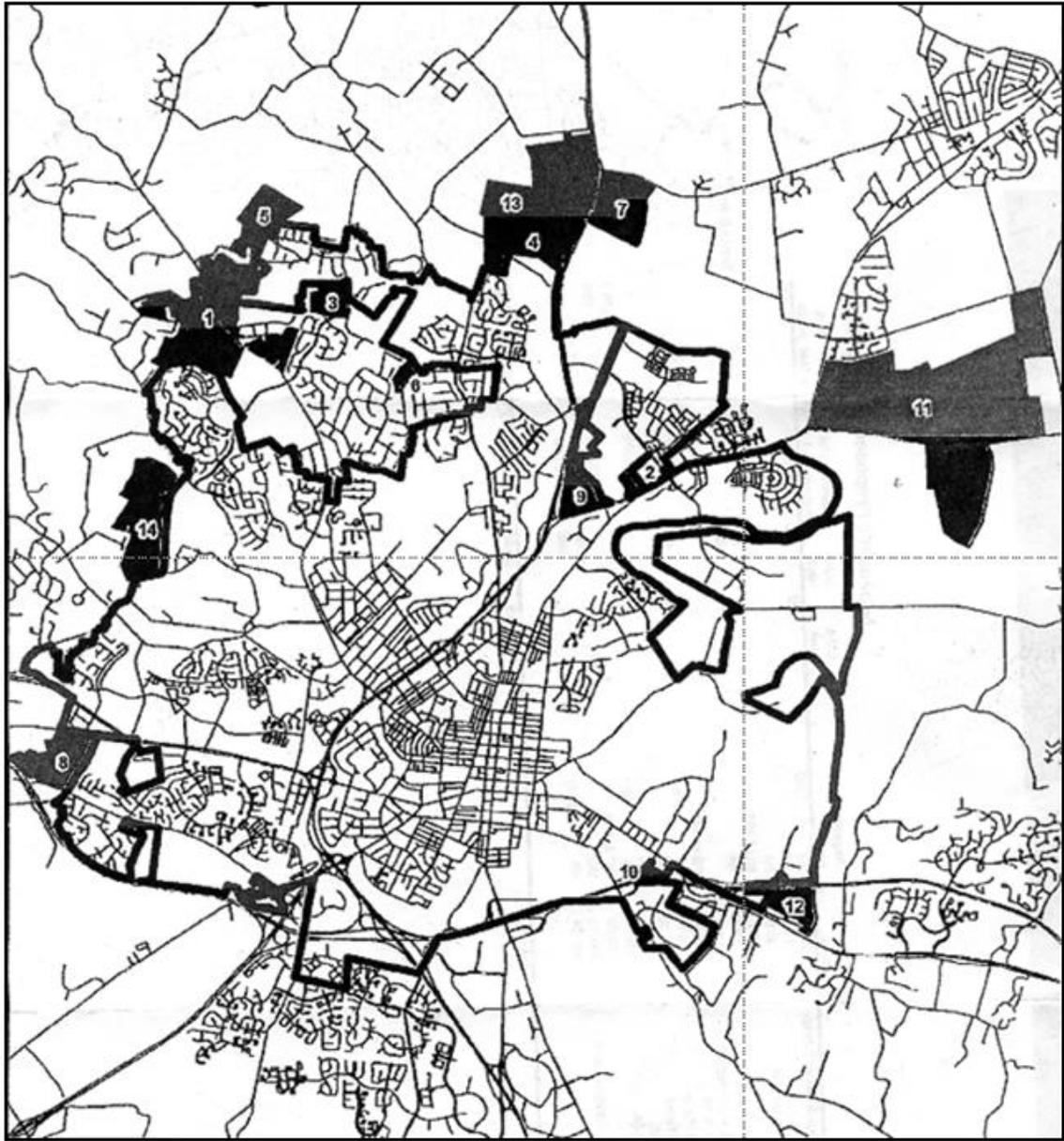
Decision

Mr. White made a motion recommending that the FcPc find the property inconsistent with the zoning and that a waiver of inconsistency be granted. Mr. Crum seconded the motion. Ms. McIntyre asked that the motion be amended to include "the staff's findings". Mr. White and Mr. Crum both agreed. Motion carried.

Figure 4.4 shows the zoom-in landscape of Crumland and Thatcher farm²⁸ located along U.S. Route 15 of the north of the city. In 2009, Crumland Farm and Thatcher Farm filed annexation applications to the City of Frederick. The Crumland Farm covers 285 acres and the Thatcher Farm has 151 acres, for a total of 436 acres. The zoning classification changed its original agricultural use to a density more 50 percent greater than previous permitted, with the potential of 1,200 housing units (R4 and R6) and 1.3 million square feet of commercial/office space. Photos on figure 4.4 show the landscape of the two properties.

The involvement of the stakeholders from the environmental front was interesting. Friends of Frederick County (FoFC) and The Monocacy Scenic River Advisory Board (MSRAB) were active in organizing several waves of resistance by FoFC were active contesting the process. FoFC initiated a referendum attempting to oppose the approval. However, lack of enough signatures (20% of a city's voters in 45 days) led to the final approval of annexing the two properties despite the opposition. On September 18, 2009, Frederick City annexed Crumland and Thatcher Farm on the next day. On May 20th 2011, FoFC launched a petition drive to de-annex both the Crum Farm and Thatcher Farms. On June 22, 2009, FoFC filed a law suit against the decision, alleging Frederick City did not have adequate infrastructure for the annexed land. The statement from MSRAB said, "We feel thatincluding grading alternations and construction, be allowed with such close proximity to the river it will threaten the rivers' riparian corridor and disregard its state-designated scenic status" (*Frederick News-Post*, 15 October 2009).

Figure 4.3: Annexations in Frederick City of Frederick County, 2008 and 2009



0 6
Miles

Source: Friends of Frederick County

Table 4.8: Annexation Applications in Frederick City, Frederick County, 2008 & 2009

	<i>Name</i>	<i>Location</i>	<i>Acres</i>	<i>Requested Zoning*</i>	<i>DU's Low</i>	<i>DU's High</i>	<i>Commercial Square Feet</i>	<i>Office Square Feet</i>	<i>Park Acres</i>
1	Kelly & Staley Properties	Yellow Springs & Indian Springs	302.76	R4	702	894	160000		68
2	Lee Property	MD 20	11.95	GC					
3	Bartgis Property	8746 Walcor Martz Road	48.00	R4		200			
4	Homewood	Willow Road	72.53	MU & IST		345			
5	Winnpenny Tell	Near Tuscarora Creek	77.00	R4	175	225			
6	Tauraso Property	Poole Jones & Runnymede	13.50						
7	Thatcher Property	Biggs Ford & US 15	110.00	PB or MO				1000000	
8	Summers Property	Butterfly & Mt Phillip	100.93	R4	375	425	58000		
9	Clemson Property	Woman's Mill Road	43.33	GC			3941000		
10	Dowcy Jordan	Monocacy Blvd	7.1	GC			550000		
11	Glade Valley Property Landmark	MD 26 & MD 144	1004.11	R4		2320		371000	479.2
12	Landmark	MD 144 & I-70	50.00	GC & PRK			585000		16
13	Crum Properties	Willowbrook & Sundays Lane	285.13	MU			310000	750000	
14	Miller & Smith Properties	Kemp Lane	161.34	R6			40000		8
Total			2287.98		1250	6435	5644000	2121000	571.2

* R4 & R6 are low density zoning codes; PB refers to Professional Business; MO is Manufacture Office; MU is Mixed Residential

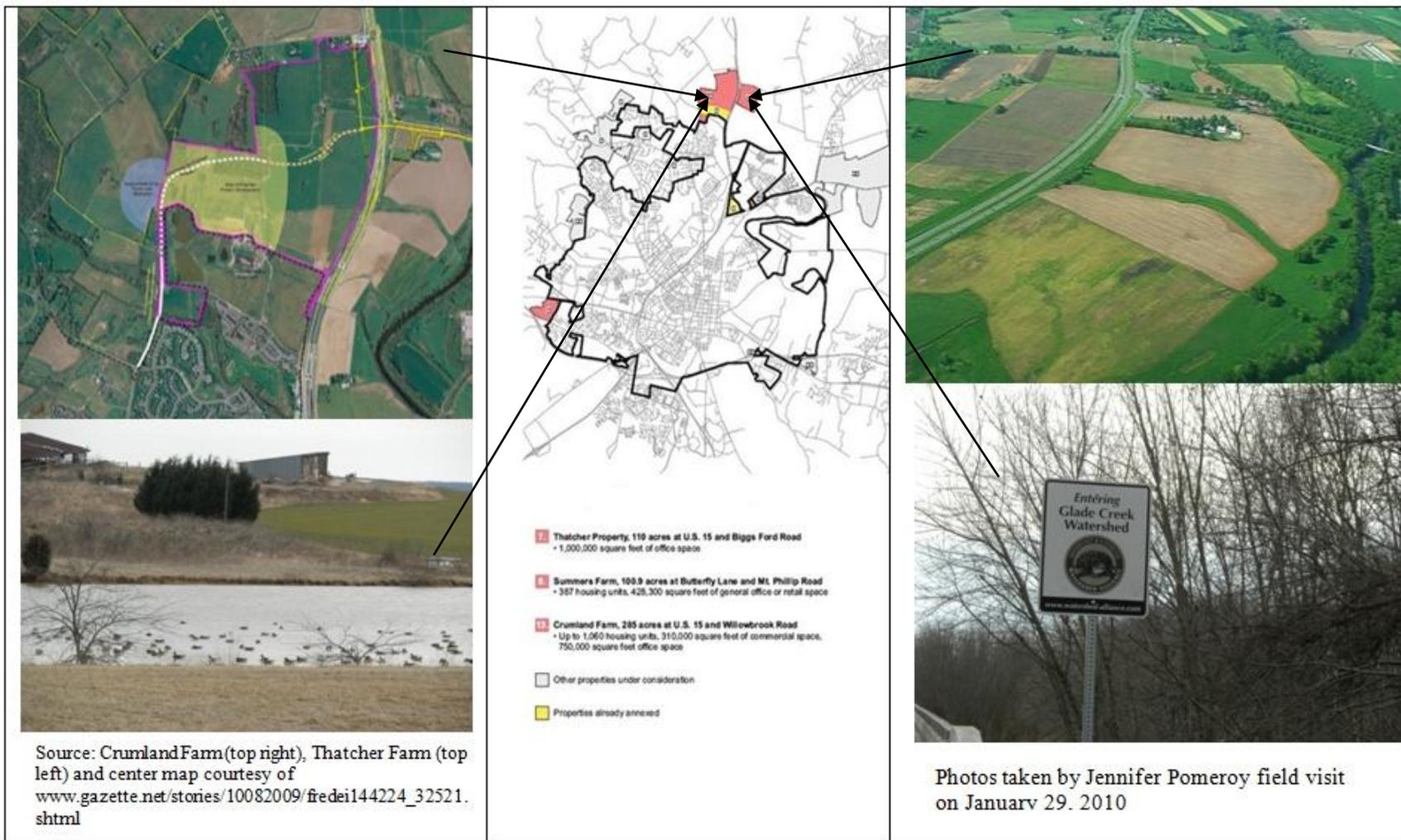


Figure 4.4: Zoom-in of Crumland and Thatcher Farm Properties

An alliance, centered by Frederick City, was evident in local newspaper's reporting. For example, Frederick city used the developers' money to mail letters out to the voters asking not to sign on the referendum (Behsudi, *Frederick News-Post*, 2 October 2009). One alderman argued by ".....the city's tax base has to grow. We have put in plans to develop and grow responsibly" (Green, *Frederick News-Post*, 4 September 2009). Also, the city approved without requiring the developers to pay for needed transportation improvements/interchange on U.S. 15 (Behsudi, *Frederick News Post*, 8 September 2009). The interview record also showed the sentiment from the developer. He said that "The case was approved for growth because the city recognizes the need to continue to grow. So do the tax base and service provision. It contained significant employment, jobs, office space. It is also a need for supporting Fort Detrick which is a primary driver. Plus the history of being D.C.'s bedroom community is business-friendly" (Interview, October 1, 2010).

Frederick County's position-in-practice was the rejection to the city's annexation decision, as puts "county commissioners have been raised concerns about how the infrastructure will support the eventual development on the city's northern boundaries" (Behsudi, *Frederick News-Post*, 3 September 2009).

A Close Examination on Annexation Events in Caroline County

A very similar picture occurred in Caroline County. Figure 4.5 that was obtained from Denton's finalized 2010 comprehensive plan²⁹ provides that Denton's incorporated

²⁹ My interviews of multiple visits and conversations in Denton brought attention on annexation issues at municipality and county levels because they took place while Denton was in the process of updating Comprehensive Plan by state's mandate..

limits had increased from 1,362 acres in 1999 to 3,291 acres in 2010 via annexation events. The town annexed 1,909 acres of land, which is equivalent to 138% increase since 1997. In addition, the map shows these annexed land are at the peripheral fringe of the town.

Figure 4.6 shows the Western Denton annexation in 2004. It comprised of 850 acres of farmland made up by the Brown, Crouse, and Metzger farms along the Choptank River along Business Rt. 404 Bridge by Denton. The proposed zoning of developers Bob Rauch and Nick Rock allowed the development of 3,000 housing units, all within one mile of the riverfront (Anonymous, *Daily Record*, 23 May 2003). Despite Caroline County disapproved the application, the town Denton approved the request, extending its legal boundary to the other side of Chop Tank River. Later, the County filed a law suit against the town and the property owners filed for deannexation as they were unwilling to pay the tax for the rezoning that was suppose to bring the profit of development which no legal procedures were to follow. Later, the developers withdrew from the development plan, resulting in the land owners retreating and asking the town issue a fee refund.

Figure 4.5

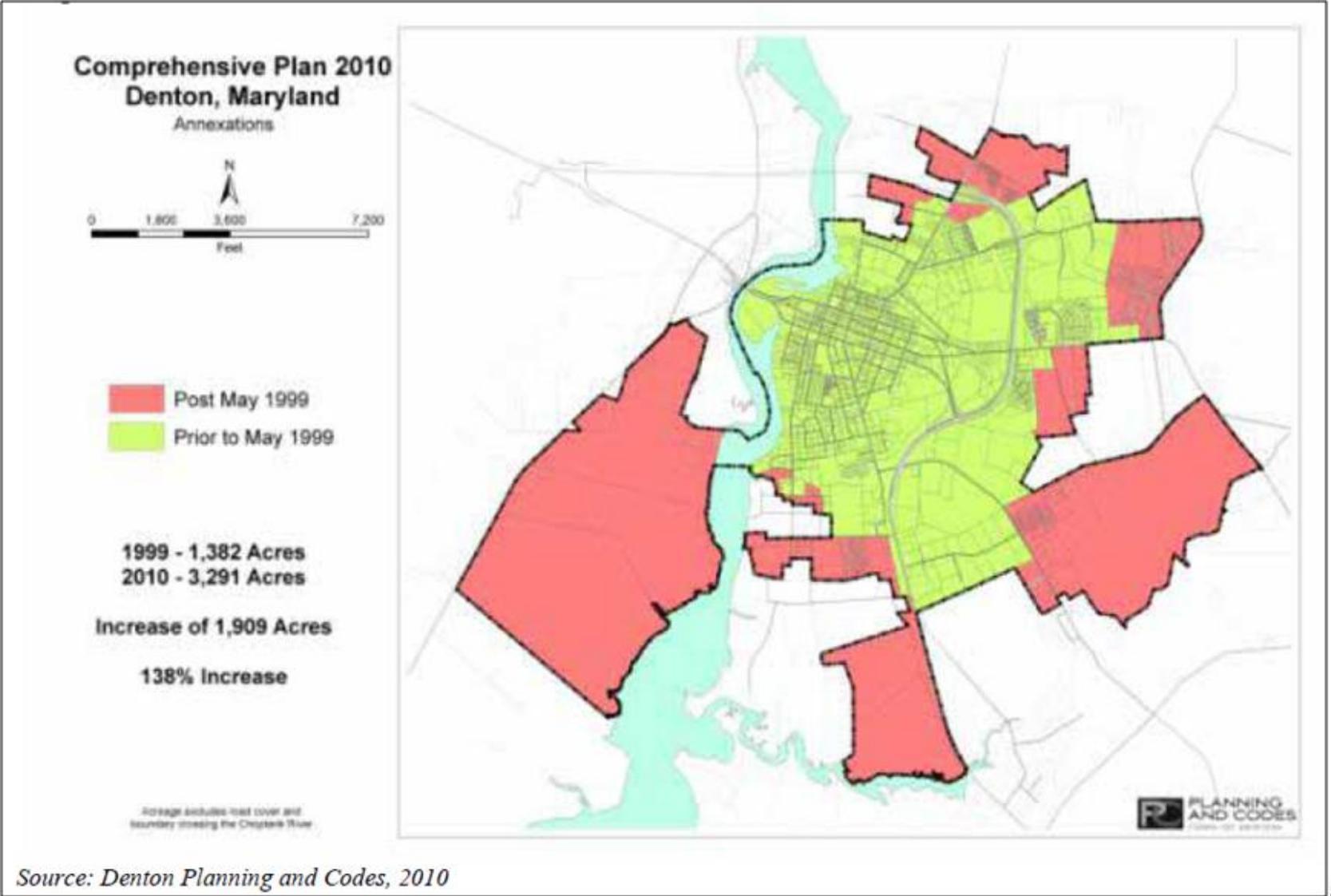


Figure 4.6: Western Denton Annexation in Denton, Caroline County, 2004



Source: Photos (right) taken by author. Map (left) from Caroline County Public Library vertical file on Western Denton Annexation

4.2 Sub-Question 2

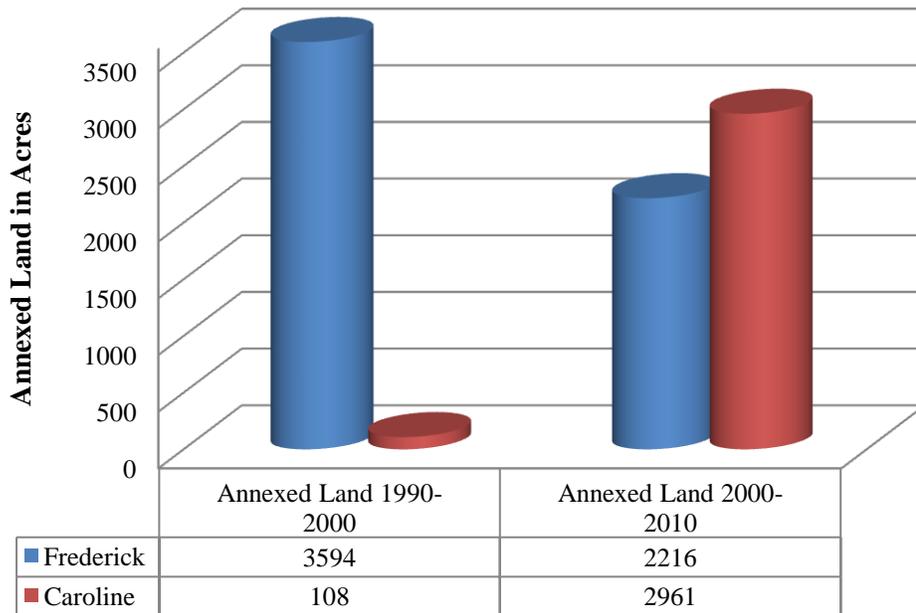
How land uses have changed before and after annexation in these two study areas?

First, the patterns of land use changes through annexation are presented. Figure 4.7 and table 4.9 together present cumulative land conversion effects of the annexation events at county level from 1990 to 2010 in Frederick and Caroline counties. Overall, Frederick County had 123 annexation events resulting in 5,810 acres (9.1 square miles) being annexed across ten municipalities. 47 annexation events in Caroline County resulted in 3,069 acres (approximately 5 square miles) being annexed. Compared to the previous decade, Frederick County experienced a decline of 38% in annexing land and Caroline County showed a huge increase (2641%). Table 5.5 presents the findings of the annexation events before and after annexation in Frederick and Caroline counties from 1990 to 2010³⁰. The combined annexation events, annexed a total of 8,879 acres. Of this total, a vast majority of land was designated for agricultural use prior to annexation application. From 1990 to 2010, 93% (2,854 acres) of the total annexed land were designated in low-density residential use and only 1% was in commercial use. These findings provide firm evidence about the trend of land use change at local scale, which is from agricultural land use to low-density residential use.

Frederick County had a cumulative annexed land of 5,810 acres, 87% (5,083 acres) of annexed land were used as agricultural land use and 12.5% (727 acres) was used for residential use purpose before they were approved for annexations. After annexation

³⁰ The visit to Maryland State Legislative Library was made in July of 2010 so only annexation events that took place during the first six months of 2010 were included in this study.

Figure 4.7 Annual Annexed Land in Frederick and Caroline Counties, 1990-2010



Data Source: Annexation Log from MSL, Annexation Events from Times-Record and Caroline County Library vertical file for Caroline County, and Annexation Events from Frederick County Library for Frederick County.

	Total Annexed Land (Acres)	Land (Acres)	Land Use Type before Annexation	Land (Acres)	Land Use Type after Annexation
Frederick	5810	5083	Agricultural	5635	Low density residential
		727	Residential	175	Commercial
Caroline	3069	2685	Agricultural	2854	Low density residential
		384	Residential	215	Commercial

Source: Annexation Events Database primarily from MSL, Newspapers, Web Sites, Vertical files from County Libraries, and Annexation Relevant documents in County and Municipal Planning Offices

applications were filed and approved, 97% (5,635 acres) of land were for low-density residential use. The discrepancy between before and after annexation suggests that successful annexations facilitate the conversion of land use from agricultural land use to low-density residential land use.

Caroline County, Caroline County's annexed land was 3,069 acres. There were 2,685 acres (87%) of the total annexed land were agricultural land use and 384 acres (12%) used to for residential use before annexation. After annexations were approved, the acreage from agricultural to low-density residential experienced a small increase (169 acres) and the land from residential to designated commercial use decrease by 69 acres. This suggests that land conversion took place from designate agricultural land use to low-density residential. According to Maryland Planning Department, Caroline County, from 1997 to 2005, experienced a 49% increase in the total municipal land area (Maryland Planning Department 2007).

An in-depth examination of the comprehensive plans in the study areas at county and municipal levels found that: (1) the earlier plans as a policy guide generally had a single set of goals exclusively focusing on physical features and land use planning for a uniform audience, reflecting utilitarian philosophy; and (2) the newly updated comprehensive plans contained a more diverse goals, for example, environmental protection discourse, and an inclusion of multiple interests (i.e. consensus building) that attempt to achieve wider consequences. The transition of these comprehensive plans demonstrates land use planning discourses has changed over time. That is, a shift from "quiet revolution" to "quieter revolution"³¹ (Mason 2008: 3).

4.3 Research Question #3

Does annexation encourage sprawl?

The major findings from previous annexation events from 1990 to 2010 in Frederick and Caroline counties of Maryland revealed that the annexation events in the past twenty years have

³¹According to Mason (2008), "quieter revolution" refers to softer, gentler approach encompassing by the concepts and terms including "smart growth, environmental stewardship," "place-based planning," "collaborative management" and "new regionalism". This term is used to contrast the 1970s' proliferation of state and regional land use regulatory programs, which was characterized as "quiet revolution" by Fred Bosselman and David Callies (1971).

facilitated a large amount of land being converted from agricultural land use to R4 and R6, which are low-density residential development and land consumptive. These land use changes reflected by at least by zoning change, if actual development has not taking place yet. Having lands rezoned is the crucial first step for development to happen. Moreover, this research was found that majority of annexed were developed and having the characteristics of sprawl which, as defined in this dissertation, is low-density development (Ewing 1994; Galster et al. 2001; Malpezzi 1999; Mason 2008; Sultana and Weber 2007) and highly land consumptive (Ewing 1994; Hasse and Lathrop 2003; Zeng, Sui, and Li 2005; Mason 2008: 152). Thus, it is this paper's position to claim that annexation enables development of areas that would not be developed otherwise resulting in sprawl-type of development in green-field areas. In other words, if annexed land were developed in low-density, it is still a sprawl. On the contrary, if annexed land were developed at a high density, the scenario would be different.

Major findings to the three-subarea questions are summarized in this sub-section:

- (1) Via annexation, unincorporated lands that were agricultural use were approved for low-density development, thus facilitating resource lands conversion in perpetuity.
- 2) Little integration of relative environment/landscape was considered in annexation events. If an annexation property has site environmental elements (e.g. steep slopes, floodplain, aquifer recharge area etc.), the site-specific environmental mitigation measures were considered.
- 3) Little record-keeping exists for rejected annexation applications. Often, these rejected annexation cases would make revisions by adding the recommendations made by the staff in Planning offices re-filing/requesting for the next round of annexation process.

- 4) Developers, land owners, and municipalities were networked, formulating Economic-interest space that occupied a central place in annexation approvals which low-density zoning being granted and development could move forward. In the same time, Environmental-interest space was injected at a later stage of annexation process where it was often too late to make any differences.
- 5) Large quantities of unincorporated land at the rural-urban continuum of the two counties are available for potential annexations.
- 6) No differences in terms of agency and structures in annexation events between Frederick County – a suburban setting and Caroline county – an exurban setting were apparent.
- 7) Yes, the annexation events in the two study areas have facilitated sprawl-type of development resulting landscape change. This is because approvals of the annexation applications have enabled development in the areas that would not be developed otherwise.

4.4 Overarching Question

The overarching research question of this dissertation is:

- *How do the sources, conditions, and ramifications of annexation contribute to landscape change in Frederick and Caroline counties of Maryland from 1990 to 2010?*

In this overarching question, the sources mean the stakeholders (actors) and the relationships among them in annexation processes. They are the agents who condition and are conditioned by the particular underlying structures in annexation practices. Ramifications refer to the outcomes of annexation decision making – approvals of annexation applications. Each is discussed in detail in the following sections.

The sources of annexation events in the two study areas from 1990 to 2010 lie at the concepts of the agency, structure, and the relationships between the two over time and space by structuration theory. On agency, the multiple stakeholders across public and private spaces at individual and collective levels were involved in annexation processes; they interacted upon their interests to build the networked spaces: Economic-centered Space (ECS), Environment-interested Space (EMIS), and Community Quality of Life -interest Space (CQoLIS). Of these three spaces, Municipality, Developers and Land Owners were the active participants and interacted in a mode of networking building ENS. During the networking, each of them knew the rules and had resources. Throughout the processes, each of them was active, persistent, and eventually became dominant playing a central role in approving annexation requests. At the same time, other stakeholder such as RIMs (residents living in city limits) and RUAs (residents residing in the unincorporated places) were inactive, though they were procedurally inserted into the later process of annexations. This inactiveness has subsequently led to a lesser role being played in deliberating annexation decisions, which was manifested while observations were taking place. One resident from an unincorporated area made the statement at a public hearing; he said, “The town lacks transparency in annexation because they do not want us participate. We need more transparency and need more discussion” (Planning Commission Meeting 20 September 2010). EMCGs (environmental groups and organizations) were not visible either. Similarly, EMCGs that were absent during the earlier years are inserted into annexations in recent years but they were generally voiceless, because opportunities to participate come at the latest stages of the annexation process, i.e. at public hearings, often comes too late to be effective to make changes (Interview 15 October 2010). The County’s role as a stakeholder group is an interesting one. Counties had no say during the early stage, despite that the state of Maryland

recently delegates that, in the confrontation of annexations, County needs to meet and confer with municipality. In sum, the economic growth and development centered stakeholders were able to establish a dominant position in the approving annexation applications. Other stakeholders had less inter-connectivity and thus were the powerlessness in the power asymmetry because of a lack of effective networking.

The conditions that facilitate the formation of this asymmetrical power structure in the annexation process are multi-faceted. First structural property of the current annexation structure is on property rights. Property rights at an individual level have significantly shaped the sprawling-type of urbanization process and how land use planning has been done in the United States. This point is central, as Jacobs and Paulsen (2009) argue that public land use planning in the United States has less often been used as a method for *managing* social and racial conflicts (134). They further argue that “such property rights movement has mounted a systematic attack on public planning, arguing in part that planning seeks to impose elite values on all groups, and therefore is out of step with core American values.” They also point out that “restrictive covenant-based homeowner’s associations have become one of the fastest growing segments of the housing market (Lang and Nelson 2007; McKenzie 1994). They content that (ibid):

Households are flocking to neighborhoods with property rights management schemes more detailed, restrictive, and rigorously enforced than public regulations could imagine possible. Both these developments raise fundamental, though dissimilar, property rights challenges for planning.

They predict these two aspects would remain as the main challenges for land use planning in the United States in this century.

Cross-case examinations of the annexation events in the two selected counties revealed that Land Owners have a belief that government should not infringe on property rights and

regulations are to protect it. By finding ways to maximize their property values (Ihlandeldt 2006: 430) through networking, land owners were able to systematically be involved annexation approval or disapproval.

Property rights advocates and Land Owners interacted with other stakeholders who share the themes of economic development and growth established dominant power in a mode of network so that each can be systematically and more effectively negotiate for the outcomes they desire. Along with Municipality – a self-governing sub-state political administrative entity, the ECS space was built. During the process of network building, Municipality has autonomy from state legislature in as far as it has rights to write its own municipal zoning code, to impose taxes, and to issue permits for new land uses. This has become a political condition for developers³² who well recognize that municipal zoning code could enhance the value of land; land owners know that municipal zoning code “create[s] a capacity to create and enforce the most critical attribute of urban land as a commodity form: its location relative to other urban land uses (Harvey 1982 in Johnson 2008: 412). Johnson (2008: 413) and Levine (2006) call such zoning as a “collective property right.”

John Meligrana, an annexation scholar, argues that “local government boundary change procedures are deeply embedded in the broader political-ideological environment and could also influence fundamental aspects of the state and society rather than solely aspects of local government and service provision” (2004: 227). Such broad political-ideological environment is seen in a shift from utilitarianism to sustainability. The state of Maryland epitomizes this temporal shifting by transitioning from annexation laws in 1954 featured by Home Rule to Smart

³² As an interviewee states that “developers in Maryland are powerful. They have money, time, and persistence to go through political process to get annexation approved” (Interview, October 2, 2010). In states in other regions, a municipality may initiate annexation for the purposes such as infrastructure construction. Such annexation is known as “eminent taking,” which is a separate issue and beyond the scope of this dissertation.

Growth – the third wave sustainability movement in USA. In 1997, Maryland State launched “Smart Growth” initiatives with the objectives of curbing sprawl, reducing resource land loss, and promoting compact development. However, the Smart Growth components are the result of “legislative compromise and are too vaguely defined to allow for meaningful enforcement” (Mason 2008: 185; DeGrove 2005: 38). On other end of the scale, local governments have been slow to embrace Smart Growth (Mason 2008: 187). As Downs (2005) reports, not many local governments subscribe to the full range of smart growth policy and there is great public resistance to urban growth boundaries and increased residential density (374). One response from the interviews frankly expresses that not until county/municipal relationships are sorted out, Smart Growth will not go anywhere but stay in Annapolis (Interview 15 October 2010).

County, despite of being another tier of local government, had no role playing during the earlier years and later years County was delegated by meet and confer with municipality in the event of annexation conflicts, but has no major role to play in annexation final decision making. During the observations and interviews, many informants express the frustration and anger over the sour relationship between County and Municipality. Below are the two examples of such antagonism between County and Municipality.

County Commissioner: “How many years we’ve been working on meet and confer Anyway, what does meet and confer mean? For municipalities, it’s not so much redistribution but to reduce” (Frederick County BOCC Meeting. 20 September 2010).

Mayor: “County is not cooperating to get that bypass. We need meet and confer that is productive” (Frederick County BOCC Meeting. 20 September 2010).

During the interview, eight interviewees responded with asking questions about 5-year rule that was amended in 2009. The informants explicitly asked why 5-year rule and it does not work and should be changed (Interviews 2010). The responses like these clearly demonstrated

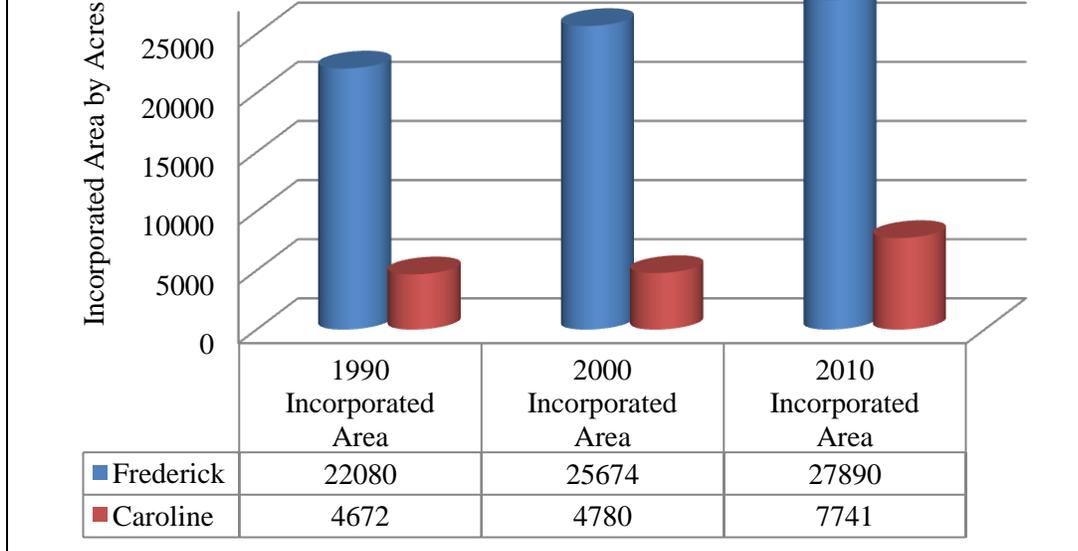
the lack of cooperation or collaboration between County and Municipality, which may present challenges for sustainable environmental governance.

In addition to these conditions embedded in the underlying structures, another condition that raises the alarm is that large amounts of agricultural land will be converting in the future to low-density development, especially as large quantities of lands remain available for potential annexations in the two counties. As stated in the introductory chapter, Frederick County has a total of incorporated area encompassing 6.3% of the county. The remaining unincorporated land counts for 93.5% (Frederick County 2010 Comprehensive Plan). In Caroline County, the share of the unincorporated land is 97%. In the both counties, these unincorporated land areas are agricultural use at present.

Figure 4.9 shows the data collected on the incorporated areas in Frederick and Caroline counties, which provides a proxy measurement of annexation activities. From 1990 to 2010, the incorporated areas in Frederick and Caroline counties have increased to a certain extent as a result of annexation events. For example, in 1990, Frederick County's incorporated area covered 22,080 acres; this number increased to 25,674 acres (a 16% increase) in 2000 and continued to increase to 27,890 acres by 2010, a 8.6% increase compared to the previous decade. Caroline County showed a similar trend. In 1990, 4,672 acres of the County's land were incorporated. By 2000, the county's incorporated land area stood at 4,780 acres (an increase of 2.3%) and 7,741 acres (61.95%) by 2010. These numbers suggest the municipalities in the both counties expanded their jurisdictional limits via annexations.

Figure 4.8 Incorporated Area in Frederick and Caroline Counties, 1990-2010

Source: U.S. Census Bureau 1990, 2000, and 2010⁶



These numbers speak well to the fact that the municipalities in the both counties substantially expanded their jurisdictional limits via annexations. As quoted from the Caroline County Planning Commission meeting minutes for May 12, 2010, “The town [Denton] has grown in area size due to the number of annexations. If the annexations were completely built out, the population would be over 30,000; the current population is 4,000” (See Appendix I). Moreover, both counties are subject to rapid population growth (greater than 30%) by 2030 which will only exacerbate growth and development problems.

The ramification of the sources and conditions was the approval of annexation requests. As mentioned earlier, it was a surprise to find that no systematic records exist for annexation applications that have been rejected. Personal communications shared by the informants indicate that these rejected annexation requests usually would go back to engineer/consulting firms where

revisions based upon the recommendations made by the staff would be made and then refile for the next round of annexation petition.

To summarize, multiple stakeholders across public and private spaces at individual and collective levels and the power structure embedded in their interactions are the sources and conditions of the overall low environmental/landscape sensitivity in the annexation events in the past twenty years in Frederick and Caroline counties of Maryland. The current structure is dominant by networked EIS consisting by Municipality, Developers, and Land Owners in deliberating annexation approvals. Stakeholders including County, EMCGs, RUAs, and RIMs are relatively weak, playing minor or no role in granting annexation requests as to lack of resources establishing powerful network to offer counterfactual power.

An additional condition of current annexation structures is Maryland's Annexation Laws. According to the typology of state annexation laws, Maryland is a PD³³ state. The first state's annexation laws were established in 1954 and remained unchanged. Also, Municipal Home Rule Amendment (MHRA) established on November 2, 1954 by Article XI-E of the Maryland State Constitution and Section 23A of the Annotated Code of Maryland together supported the MHRA's general purpose was to grant municipal corporations the authority in governing³⁴ local affairs (Maryland Legislative Services 2009). For example, a municipality may annex an area as long as it is "contiguous and adjoining" to the existing municipal boundary and not part of another municipality (Article 23A, Section 19 of the Annotated Code of Maryland).

³³Five specific terms that are used for broad categorization of state annexation laws to classify all states in U.S. are Legislative Determination (LD), Popular Determination (PD), Municipal Determination (MD), Judicial Determination (JD), and Quasi-legislative or Administrative Determination (QD or AD). Popular Determination is used as a primary method in 20 states, according to Edwards (2011) and 29 states, according to Meligrana (2004).

³⁴ This was the first major change in the legal status of Maryland's municipal governments since the first municipal charter was granted by the General Assembly in 1683.

In addition to municipalities, property owners also can initiate an annexation process. Once an annexation application is initiated, public notice and hearings are also required, as well as the consent of at least 25% of the voters and 25% of the owners whose properties that be being affected. If a petition is filed by at least 20% of the voters residing in the annexed area or if petitioned is filed by a two-thirds majority of voters in the affected areas, a referendum can be allowed for an annexation resolution. This earlier legislation concerning annexation has been in place for more than fifty years, though small amendments were made during the 1970s and 1980s. The 2006 session of the Maryland General Assembly initiated a new legislative bill concerning planning and zoning issues in Maryland which includes the modification of the annexation procedures. The specific legislative piece, HB 1141, was passed and a series of new procedural requirements for annexation were established. Specifically, it established that counties and municipalities need to confer if disagreement occurs, and a five-year rule in which a county can delay development in annexation if the to-be-annexed land has inconsistent zoning. In 2009, the state of Maryland required municipalities to update their comprehensive plans by including annexation and a new planning element called as Municipal Growth Element (MGE). MGE was originally scheduled to take effect on October 1, 2009 and had to be postponed by one year for implementation (Maryland Department of Planning 2010).

Table 4.10 shows the frequencies of the indicative terms of the discourses in the most recent comprehensive plans for Frederick and Caroline counties and their respective municipalities that are mandate by the state. Of the four categories, the Economic category stands out. For example, in comprehensive plans of Frederick County, the terms related to Development/Growth appeared 1,505 times. Looking across four broad categories of terminology – economic, environment, resource, and landscape, the usage of economic

terminology is most common. 85% percent of coded terms fell within the economic category. Similarly, in the comprehensive plans of Caroline County, the term used most frequently was within the economic category but a 75%. Of the comprehensive plans of municipalities, the terms appeared in the comprehensive plans in the both municipalities are 91%. On the category of Environment, the comprehensive plans of Caroline County appeared with 18.3% and Denton with 5.8%. On the category of Resource, the comprehensive plan of Frederick County has the highest appearance frequency, which is 14.1%. Caroline County's comprehensive plan is the next highest with 6.7% of the frequency term.

Table 4.10: Frequency of Terms Used in the Most Recent Comprehensive Plans

<i>Category</i>	<i>Terms</i>	<i>Frederick County</i>	<i>Caroline County</i>	<i>Frederick City</i>	<i>Denton</i>
Economic	Development/Growth	1505	423	334	628
	Jobs Creating/ Employment Opportunities	277	4	49	27
	Housing/Residential	490	143	109	367
	Commercial	227	18	31	244
	Percentage of the Total Column	84%	75%	91%	91%
Environment	Environment protection/conservation	54	138	15	77
	Environmental problems	x	x	x	x
	Sustainable/sustainability	8	1	1	2
	Sustainable technology	x	x	1	x
	Environment site	x	5	x	1
	Percentage of the Total Column	2.1%	18.3%	3%	5.8%
Resource	Natural resource	104	25	1	11
	Rural/Agri. as resource	1	x	1	9
	Rural /Rural design	248	1	x	11
	Cultural resource	x	1	34	x
	Resource conservation/Protection	69	26	x	6
	Ecological concept used	230	191	69	257
	Percentage of the Total Column	14.1%	6.7%	6.2%	2.7%
Landscape	Natural landscape	1	2	1	6
	Heritage landscape	4			
	Community landscape	1			
	Rural landscape	4			
	Column Frequency Total	2993	787	577	1389

4.5 Discussion

The following section focuses the discussions in the following areas: (1) economic-interest stakeholders networked as winners enabling annexation approvals; (2) losers as to legitimacy, externalities, and unorganized; (3) asymmetrical power structure; (4) facilitating towards to sustainable structures.

EIS Networked as Winners Enabling Annexation Approvals

After examining the distributive implications of the stakeholders and their interactions in annexation events occurred in the past twenty years in Frederick and Caroline counties of Maryland, the winners were identified in annexation processes. At an individual level, these winners are *Municipality, Developers, and Land Owners*. At a collective level, the winner is the networked space, which is centered by “economic development” and “growth.” In this enabling space that plays a central role in deliberating the approvals of annexation requests, municipalities are autonomous and self-governing is because it is the result of historical power being ceded from state to sub-national sovereignty in land use in the United States. That is, municipalities in U.S. as a distinct self-governing form are in that it is the “mere creatures” of sub-national states (Johnson 2008: 401). At the same time, no administrative capacity at a state level on land use matters is available. Moreover, mechanisms and incentives encouraging municipalities collaborate between and among each other are also missing (ibid).

Home Rule, from another aspect, reveals as another important factor into Municipality as a conducive political condition for establishing the networked EIS space enabling decision making in the numerous annexation practices. Home Rule started from the beginning of the twentieth century and by the 1920s municipalities were pretty much granted with an autonomous

status. Some of traditional municipalities' functions include the rights to frame and enforce their own charter, impose taxes, create and enforce new uses of land via municipal zoning code.

The super power of municipal zoning code was quickly acknowledged by developers. As Johnson noted (2008: 413):

The specific power invoked here – the right to designate and enforce specific uses of land via a municipal code – found a ready application on the urban fringe, where the widespread distribution of land in fee simple had fostered an unusually haphazard pattern of urban growth as industry began to decentralize around the turn of the 20th century. Like poorly located factories in the cities, rapid, speculative subdivision of land “land butchering” as contemporaries called it – threatened to just the public health but the public purse, necessitating costly retrofits for basic services and utilities like sewers and streets. Many developers quickly realized, however, that a proper municipal zoning code could also enhance the value of land well beyond the profits of a quick subdivision by protecting them from haphazard development on adjacent land. It was the necessary political condition, in short, behind the rise of a new type of developer Marc Weiss (1987) calls “community builders,” who began to stage and build whole new communities on the urban fringe.

In terms of the interaction between Municipality and Land Owners, Johnson (2008) continues to argue (413 in Harvey 1982):

The extension of home rule to small towns on the urban fringe created the potential for well-positioned landowners to capture not just the windfall profits from the initial subdivision of agricultural land – a kind of primitive accumulation – but the self-reinforcing valorization of land from development around it. This is because municipal zoning created a capacity to create and enforce the most critical attribute of urban land as a commodity form: its location relative to other urban land uses.

Johnson calls this enabling capacity via municipal zoning code as “collective property right” (2008: 412-3) for its nature of corporating land.

The rise in annexation events, particularly in the county seats – Frederick City of Frederick County and Denton of Caroline County were mainly prompted by the stakeholders with economic development and growth interests; they interacted in a mode of network, enabling

the decisions made to meet their initial expectations. According to Allen (2003), power can be considered as a “relational effect of social interaction” “represent[ing] social complexity and its driving force” (2). Foucault (1979: 89) identifies such relationship as dynamic and mobile networks of power, e.g. sexuality and political initiatives in which networks integrate functional-strategic power and interdependencies which alliances are established and negotiation takes place. Massey suggests the importance of “analyz[ing] and recognize[ing] both the specific forms of power at issue in any particular case and the specific locations of its enabling resources” (2004: 14). Municipalities, developers, and land owners were networked into an economic-development and growth space, systematically enabling private stakeholders participating annexation decision making processes by using their network power negotiating. The networked economic space has become a de facto mechanism that is market-based, winning the political competitions in Frederick and Caroline counties of Maryland.

Losers as to Legitimacy, Externalities, and Unorganized

One may be surprised that the rest of the stakeholder, including EMCGs, RIMs, RUAs, and County) groups are considered as losers in annexation processes. On EMCGs, the responses collected from the stakeholders ranging from municipality, developers, to land owners uniformly perceive that the environmental groups/organizations are not the stakeholders in annexation processes. Some of the representative responses were, “... watchdogs;” “...indirect stakeholders;” “... are not stakeholders” (Interviews 2010).

During the processes, the low status of EMCGs was evident. These EMCGS, such as Eastern Shore Land Conservancy (ESLC), Cheasapeake Bay Foundation (CBF), and Friends of Frederick County (FoFC), first had no involvement in annexation events during the early years

and later procedural insertion did not make any impact in influencing the annexation decision making.

Similarly, RIMs and RUAs were the other two stakeholders groups who had almost no appearance, no voice, and thus no role played. The stakeholders of residents living in the unincorporated places were only observed in small numbers at a few Planning Commission meetings and Zoning Appeal Board meetings. Residents living within the municipalities were observed with even less visibility. Virtually, they showed that they are not organized, do not actively participate, and therefore have a little or no capacity to influence the deliberation processes.

County as a separate tier of local government is another agent representing an important component of the local government administrative structure, yet, County has been largely been neglected, suffering in part due to the historical ceding of power to municipalities in the United States. This negligence has provided limited power for County to effectively influence decision making on annexation. In addition, Maryland's state legislature vaguely specifies the role that County plays further exacerbated the sour relationship between County and Municipalities. Although state delegates County/Municipality meet and confer as a solution for any conflict-laden annexation events, the bitter relationship completely lacking collaboration between County and municipality remained apparent. Such conflicted positions were manifested, as one respondent describes, "County and town are at each other's throat" (Interview 8 October 2010).

When identifying the stakeholders, this dissertation specifically adopted the criteria of the involvement in annexation process for defining a stakeholder. The low level of involvement indicates the low status of EMCGs, RIMs, RUAs, and County, which raises the question of legitimacy of EMCGs in local land use affairs such as annexation events occurred in the past

twenty years in Frederick and Caroline counties of Maryland. The involvement of EMCGs in recent years reflects an increasing environmental awareness in general but the overall low environmental/landscape sensitivity remains unchanged. Although diverse specific interests may exist in the various environmental groups, this dissertation took a stand of a general assumption, which is that environmental groups, at least in the two study areas, advocate for environment benefits at large³⁵.

The low status of RIMs and RUAs that appeared with small number, not organized, and often appeared at public hearings in ad hoc groups, not mentioning the later insertion which their voices can only be heard at public hearings. In a case of a referendum that was organized by an EMCG in order to oppose an annexation that has major landscape impact, the 25% individual signatures were required for a petition but not enough signatures were obtained so the referendum failed. These RIMS and RUAs together were the unorganized and not represented “local community” in annexation processes. County that had limited involvement continues the power asymmetry shifting to the networked economic space that plays a primary role determining the outcomes of annexation requests – approval for low-density development at the cost of lost farmland. To conclude, the interactions among the stakeholders created a power asymmetry where the networked economic space was central and thus powerful playing a decisive role in annexation decision making process.

³⁵ Recently, fragmentation and diverse interests among various environment groups have been recognized. Researching how to consolidate and reconcile such diversity making environment protection as the public interest are being carried out by scholars such as Mikalsen and Jentoft at Department of Political Science, University of Tromso, Norway and Alexander Conley and Margaret Moote in “Evaluating Collaborative Natural Resource Management” *Society and Natural Resource*, 16:5: 371-386.

Facilitating Towards to Sustainable Structures?

The current administrative structure in the both case-study areas has been confusing the definition of local. It attempts to exercise governmental power and is also structurally tied to those with power (dominator), enabling the formation of the local networks with abilities to transform power resources in coalitions and negotiations. The case studies show that developers and land owners take advantage of home rule from the “shadow of hierarchy” (Scharpf 1997) to achieve their goals.

Such existing underlying social structures that were found in annexation events were unsustainable due to the networked economic space’s dominant power in annexation processes. As a result of such unsustainable structures, annexation has played a major role in facilitating land conversion from agricultural use to low-density development at rural-urban continuum in perpetuity. Although the environmental site attributes ranging from floodplains, steep slopes, aquifer recharge areas, to critical habitats were recognized and have been institutionalized and thus protected, market-based “benefits through growth” and “economic development” ideologies remain prevalent in local land use practices. Collins defines “economic development” as “land speculation and the remote control of local landscapes by economically powerfully individuals and collectives” (2008: 33). Today, both Frederick and Caroline counties still pursue economic development just like many other municipalities. On February 14, 2012, at BOCC meeting of Frederick County, over 15,000 acres were voted³⁶ to be rezoned from agriculture to development. The prevalence of the unsustainable structures has undermined the landscape at a larger-than-local scale. How can the underlying unsustainable social structure schemas encompassing agency to structures from land use policy discourses, land use regulation,

³⁶ The votes of 4:1 honored the rezoning quest filed by Adamstown, Brunswick, Middletown, Frederick, Thurmont and Walkersville region.

administrative capacity, and property rights, to local civil culture enabling or constraining land use decision making not only at the local level but also affecting systematic change at wider scales move toward to sustainability? According to Giddens (1984) and Stones (2005), agency and structure as medium and outcome and they structure not only between themselves but also internally and externally in time 1 transitioning to a new set of structures for time 2.

The current unsustainable social structures require structural improvement in annexation processes. In order to facilitate such unsustainable social structures to sustainable, quieter³⁷ initiatives and changes in social capital are required. That is, an emphasis on landscape planning is necessary as a normative guidance. Reed argues that stakeholder participation “needs to be underpinned by a philosophy that emphasizes empowerment, equity, trust and learning” (2008: 2417). As Mason (2008) points out, “... that land and easement acquisitions are simply too expensive to be a sustainable land management strategy, that the quieter revolution is elitist, and that much of what is it achieving is rather low on the general public’s priority list. In reality, the quieter revolution is multidimensional and complex, more than just devolution of power or a platform for launching local land use strategies” (280). Mason suggests that strong government intervention to regulate and rationalize land use at a larger-than-local scale is needed than ever (2008: 282).

Also, continuing efforts on improving the relationship between county and municipality fostering a positive collaborative relationship needs to be carried on. Continue to educate the

³⁷ The “quieter revolution” refers to, the 1990s and the turn of this century, a reemergence of organized land use activity in a much gentler, less-intrusive, more local orientated form that what had proceeded it in the early 1970s in which the quiet revolution aimed to raise environmental awareness (Mason 2008: 2).

citizens at large about spatiality of land use effects are helpful in generating a new round of position practices.

Empowerment of EMCGs could help the role playing in annexation events. In addition, the respective responses collectively shown in the interviews revealed local resistance to the state’s Smart Growth policies. The second revelation of this research was exposed to the addition stakeholder group – School Board. Although School Board may not be directly affected, School Board should be treated as a necessary externality because demographic changes in incoming population could seriously affect the enrollment of students.

The responses for the interview question three through five provided for a promising future. Figure 4.9 shows that 77.1% of the responses perceived municipal annexations as very important to County’s growth management. Nearly 14.6% of the responses thought municipal annexations are important to County’s growth efforts. 4.2% of the responses said somewhat important. No one said it was not important.

Figure 4.9 Results of Importance of Municipal Annexations to County’s Growth Management

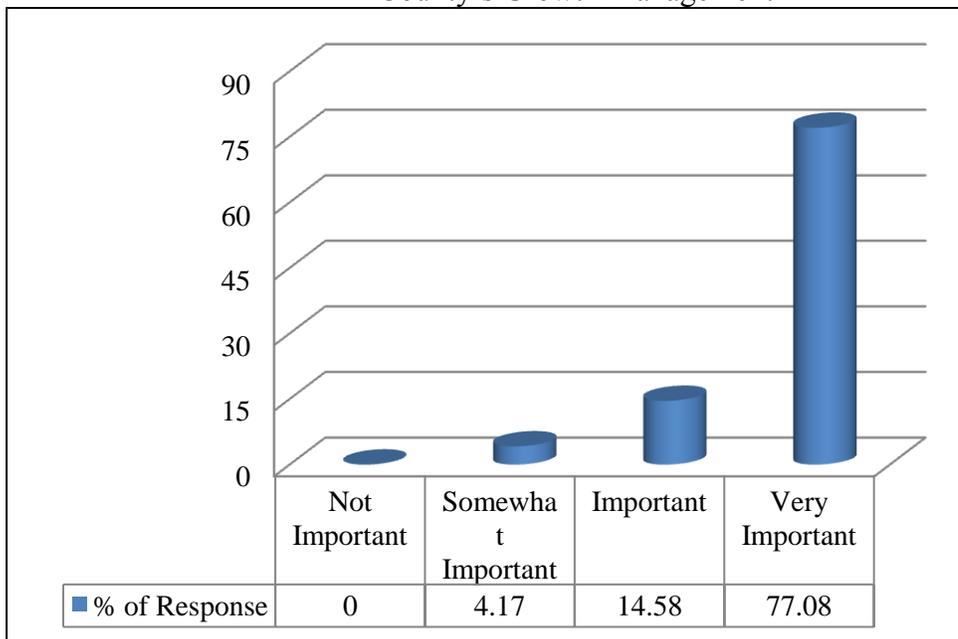


Table 4.11 displays the response for the interview question five in terms of areas for future improvement. The area that has the highest frequency is to improve the relationship between county and municipality. The second emerging area is on state policy/smart growth. Responses such as “state policy gets more and more complicated and hard to follow,” “state lacks of consistent vision/objective,” “frustrating with smart growth,” “smart growth has no carrot” reflect negative opinions about Maryland’s smart growth, indicating resistance at local levels.

Table 4.11: Data Derived from Interviews on Improvement in Annexation Process	
Procedurally	Frequency
Change 5-year rule	10
Vague on who is local	7
Improve transparence in process	7
Taken too long	5
Stakeholders definition unclear – Environmental groups watchdogs	4
State legislature	
State laws getting more & more complicated, hard to understand & follow	6
State lack of consistent vision/objectives	4
Smart Growth has no carrots	3
Improve CTY/MUN cooperation	14
School Board should be legally involved	6
Frustrating w/ Smart Growth	6
CTY needs power/be able to veto	5
MML not working	3
Using Smart Growth principles to improve CTY/MUN relation	2
Getting politics out of growth management	1

The response for the interview question four revealed that the most successful area in growth management is “not much has been done in growth management at both government level manifested another promising area in transitioning from the existing unsustainable structures to future sustainable structures. The respondents also revealed their frustration with

smart growth indicates that more communication needs to be carried out between government and citizens.

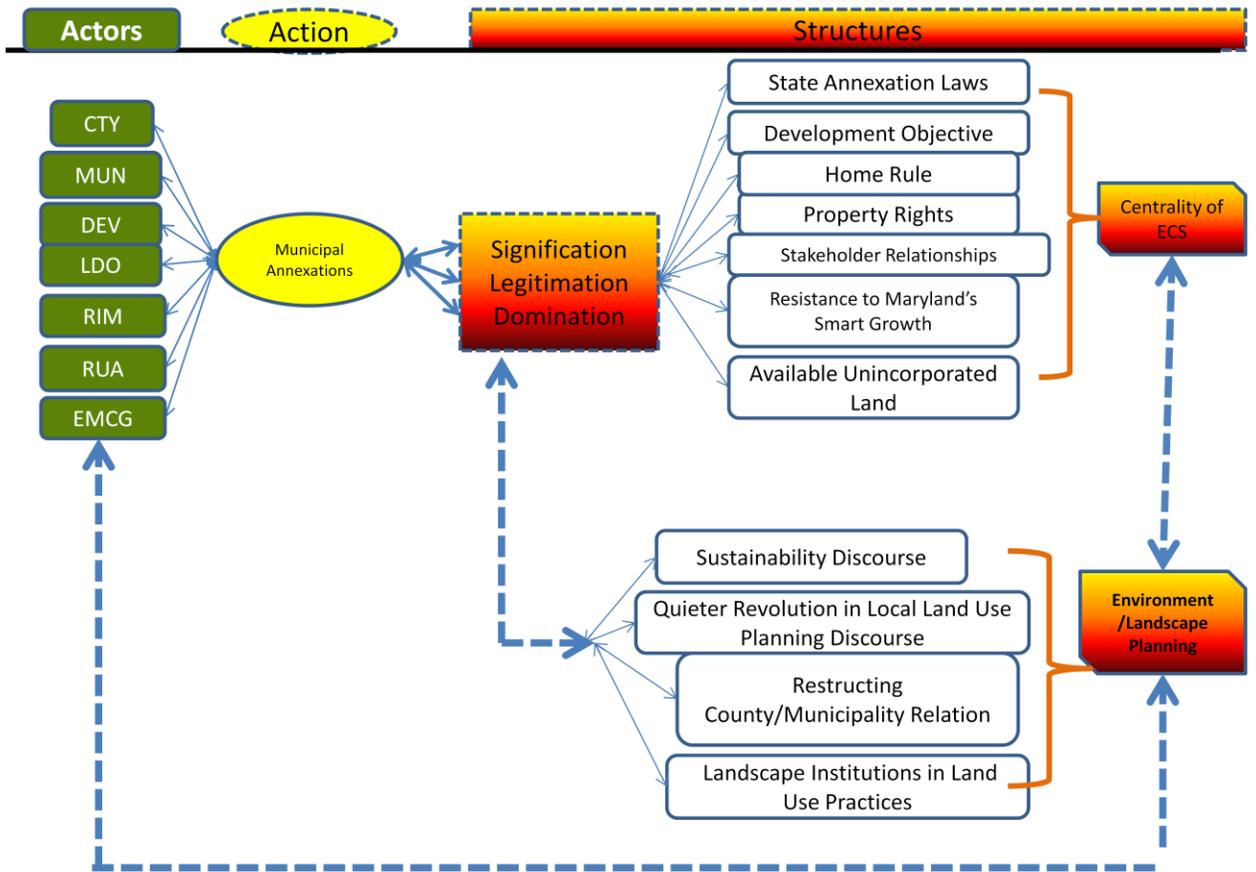
While assessing Maryland's Smart Growth policy is not the main goal, this research did confirm that the state's Smart Growth policy failed to achieve what it is meant to. Specifically, 1997 Smart Growth Legislation, which consisted the programs of Priority Funding Areas, Rural Legacy, Brownfields Cleanup, Job Creation Tax Credit, Live Near Your Work, and Right-to-Farm, all contained contradicting goals (economic development versus environment/landscape) and no capacity to capture annexation effects. As stated by Sartori et al. at The National Center for Smart Growth Research and Education at the University of Maryland (2011):

“Currently available indicators are highly imperfect measures of environmental quality or quality of life. If the success of Maryland's Smart Growth Program was measured only on currently available indicators, however, the indicators generally suggest that substantial progress has not been made.”

4.6 Refining Conceptual Annexation Structuration Model (CASM)

Based upon the proposed theoretical framework, a preliminary conceptual annexation structuration model (CASM) was developed and presented in Chapter 2. Drawn from my intensive fieldwork, interviews, and observations, the original CASM was modified, refined and illustrated on figure 4.10 below. The refined CASM not only denotes the nature of multiple agents across private and public sectors at individual and collective levels but also emphasizes the underlying structural schemas. The two-way arrows denote structuration and interdependencies between agency and structures, signifying continuous processes from time 1 to time 2.

Figure 4.10 The Refined Conceptual Annexation Structuration Model



Source: Created by author based upon fieldwork conducted from August 2010-September 2011

Chapter 5: Summary and Conclusions

The distinctive rural-urban continuum landscapes of Frederick and Caroline counties of Maryland combines particular groups of people, communities, and physical environment. This dissertation set out to establish a new way to study annexation processes in which the agency and social structures condition each other in structuration processes. It has done so by developing an integrative theoretical framework that combines political ecology and structuration theory to address the dynamics of structuration processes in environmental/landscape land use planning. Specifically, the patternized annexation processes were discerned from the annexation events occurred during the past twenty years in Frederick and Caroline counties of Maryland from 1990 to 2010. Drawing on the extensive field work, analysis results of interviews and observations of the selected meetings, this chapter presents a summary of major findings, contributions, future research direction, and conclusions.

5.1 Summary of Major Findings

This sub-section offers a summary of the major findings of this research project. Six major findings were revealed throughout this study. First, I have found that unincorporated lands that were agricultural use were approved for low-density development via annexations, facilitating resource lands conversion in perpetuity. Second, little integration of broad environment/landscape in annexation events from 1990 to 2010 in Frederick and Caroline counties of Maryland. Although site-specific environmental attribute mitigation was considered in annexation processes if a property filing for annexation has site environmental attributes (e.g. steep slope, floodplain, aquifer recharge area etc.), relative environmental effects - landscape were absent. This indicates that broad environmental/landscape sensitivity is low as to the

current social structural properties are untenable. Third, I have interpreted the underlying social structure – economic development and growth-driven space that was networked among the stakeholders in annexation events occurring from 1990 to 2010 in Frederick and Caroline counties of Maryland as the sources and conditions that have led to the loss of agricultural land, cumulatively influencing landscape change. Together with a late insertion of environmental groups, such social structures have been found instrumental in annexations facilitating converting agricultural land to low-density residential and commercial land uses. Fourth, little record-keeping exists for rejected annexation applications. Often, these rejected annexation applications re-file/request for annexation. If having these records, counter-factual analysis would be able to be performed. Fifth, large quantities of unincorporated land at the rural-urban continuum of the two study areas are available. Lastly, there were no differences in terms of sources, conditions, and ramifications in the two case study areas.

In terms of the stakeholders in annexation events, my investigation found that stakeholders were motivated by their interests and interacted in a network mode establishing three spaces: ECS, EMCS, CQoLS. The centrality of ECS allowed the consistent members including municipalities, developers, and land owners had a power in deciding the annexation outcomes. Simultaneously, the stakeholders such as EMCGs and RUAs were powerless standing at the other end of the power spectrum. The stakeholders including County and RIMs were in between. In order to change the distribution of such power asymmetry in annexation events, inserting the stakeholders such as EMCGs and RUAs and have them participate throughout the entire process are crucial in empowering them. In improving the role that County as a stakeholder group, RUAs and County should work together early in annexation processes.

In addition, my results suggest that the underlying social structure schemas in the annexation events exposed are encompassing “economic,” “development,” and “growth” land use policy discourses, indicating an unsupportive administrative structures at a local level. Local land use planning has a tradition of accommodating development and growth and protecting property rights partially lead to land use decision making process lacks a consideration of larger-than-local scales from 1990 to 2010. The launch of Smart Growth initiatives in 1997 brought the concept of smart growth to the local places; however, resistance to such state policy was evident. These structural schemas interacted together, greatly facilitating the land conversion from agricultural land use to low-density development via the approved annexation acts.

In terms of the availability of unincorporated land in Frederick and Caroline counties of Maryland, both counties still have large quantities of land that are outside of the municipalities. Frederick County remains nearly 63% of land in agricultural use and Caroline county has 97% of land unincorporated. Despite the establishment of farmland preservation programs at the state (MALPF) and county levels, both counties experienced agricultural land losses totaling 8,879 acres to the approved annexation applications in the period 1990 to 2010. This undercuts the state’s effort to accomplish its Smart Growth goals.

My results also suggest that annexation events may have undercut the Maryland’s Smart Growth initiatives that were launched in 1997 with an objective of curbing sprawl and reducing resource land conversion. Annexation activities in Maryland during post-1997 experienced a spike to the present indicates the occurrence of this undercut. For example, the annexed events such as Thatcher farm (110 acres) and Crumland farm (285 acres) in Frederick City of Frederick County and Western Denton Annexation (850 acres) facilitated the land use code from agricultural use to development. Small land parcels were also approved for annexation. For

example, 5-year rules were often being waived. Agricultural lands were piecemealed via annexation, gaining permission for development.

Insight into Possible Ways Forward

One way for local land use practices such as annexations to be implemented in supportive way of landscape planning is to incorporate landscape indicators in every sector of local land use practice. Today, state governments, as well as local, are much more environmentally conscious than in the past as many environmental values introduced in the 1970s have become the mainstream. Environmental education has largely been instituted in schools today. People are much more aware of the environment. Taking advantages of these improved societal conditions, based upon the aforementioned findings, this research suggests (1) while continuing to have site environmental attributes being critically reviewed in annexation processes, landscape sensitivity that reflect relative environment services and values should be incorporated into annexation processes; (2) study where and how 5-year rule has been exercised in annexations and assess its effectiveness; (3) improve county and municipality relationships by including horizontal organizations such as Maryland Municipal League (MML) and Maryland Association of Counties (MACo) into more productive conversations; (4) greater inter-communications between planners and citizens at large about spatial effects of land use decision making; (5) developing deannexation laws.

While annexation property size and location are part of approval/disapproval evaluation, more broad environmental effect indicators - landscape sensitivity should be given more weight in annexation process. For example, land use designation before and after annexation should be placed into a space-time context. In addition, a consideration of including distance to the nearest

protected areas can also broaden the relationship between the annexed land and physical environment afar.

5.2 Topical and Theoretical Contributions

Past annexation research has focused on political and economic aspects of annexation in the several fragmented disciplinary fields. This has prevented better understanding of the relationship between annexation, land use practices, and larger-scaled landscape effects. Furthermore, the literature has lacked a strong theoretical framework. John Meligrana noted that local boundary changes, such as annexation, has largely been overlooked by researchers because of weak theoretical grounds that fail to provide necessary understandings about the various procedures for (re)drawing local government boundaries (2004: 1).

The completion of this research project has filled a theoretical void by developing an integrative theoretical framework informed by a contemporary geographic perspective. This research project has expanded annexation research topically by incorporating a human geographer's eyes, examining the missing environment/landscape aspects in annexation processes, and by identifying current network as unsustainable social structures. This research used political ecology and structuration theory to conceptualize annexation as a process with distinctive time-space structures that are crucial in land use decision making influencing annexation outcomes. The failure of annexation events in Frederick and Caroline counties of Maryland is the failure of no incorporation of landscape sensitivity as to unsustainable social structures who were involved into annexation processes

At the rural-urban continuum of Frederick and Caroline counties of the state of Maryland, the unsustainable social structures are composed of land owners, developers, and municipalities

and have been translated into an unsustainable structural schema including property rights, the centrality of development-driven economic growth, and home rule that delegates the municipality as the sole decision makers. These structures internally and externally collaborated creating a networked space centralized by solely economic interested, development, and growth. Despite the state of Maryland having smart growth policies, these policies have had negligible effects on curbing sprawl and reducing resource land conversion.

Land use planning in the United States still largely regards landscape as a product and not as a process (Russo, 2009). Not until the notion of landscape preservation as a process into every sector of land use practice, the resource land such as agricultural land will continue to lose the battle with development and growth. This importance is argued by Rose (2002) who puts that landscape as being the result of a process is “the only thing that the landscape ever *is* is the practices that make it relevant” (462-3). Looking at the other side of land use – farmland preservation programs, despite mushrooming in recent years, remain expensive. With the current budget woes at higher administrative levels, the loss of farmland will only continue if the social capital and underlying structures do not become more environment/landscape conscious. This dissertation has demonstrated that a new theoretical framework was able to provide a careful contextualization and conducts of the stakeholders that is instrumental in understanding First World human-environment relations.

The greater empowerment of the stakeholders including EMCGs, County, RIMs RUAs are important steps to balance the power structure schemas in local land use practices. As Reed recommends that “when relevant, participation [of the stakeholders] should be considered as early as possible and throughout the process, representing relevant stakeholders systematically” (2008: 2420). In this process, planners who have expert knowledge should play a normative role

in facilitating the stakeholders' participation in the current unsustainable annexation processes towards to sustainable exercises.

5.3 Methodological Contributions

In using triangulated data sources and analysis methods, this dissertation provided an opportunity to further the on-going discussion concerning mixed research strategy in geography. Sarah Elwood shared the claim of “third geographer³⁸” describing the mixed methodology. She argues that “mixing methods [are] the creative and intellectually productive ways in geography and will involve not only our continued efforts to bridge quantitative-qualitative divisions, but to consider how our research methods can engage some of the newest and most challenging theoretical development in the discipline” (2010: 110). The greatest benefit of using multiple data sources is to collect as much data as possible to ensure a high quality, relatively complete and accurate databases. Regarding the use of multiple analytical methods, each analysis technique offered the ability to examine one aspect of the issue, and therefore use of multiple analytical methods helped providing a complete picture by providing consistent evidence. These two merits have been demonstrated in this dissertation.

The employment of both stakeholder analysis and social network analysis provides benefits of understanding “who and how” questions in annexation processes. Stakeholder analysis offered a flexibility in identifying the stakeholder groups, developing understanding of why changes occur, establishing who are active agents and can make changes happen, and discerning how to best manage the stakeholders. The use of SNA provided the density of relations, degree of network centrality, and subgroup interconnectivity, allowing accounts for

³⁸ One who uses ‘both/and’ epistemologies and methodologies from quantitative and qualitative approaches.

which individuals and category of stakeholder played more central roles in the network and which were more peripheral.

5.4 Future Research

Future research could be conducted in the several areas. First is to replicate what this research has done into other counties in Maryland and other regions. For example, researching whether the same social structure dynamics exist in other Maryland's suburban and rural counties would be important. This is because they will provide more insights and understanding how land use decision making are accomplished at local levels. At a regional scale, the Mid-West, West and South of U.S. are the regions that are prevalent in annexation events in the recent time. Investigating how counties and municipalities in these regions deal with annexation events and annexation processes would provide important understandings about how large quantities of unincorporated land can be used and managed. In addition, comparisons between the local scales of Maryland where the state earned accolades for Smart Growth policies and other states, particular in the South, that have similar smart growth programs, would be helpful in understanding the spatial patterns of the structures in annexation activities.

Next, a longitudinal research monitoring how annexation structure is changing, especially with a relatively new land use discourse – sustainability is expected to be carried on. Maryland's Smart Growth has recapped its policy term as sustainability. How this policy term and its tenets diffuse and being mobilized into local would be interesting for assessing the capacity of social capital in land use planning and practices at a local scale.

In addition, applying Geographical Information Sciences linking annexation's sources, conditions, and ramifications would provide additional tool in further visualize and investigate annexation phenomenon.

5.5 Conclusions

In this dissertation, I analyzed annexation events from 1990 to 2010 in Frederick and Caroline counties of Maryland, applying political ecology in framing the issue and structuration theory investigating the dynamic stakeholder relationship in which the underlying social structures are embedded to condition and facilitate the annexation processes in First World's rural-urban continuum landscape. The concept of facilitation offers a powerful lens for understanding of the political ecology of sustainable landscapes. Other concepts including agency and structures that steer landscape changes at rural-urban continuum are useful in that landscape change should be seen as a process, discourse, and practice.

Paul Robbins (2002) suggests that First World political ecology needs to examine institutions in facilitating landscape change across scales so it is important to understand such facilitation process. Our attention to the institutional mechanisms should focus on how "economic development" and "growth" ideologies enable a society pursuing the competing goals between economic gain and environment. The legitimacy of the environmental groups/organization as a stakeholders group stands at the core of local land use practices and decision making but decentralized by EIS in local land use activities. This reveals basic dimensions of power in relationships among people, land, and landscape.

In addition, I perceive the underlying social structures facilitating and operating at a range of scales influencing the landscapes as a process; not until some structural empowerments

accomplished at the local scale, this processes would only facilitate the solely economic-interested stakeholders interacting in a network fashion continuing to play the dominant decision maker and facilitating the land consumptive landscapes. Therefore, this facilitation needs to provide a way of dissolving the conflicts from economic restructuring and neoliberal economic policies by recognizing the power of institutions.

APPENDIX A: FIELD WORK LOG

#	DATE	DESTINATION	# OF HOURS	ACTIVITIES	APPROX. MILES
1	8/9/2010-8/10/2010	Annapolis	14	Maryland General Assembly Department of Legislative Services	132.6
1	8/10/2010-8/12/2010	Denton	40	Denton & 5 Towns & Caro County Library	275.25
2	8/12/2010	Frederick City Frederick city County	3.5	Interviewing LT & visited 9 towns & Fred County Library	231.22
3	8/16/2010 - 8/17/2010	Library	17	Researched in Frederick County Library	131.22
4	8/19/2010	Denton	10	Interviewing LP & 3 Caro County Planners	344.48
5	8/20/2010	Frederick City	4	Interviewing JG	131.22
6	8/24/2010	Frederick City	3.75	Interviewing JG & DG	131.22
7	8/25/2010	Frederick City	8	used Frederick County Library	131.22
8	9/3/2010	Frederick City	3	Interviewing TB	131.22
9	9/10/2010	Denton/Easton	10.5	Interviewing EC @11 at Denton & B G @1	380
10	9/15/2010	Myserville	3.25	Interviewing KA	120
11	9/20/2010	Frederick City/College Park	8	Interviewing TG & JD in CP (traded him lunch)	265.61
12	9/21/2010	Denton	10	Interviewing 3 Caro County Commissioners in Courthouse	364.48
13	9/27/2010	Vienna	8	Interviewing J S in Vienna, VA (Downpoured)	220
14	10/1/2010	Rockville	4	Interviewing CP - developer in Rockville	186
15	10/4/2010	Besethda	6	Interviewing MK	240
16	10/6/2010	Frederick City	6	Interviewing JM & BD - legal council of property owners	154
17	10/8/2010	Greensboro	10	Interviewing GG	350
18	10/15/2010	Annapolis	9	Interviewing S H (Cancelled) & EF (MDP)	295.2
19	10/18/2010	Rockville	3.5	Interviewing MF + 2 planners in Rogers.com	131.22
20	10/22/2010	Annapolis	4.5	Interviewing SH @ Elmstreet & SK @ MDP	285.2
21	11/8/2010	Frederick City	3.25	Interviewing JW	131.22
22	11/13/2010	New Market	4.5	Interviewing WB	154
23	11/19/2010	Annapolis	5	Interviewing JP & TR @ MML	275.2
24	2/17/2011	Frederick City	3.75	Interviewing BY & PS	131.22
25	3/10/2011	Frederick City	3	Attending Fred County - BOCC/Municipalities mtg	131.22
26	7/8/2011	Myersville	3.25	2nd interviewing KA	120
27	8/3/2011-8/5/2011	Denton	10.5	Denton Planning /Codes - viewing annexation archives & Town Council Mtg	350
28	8/8/2011-8/9/2011	Denton	13	Attending Caro County Commissioners MTG & Denton Town BOA mtg	370
29	8/10/2011	Frederick City	16	Fred County Planning Commission mtg & Caro Planning Commission	360
30	8/11/2011	Frederick City	3	Attending BOCC/Municipalities mtg	132
31	8/18/2011	Frederick City	5.5	Attending Frederick City Alderman & Mayor monthly meeting	132
32	8/23/2011	Frederick City	3	Frederick City BOA meeting	132
33	8/30/2011	Denton	9	Denton Town Planning Commission meeting	345.2
34	9/7/2011	Denton	9*	Caroline County BOA	345.2
35	9/14/2011	Denton	9*	Caroline County Planning Commission	345.2
TOTAL MILEAGE					8085.82

8085.82 X .50 CENTS (FEDERAL STANDARD)	\$4,042.91
PARKING EXPENSE	\$48
RESTAURANT MEALS (INCLUDING 5 GUEST MEALS)	\$143
HOTELS	\$520
GRAND TOTAL	\$4,753.91

APPENDIX B: SEMI-STRUCTURED QUESTIONNAIRE

Open-end interview questions with stakeholders who involve in municipal annexation processes in Frederick and Caroline counties of Maryland (May – November 2010).

1. In your view, what are the primary objectives of _____ municipality's annexation decision making?
2. Which groups does this office view as the primary stakeholders in the municipal annexation processes?
3. How important are municipal annexation processes to _____ County's growth management efforts?
4. What do you consider to be the most successful aspects of _____ County's growth management efforts? Greatest room for improvement?
5. Do you think there is the greatest room for improvement in annexation processes? If yes, please explain.

These are all our questions. Thank you for your time.

NEWSPAPER SOURCES

*Including the search from the on-line newspaper archives and vertical files from the Frederick County and Caroline County Libraries

* Used in discourse analysis

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Curriculum Vitae

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EDUCATION

- Ph.D. Geography, Department of Geography
University of Maryland, College Park, expected in May 2012
Adviser: Dr. Martha E. Geores
Dissertation: Analyzing Municipal Annexations: Case Studies in
Frederick and Caroline Counties of Maryland, 1990-2010
- M.A. Geography/Planning, Department of Geography/Planning, The
University of Akron, OH (1999)
- B.A. Chinese Language & Literature, Xinjiang University, P.R. China

PROFESSIONAL POSITIONS

- Adjunct Professor Geography/Earth Science Department,
Shippensburg University, PA 17257 (Fall 2002 –
Present)
- Director for Field Studies of China Geography/Earth Science Department,
Shippensburg University, PA 17257 ((2012
Summer, 2010 Summer, 2008 Summer & 2005
Summer)
- Undergraduate Academic Advisor
& Lecturer Department of Geography, University of Maryland
(January 2006- January 2010)
- Teaching Assistant Department of Geography, University of Maryland
(Fall 2005-Spring 2010)
- Research Assistant North American Carbon Group, Department of
Geography, University of Maryland (Summer
2007)
- Adjunct Lecturer History & Political Science Department, York
College, PA (Fall 2004)

Graduate Assistant

Department of Geography/Planning, The
University of Akron, OH (1997-1999)

COURSES TAUGHT

Introduction to Geography, Introduction to Human Geography, Elemental Systems (Introduction to Physical Geography), Human Geography Research Lab, World Regional Geography, Introduction to Geographic Information Systems, Urban Geography

COURSES AS TEACHING ASSISTANT

Introduction to Geography, Coastal Environment, Developing Countries, Elemental Systems (Introduction to Physical Geography), GIS and Spatial Analysis, Introduction to Remote Sensing, Advanced Image Processing

AWARDS

2011 Distinguished Service Award

Regional Planning & Development
Specialty Group, Association of American
Geographers (2012)

Distinguished Teaching Assistant Award

Center for Teaching Excellence
University of Maryland (2007-2008)

Graduate Teaching Assistantship

Department of Geography, University of
Maryland (Fall 2005 – 2010)

Travel Grants

Department of Geography, University of
Maryland (2006-2010)

Jacob K. Goldhaber Travel Grant

Graduate School, University of Maryland,
(2005)

Elain F. Bosowski Award

1st Place, Student Paper Competition,
Pennsylvania Geographical Society Annual
Meeting, Erie, PA (2004)

Graduate Assistantship

Geography/Planning Department
The University of Akron, OH (1997-1999)

PROFESSIONAL SERVICES

Chair of Honors Committee

Regional Planning & Development Specialty Group,
Association of American Geographers (2011-2012)

Chair	Regional Planning & Development Specialty Group, Association of American Geographers (2010-2011)
Vice Chair	Regional Planning & Development Specialty Group, Association of American Geographers (2009-2010)
Member-at-Large	Regional Planning & Development Specialty Group Association of American Geographers (2008-2009)
Director of Developing Countries	Association of American Geographers (2006-2007)

PUBLICATIONS

Pomeroy, J. and Pomeroy, G. 2006. Pointers, Practicalities, and Pitfalls of Directing a Field Course in Asia. *Education about Asia* 11(2):46-48

Pomeroy, J. 2004. Residential Patterns of Asians in the Washington, D.C. Metropolitan Area: Enabled Selectivity, Choice of Ethnic Proximity or Assimilation. *Proceedings of 12th Annual Pennsylvania Geographical Society Conference*

Pomeroy, J. 2003. Social Correlations of Imbalanced Sex Ratio in China: *Proceedings of 11th Annual Pennsylvania Geographical Conference*

SELECTED PRESENTATIONS

Panelist on Potential of Political Ecology in Redefining/Refining Regional Planning and Development Panel Session. (2012). Association of American Geographers Annual Meeting, New York City

Using Structuration Theory Analyzing Sustainability Structures of Annexation Events in Two Counties of Maryland, 1990-2010. (2012). Association of American Geographers Annual Meeting, New York City

Analyzing Annexations in Frederick and Caroline Counties of Maryland, 1990-2010. (2011). Association of American Geographers Annual Meeting. Seattle, WA

Analyzing Municipal Annexation: Case Studies in Frederick and Caroline Counties of Maryland, 1990-2010. (2010). Association of American Geographers Annual Meeting, Washington, DC

Land Use and Land Cover Change, Comparing Incorporated and Unincorporated Census Designated Places in Maryland. (2009). Association of American Geographers Annual Meeting, Las Vegas, NV

Land Use Land Cover Change in Frederick County, Maryland from 1973-2002 from Political Ecology Perspective. (2008). Association of American Geographers Annual

Meeting, Boston, MA

Spatiality of Unincorporated Places in Maryland, 1970-2000. (2007). Association of American Geographers Annual Meeting, Los Angeles, CA

Panelist on Consumerism for China Rising Panel Session. (2007). Association of American Geographers Annual Meeting, Los Angeles, CA

Spatial and Temporal Analysis of Biophysical Characteristics of Urban Sprawl in Mega Cities by Satellite Imagery. (2006). Association of American Geographers Annual Meeting, Chicago, IL

China '05 – Pointers, Practicalities, and Pitfalls for Directing a Short Term Study Abroad Course. (2005). Pennsylvania Geographical Society Annual Meeting. Greensburg, PA

Residential Patterns of Asians in the Washington, D.C. Metropolitan Area. (2004). Pennsylvania Geographical Society Annual Meeting. New Cumberland, PA

Reflections of Residential Choice: A Factorial Ecology of Asia American in Suburban Maryland. (2004). Association of American Geographers Annual Meeting. Philadelphia, PA

Family Structure and Geographic Proximity in China's Sex Ratio Imbalance. (2003). Pennsylvania Geographical Society Annual Meeting. Erie, PA

Contemporary Residential Patterns of Asia Americans in the Cleveland Metropolitan Area. (1999). Association of American Geographers Annual Meeting. Honolulu, HI

POSTERS

Revisit Jean Gottmann's Megalopolis Using Remote Sensing Approach. (2007). Association of American Geographers Annual Conference. San Francisco, CA

Reflections of Residential Choice by Factorial Ecology and Cluster Analysis of Asian Americans in Greater Washington D.C. Area. (2004). Race/Ethnicity and Place Conference. Washington DC

PROFICIENT LANGUAGES

English and Mandarin