Spring 2010

Community change in the Northern forest

Chris R. Colocousis

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COMMUNITY CHANGE IN THE NORTHERN FOREST

BY

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Bachelor's of Arts, Stonehill College, 1998
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DISSERTATION
Submitted to the University of New Hampshire
in Partial Fulfillment of
the Requirements for the Degree of

Doctor of Philosophy
in
Sociology

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS ........................................................................................................... iii

TABLE OF CONTENTS ........................................................................................................... v

LIST OF TABLES .................................................................................................................. ix

LIST OF FIGURES ................................................................................................................ x

ABSTRACT .......................................................................................................................... xiv

CHAPTER

I. BACKGROUND AND PREVIOUS RESEARCH ......................................................... 1
   Introduction .................................................................................................................. 1
   Berlin, New Hampshire ......................................................................................... 3
   The Northern Forest ............................................................................................. 8
   Understanding Change and Redevelopment ...................................................... 9
   Review of Literature ............................................................................................. 12
   Environmental Sociology ..................................................................................... 13
   Studies of Community and Regional Decline ..................................................... 15
   The Increasing Significance of Natural Amenities and Attractiveness of Place in Development ................................................................. 22
   From Spaces of Production to Spaces of Consumption ........................................ 24
   A Third Way? Sustainability, Conservation, and “Green” Development ............ 27
   Conclusion ................................................................................................................. 30

II. METHODS ...................................................................................................................... 32
   Community as the Unit of Analysis ..................................................................... 32
   Place Character ....................................................................................................... 33
   A Model of Redevelopment .................................................................................. 35
   Research Questions ............................................................................................... 38
   Data Sources .......................................................................................................... 40
   Qualitative Data ...................................................................................................... 40
   Semi-Structured Interviews ................................................................................. 41
   Participant Observation ......................................................................................... 46
   Visual and Photographic Accounting ................................................................. 46
   Other Qualitative and Historical Methods .......................................................... 47
   Public Secondary Data ......................................................................................... 48
   Survey Data ............................................................................................................. 49
   The Community and Environment in Rural America Survey ............................ 49
   The Fall 2009 Granite State Poll .......................................................................... 50
### III. DEVELOPMENT AND DECLINE IN BERLIN

- The Pulp and Paper Industry
- Pulp and Paper in New England and the North Country
- A Century of Growth and Decline in Berlin
- From Growth to Decline
- The Mill’s End
- Conclusion

### IV. COMMUNITY IDENTITY, IMAGE, AND CHANGE

- The Androscoggin and the Environmental Costs of Pulp and Paper Production
- Community and Environmental Stigma
- The Burgess Pulp Mill and Pollution in Berlin
- The City’s Identity and Image
- The Momentum of Historical Identity and Image
- From Pollution to Physical Decay and Social Disorganization
- The Shape of Tourism-Oriented Development
- Tourism Development in Berlin
- Northern Forest Heritage Park
- Jericho Mountain State Park
- The Coos County Branding Project
- Berlin’s 21/21 Initiative
- The Androscoggin Valley Tourism Promotion Project
- The Role of Image and Identity
- Conclusion
- Stigma: Form and Content
- Ascertaining the Invisible Costs of Stigmatization

### V. THE PRODUCTION OF SPACE IN BERLIN: IMPACTS OF THE BUILT ENVIRONMENT ON REDEVELOPMENT

- The Production of Space
- The Built Environment in Berlin
- The Cityscape
- Blight
- Downtown
- Housing
- Public Safety Expenditures
- The Infrastructure Issue
- Fiscal Stress
- The Mill Site
- The Recovery Boiler
- The Cell Houses
- The Industrial Androscoggin
- Conclusion
Appendix B. IRB Approval.................................................................301

Appendix C. Interview Guide.........................................................302

Appendix D. The 2007 Community and Environment in Rural America Survey.................................................................306

Appendix E. The Fall 2009 Granite State Poll—Berlin, NH Questions.................................................................323
## LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1</td>
<td>Main themes in interview data coding scheme</td>
</tr>
<tr>
<td>6-1</td>
<td>Correlation Matrix of Pulp and Paper Employment and Forest Structure Variables for Northern Forest Region</td>
</tr>
<tr>
<td>8-1</td>
<td>Largest Employers in Berlin, 2008</td>
</tr>
<tr>
<td>8-2</td>
<td>Summary Table of Main Redevelopment Projects in Berlin</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1 Location of Berlin, NH in Region</td>
<td>4</td>
</tr>
<tr>
<td>2-1 Conceptual Model of Factors Affecting Community Response to Economic Disruption in Berlin</td>
<td>37</td>
</tr>
<tr>
<td>2-2 Key Elements of Place Character by Primary Orientation</td>
<td>40</td>
</tr>
<tr>
<td>3-1 Wood Chips being Loaded into Chemical Digester in Burgess Pulp Mill, 1937</td>
<td>56</td>
</tr>
<tr>
<td>3-2 Men &quot;On the Wrenches,&quot; Tightening Digester Cover in Preparation for a “Cook,” 1937</td>
<td>57</td>
</tr>
<tr>
<td>3-3 Looking South down the Androscoggin Valley from Roof of Building at Northern End of Mill Site, 1928</td>
<td>67</td>
</tr>
<tr>
<td>3-4 Population of Berlin, Coos County, and Rumford, ME, 1820–2008</td>
<td>71</td>
</tr>
<tr>
<td>3-5 Aerial View of Mill Site and Northwest Quadrant of City, 1952</td>
<td>72</td>
</tr>
<tr>
<td>3-6 Aerial View of Mill site and East Side of City, 1965</td>
<td>73</td>
</tr>
<tr>
<td>3-7 Percent of Total Coos County Employment by Sector, 1969–2000</td>
<td>75</td>
</tr>
<tr>
<td>3-8 Percent of Total Coos County Earnings from Manufacturing Establishments, 1969–2000</td>
<td>76</td>
</tr>
<tr>
<td>3-9 Median Family Income for Berlin and New Hampshire, 1969–1999</td>
<td>77</td>
</tr>
<tr>
<td>3-10 Employment in Pulp and Paper and Manufacturing by Region, 2000</td>
<td>78</td>
</tr>
<tr>
<td>3-11 Berlin Average Annual Unemployment Rate, and Berlin Rate as a Percentage of NH Rate, 1990-2007</td>
<td>79</td>
</tr>
<tr>
<td>3-12 Looking West across Former Pulp Mill Site, April 2008</td>
<td>81</td>
</tr>
<tr>
<td>3-13 Perceived community effects of loss of forest-based jobs/income, CERA Survey spring-summer 2007</td>
<td>83</td>
</tr>
</tbody>
</table>
xii
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-7</td>
<td>Original and New Versions of the Official City Seal of Berlin</td>
<td>245</td>
</tr>
<tr>
<td>8-1</td>
<td>Overlay of Development Types and Primary Elements of Place Character</td>
<td>260</td>
</tr>
<tr>
<td>8-2</td>
<td>View of Berlin from Hillside east of Downtown, 2009</td>
<td>272</td>
</tr>
</tbody>
</table>
ABSTRACT

COMMUNITY CHANGE IN THE NORTHERN FOREST

By

Chris R. Colocousis

University of New Hampshire, May, 2010

In 2006, the pulp mill in Berlin, NH was closed and dismantled, marking an end to more than a century of dependence on the pulp and paper industry. The city’s location in a high-amenity and recreation-dependent region suggests that the rebirth of the local economy would follow a general transition from a production orientation to consumption. Using in-depth interviews and other qualitative methods, survey work, and secondary quantitative data I chronicle a century change, focusing on how the industry has shaped the community and its present ability to reinvent itself. I analyze the ways in which patterns of change and redevelopment are structured by the local social, economic, and environmental contexts, emphasizing society-environment interactions.

The community became stigmatized on the basis of industrially-produced environmental harm, and this negative image has proven a subtle, though real obstacle to redevelopment. The physical decline of the city’s built environment, the mill site’s central location, and a heavily industrialized river corridor have also constrained development opportunities. More than a century of forest management for pulpwood production has left the surrounding region with a relatively young forest comprised of smaller-diameter and lower-value timber stands, and large-scale biomass energy production has emerged as the primary new wood-based industry. Discourse about the
community’s economic future has largely centered on potential uses of the former mill site. The local small business community has been instrumental in shaping these discussions, though in ways consistent with divergent consumption-or production-oriented economic interests.

I call into question the ubiquity of the post-productivist transition in high-amenity rural communities. Despite Berlin’s location, the community has not turned squarely toward tourism and consumption as its new economic base. Instead, elements of place—particularly its embodied industrial history—have led the community into a mixed turn in which both production- and consumption-oriented activity are emerging alongside a broadly public sector-dependent local economy. In employing a case study approach to rural redevelopment I have shown how the specificity and distinctiveness of particular arrangements of geographical location, material form, and meaning—*place*—matter in great ways for how patterns of social and economic transformation play out across space.
CHAPTER 1
BACKGROUND AND PREVIOUS RESEARCH

Introduction

A decade into the 21st century, many rural communities across North America find themselves at a crucial point of transition. Traditional livelihoods in natural resource-based sectors and low skill manufacturing have been eroded by a combination of factors involving technological change, increasingly global competition, and energy costs. While some strategies for the economic and social reinvigoration of rural communities have been articulated, few communities have successfully reinvented themselves and achieved beneficial social, economic, and environmental outcomes. Often, ideas about redevelopment hinge on the potential of rural places to draw people there (as tourists or in-migrants), or on related ideas premised on the promise of telecommunications technologies for decoupling work and residence. Still other schools of thought focus on using natural resources in new ways to provide energy sources for communities and larger regions. Some of these ideas have been put into practice as development strategies in particular communities; none have emerged as a solution for the suite of issues facing rural communities today.

Effectively addressing the questions and challenges of redevelopment can be made more difficult, or facilitated, by the social, economic, and environmental contexts of rural communities. Often, they have seen decades of outmigration, particularly of young people, alongside prolonged underinvestment in human capital. Some places have
been dominated by extractive industries such as mining that carry severe environmental costs. Rural communities tend to be geographically remote, and may carry with them reputations as socially "backward" or environmentally polluted places. Some regions, such as Appalachia and the Mississippi Delta, are marked by deep economic and social divisions that make cooperation for change difficult. However, other places have seen similar degrees of economic and demographic decline, but have relatively robust middle classes and richer civic cultures. They may have an economic history fundamentally rooted in renewable resources such as timber, despite having experienced the boom-bust cycles familiar in extractive industries. These communities, which frequently have substantial natural amenities making them physically attractive to outsiders, may stand a better chance at reinventing themselves as the role of rural places in an increasingly urban society shifts.

Recent research suggests that it makes sense to think of rural America in terms of four distinct types of places (Hamilton, Hamilton, Duncan, and Colocousis 2008). Some amenity-rich rural areas are growing as baby boomers move there to retire, and as "footloose professionals" choose to settle in smaller communities endowed with great natural beauty and recreational opportunities. Other places, long dependent on resources such as timber or farmland, are continuing a long trend of population loss as employment in these traditional industries declines. A third type consists of chronically poor communities where decades of underinvestment have left a legacy of deep poverty and weak, deficient community institutions. Finally, some places are in a transitional phase in which traditional resource-based industries have declined in terms of the employment base, and the potential for new growth related to natural amenities or renewable resources
exists. This study focuses on one such community. In 2006, the pulp mill in Berlin, New Hampshire closed for the last time, marking an end to over a century of the pulp and paper industry as the economic base of the city.

**Berlin, New Hampshire**

Berlin—"The City that Trees Built"—is a community of roughly 10,000 people which lies in the "North Country," the part of the Northern Forest closest to the Canadian border and that, depending on who one talks to, stretches across it. Writer Howard Frank Mosher (1997) describes the US-Canada border as:

> A vast and little-known territory so distinct from the rest of the United States that it has a name of its own...an immense, off-the-beaten track sector of America inhabited by a remarkably versatile, resilient, and, most of all, independent people, most of whom are still intimately in touch with the land they live on and with their respective communities (p. 3).

As Luloff and Nord (1993) pointed out a decade and a half ago, Berlin has been isolated from the population boom to its south, and is largely cut off from markets by the mountainous terrain which surrounds the city. The USDA Economic Research Service has classified Coos County, the least populated and northernmost county in New Hampshire, as both manufacturing-and recreation-dependent.\(^1\) Mosher notes that the geographical, economic, and cultural differences between the US and Canadian sides of the border are no more apparent anywhere else between the Atlantic and the Pacific than they are here, with the pastoral agricultural countryside of francophone Quebec and the mountains and forests of New Hampshire stretching away from the

---

\(^1\) The USDA Economic Research Service designates as "manufacturing dependent" a county in which at least 25 percent of average annual income came from manufacturing between 1998 and 2000. "Nonmetro recreation" counties had a high share of employment and/or earnings in recreation-related industries in 1999, a high share of seasonal or occasional use housing units in 2000, and high per capita receipts from motels and hotels in 1997.
border in opposite directions. The southern part of the county contains portions of the White Mountain National Forest, including 6,288 foot Mount Washington, and other major tourist destinations near population concentrations in the southern part of the state. The northern part of the county is closer to Montreal than to the urban areas of southern New Hampshire. With ample natural amenities including mountains, forests, and rivers, the county affords numerous recreational opportunities to residents and visitors, from hiking, hunting, and fishing, to winter skiing and snowmobiling, to canoeing and kayaking in the summer. With abundant timber and powerful rivers, it has long been a major producer of wood products, especially pulp and paper. In recent years it has been hard-hit by job losses as forest products and other manufacturing industries contract (Colocousis 2008).

Figure 1-1: Location of Berlin, NH in region (c. Google Maps).
Berlin lies a few miles north of US Route 2, which Mosher uses as the unofficial southern border of the North Country. Route 16 leaves the motels and restaurants of Gorham behind and follows the Androscoggin River northward up the long, broad Androscoggin Valley. Past several strip malls and auto dealerships, just before the Berlin line, Fraser Paper’s Cascade mill sits low on the west bank of the river, taking water from the river before returning it via effluent treatment lagoons that lie across the street from a row of modest single family homes and three-decker apartment buildings. The ubiquitous pickup trucks that occupy the paper mill’s parking lot begin to provide an idea of the rural blue-collar identity that permeates the place.

Entering Berlin, elements of the city’s industrial growth and decline become apparent. For every apparently new business downtown, there’s one that looks like it has shut down in the last few years. The charred ruins of structure fires are visible in several spots downtown and beyond. The Androscoggin cuts through the heart of the city, passing between the downtown area and the nearly vacant 120-acre pulp mill site on the river’s east bank. The pulp mill’s recovery boiler hulks over the city, a reminder of the city’s past economic function and identity, while the mill’s wood yard sits empty. Machine shops near the mill site on the East Side advertise that they provide several types of services related to the pulp and paper industry. Truck repair shops and several small manufacturing facilities—some operational today, some long defunct—line Route 110 west of downtown, further establishing the blue-collar character of the place. Several hydroelectric generating stations and their dams occupy the river, each regulating its flow in accordance with the need for power production. Department of Corrections
trucks roll through town on their way to and from the state prison out near the Success line, just a couple miles northeast of downtown.

Cemeteries seemingly too large for a city of Berlin’s size occupy space on either side of the river to the north of downtown. Three-deckers and modest single family homes intermingle near the river, while nicer single family homes are more common up on the hillsides above town. Examples of abandoned and run-down housing are common around the city, but they tend to be mixed in with well-maintained properties so that no single neighborhood sticks out as the “bad part of town.” However, this even mixture of housing quality lends almost the entire city a blighted, run-down look and feel. On a summer day a few older men can be seen on their front porches drinking in the middle of the afternoon, some shirtless. The city’s tough economic times are visible in the faces of people on the street, some of whom appear down on their luck for one reason or another.

But images of decline do not monopolize the landscape in Berlin. The northern Presidential Range forms the southern end of the Androscoggin Valley, and makes a remarkable backdrop for the former mill site. The granite cliffs of Mt. Forist loom just to the southwest of downtown. An ornate and well-maintained Russian Orthodox church is prominent among the steep hills that descends to the river from the west. On these hills sit a few boarded-up schools, but also an old church that has been converted to a community arts center. Around town, French can be heard spoken by older folks who linger over lunch in restaurants festooned with hockey memorabilia. North of town, the valley widens as Route 16 passes by the single family homes comprising the Norwegian Village neighborhood as it heads along the Androscoggin and up to the wild, open country of northern Coos County.
The city is undergoing a dramatic, even wrenching, transition away from traditional blue-collar industries as are hundreds of communities across North America, from small rural mill towns to heavily industrialized metropolitan regions. The impact of these changes on rural communities and their prospects for adaptation and reinvention are uncertain. As one columnist in the May 13, 2009 edition of the Berlin Daily Sun wrote, “If ever there was a place in which the future is nearly completely obscured, it is Berlin” (Walsh 2009a p. 4). The city is poised between a long trend of industrial and demographic decline, and a set of possibilities for the future that, whatever form they take, represent a seismic shift away from its historical industrial base and identity.

Across the region, tensions exist between traditional forms of economic activity and resource use such as logging and forest products, and emerging community development strategies that are premised on the attractiveness of the place and, implicitly or explicitly, the importance of environmental stewardship and resource conservation. Concerns about the economic future of the region are particularly evident in Berlin, where decades of demographic and economic decline have lead up to public debate comparing the merits of new economic activities that resemble traditional forms of resource use, such as biomass energy, other common rural development strategies such as prisons and casinos, and still other development ideas predicated on the area’s natural amenities. The now largely vacant pulp mill site in the center of the city is often at the heart of these discussions. For over a century, residents of Berlin built livelihoods based on the natural resources of the region, but its economic future is certain to be more complex than the previous industrial era.
**The Northern Forest**

Berlin’s experience reflects the past, present, and likely future of many similar communities in the larger forested region in which the city sits. The Northern Forest is a 34-county region stretching across the northern tier of New York, Vermont, New Hampshire, and Maine. A 26 million acre expanse of boreal and northern hardwood forest forms the ecological basis of the region, home to 2.3 million people. Ecological, economic, and cultural characteristics make the northern forest a cohesive region, but it is also a political entity borne out of the concerns of residents who saw paper companies merging and divesting their vast landholdings in the 1980s (McGrory Klyza, Isham, and Savage 2006). While it is a relatively diverse region economically, its communities share an underlying dependence on forest resources, though this dependence takes many forms. For example, forest-based tourism is paramount in many Adirondack Park communities, while pulp and paper production is a center of economic activity in much of northern Maine. The people of the region have been closely tied to its forest resources for thousands of years (Trombulak 1994), and it is well endowed with social resources compared to other natural resource dependent areas of rural America. These include relatively low poverty rates, strong civic culture (Duncan 1999), and a longstanding commitment to resource stewardship (Judd 1997). Nonetheless, recent economic and social changes in the Northern Forest, and Berlin, are part of the larger story of the decline of rural manufacturing and technological change in natural resource-based industries.
The past few decades have seen substantial restructuring in the pulp and paper industry and dramatic community effects across the Northern Forest. The region today produces roughly as much pulp and paper as it did 20 years ago, but it does so with far fewer workers and operational mills (Irland 2003). As the pulp and paper industry, and the manufacturing sector more generally, saw growing productivity coupled with increased competition in global markets in the late 20th century, workers were laid off and mills shut down in many of the region’s more remote communities. Forest-dependent communities in the region have seen diminished economic opportunity structures and have lost population, young residents in particular driven away by stagnant local economies. Census data show that while the population of the entire region grew by 4.3% from 1990 to 2007, its manufacturing-dependent counties grew by just under 1%.

**Understanding Change and Redevelopment**

The goal of this study is to better understand processes of community change and redevelopment in a remote, historically forest-dependent community during a period marked by the confluence of long-term demographic decline, dramatic industrial restructuring, and increased emphases on the roles of natural amenities, environmental stewardship, and renewable energy in economic development. While change is certainly afoot in Berlin and many similar communities, its precise nature is anything but certain. I focus on the local economic, social, and environmental factors most saliently shaping the course of this transition in Berlin.

The course of this transition is important, both conceptually and practically, because questions of redevelopment are fundamentally questions about opportunity.
Where once a robust, largely blue-collar middle class was supported by the pulp and paper industry, today opportunities to make such a living are in short supply in places like Berlin. These communities are at critical points of transition where their longstanding identity as places with strong middle classes and rich civic cultures (see Duncan 1999) are in jeopardy. Today’s decisions about what path to take will have consequences for the sets of opportunities in these communities, their ability to sustain and retain the middle class so central to their well-being, and thus their very social fabric.

I focus extensively on the role of the pulp and paper industry in Berlin’s past and present, illustrating how the industry has shaped the place, and with what effects on its ability to reinvent itself today. Related to this theme, I also examine how Berlin’s physical environments, both built and biophysical, shape change and redevelopment. By focusing on change in a community with both substantial natural amenities and an environment that presents distinct sets of challenges and opportunities related to its industrial past, I contribute to a more robust understanding of how redevelopment is contingent on forces rooted in communities’ material forms. I also explore the role of civic culture and the city’s small business community in shaping the course of redevelopment, connecting my findings to work on the nature of the middle class and the role of small capitalism in community resilience.

I draw on secondary data to identify patterns of demographic, social, and economic change in Berlin and the surrounding region. I employ primary survey data from several sets of rural county clusters to identify residents’ perceptions of economic, social, and environmental conditions in and around Berlin, and to reveal patterns of similarity and difference between the city, region, and other parts of rural America. But
perhaps most importantly for the study, I draw on data from interviews with key informants and local residents, participant observation, and other qualitative methods to understand the ways in which Berlin is changing, and how these patterns of change are shaped by social, economic, and environmental forces. Interview respondents are comprised of local professionals, businesspeople, and other residents drawn from a variety of industries and occupations. Though the interview and survey data come from individuals, the community is the fundamental unit of analysis, and the goal of my study is to understand how and why change is unfolding there in particular ways. Berlin's characteristics—close linkages between the community and its built and natural environments, a recent period of profound economic decline, the potential for new forms of growth, and fundamental questions of community identity and the future of economic opportunity there—make it particularly interesting as a site in which study the local manifestations of larger processes of social change.

Here in Chapter 1 I discuss the transition of rural places from traditional industries to new economic bases. I situate my work conceptually and provide an overview of relevant literature on processes of industrial and demographic decline and dynamics underlying new, often amenity-driven growth. I also consider the literature concerned with the transition of rural places from spaces of production to spaces of consumption. In Chapter 2 I outline my main research questions and methodological approach. Chapter 3 combines an historical overview of development in Berlin and the region more generally, focusing on the growth and decline of the pulp and paper industry. Chapter 4 begins to explore the environmental and related social costs of a century of pulp production in Berlin. Chapter 5 focuses on the ways in which options for
redevelopment are largely contingent on the community’s built environment, and Chapter 6 focuses on the condition of the surrounding forest resource. Chapter 7 is largely economic and social in focus, examining the civic culture of the city and drawing on the civic community perspective to explore how small business shapes the course of change. Finally, in Chapter 8 I summarize my findings and attempt to offer a new, place-focused perspective on community change.

The community studied here is representative of many in the Northern Forest and, by extension, throughout rural America. Demographic decline, a vulnerable manufacturing base, and geographical remoteness characterize many rural places. At the same time, a shifting conceptualization of what rural communities do for other people and places—for example, as sinks for carbon emissions, as living space for professionals unbound to place by virtue of telecommunications, or as sources of clean water and renewable energy production—is pushing development in new directions in the Northern Forest and beyond.

**Review of Literature**

There are five main themes in the literature that inform my understanding of the changes occurring in the city of Berlin. First, I situate my work in the sub-field of environmental sociology, and a tradition of integrating natural and social science data to understand society-environment interactions. Second, I elaborate the processes and community effects of industrial decline, which illuminate Berlin’s recent past. Third, I provide an overview of recent work on natural amenities and the increasing centrality of attractiveness of place in economic development strategies. Fourth, I examine work that
posits rural communities as changing places whose identities are based less and less on what they produce, and increasingly on what is consumed there. Finally, I consider the recent emergence of the theme of sustainability as a prominent one in development and planning as a sort of “third way”—an alternative to the production–consumption paradigm.

**Environmental Sociology**

This study of community change and redevelopment is part of a well-established yet relatively young sub-field of sociology which grants environmental factors a place in attempts to understand the social world. Environmental sociology emerged largely on the basis of an increasing public environmental consciousness during the 1960s and 1970s. Heightened recognition of environmental issues among both sociologists and the public generally stemmed from the negative environmental impacts of processes associated with modernization, such as industrialization, and population growth and concentration. However, Dunlap and Catton (1979) outlined a shift from a “sociology of environmental issues” to a distinct “environmental sociology” through the 1970s. They articulated the fundamental insights of environmental sociology as the recognition of the possibility that social phenomena might be influenced by physical phenomena, and an acceptance of environmental variables in efforts to explain social facts. Such an approach to doing sociology was initially met with hostility by traditionalists who balked at to the inclusion of environmental variables in sociological analysis (Freudenburg 2008).

According to Dunlap and Catton (1979) environmental sociology seeks to answer two kinds of questions:
How do interdependent variations in population, technology, culture, social systems, and personality systems influence the physical environment? How do resultant changes (and other variations) in the physical environment modify population, technology, culture, social systems, and personality systems, or any of the interrelations among them (p. 252)?

Dunlap and Catton outlined six areas of research in environmental sociology: the ‘built’ environment; organizational, industrial, and governmental response to environmental problems; natural hazards and disasters; social impact assessment; impacts of energy and other resource scarcities; and resource allocation and carrying capacity.

A few years later, Buttel (1987) saw the common element of writings in environmental sociology as “a critique of the anthropocentrism of classical and contemporary sociological theory and of its limitations in understanding social change in a modern world that is increasingly constrained by ecology” (p. 468). Building on Dunlap and Catton’s framework, Buttel emphasized five distinct areas of environmental sociological study: the “new human ecology,” emphasizing the interrelationship between physical environmental variables and social facts; environmental attitudes, values, and behaviors; the environmental movement; technological risk and risk assessment; and the political economy of the environment and environmental politics. He further identified a theme underlying most research in environmental sociology: instead of tending toward equilibrium with the ecosystems and resources on which they depend, modern societies tend to exacerbate environmental degradation and resource depletion. Buttel (1996) would go on to describe the classical tradition as “radically sociological” in its exaggeration of the autonomy of social processes vis-à-vis the physical world. However, others would later emphasize the classical foundations of environmental sociology (e.g., Studholme 2007), particularly in the work of Marx (e.g., Foster 1999).
Often viewed as distinct from environmental sociology (Buttel 2002; Field, Luloff, and Krannich 2002), but nonetheless residing in similar disciplinary space (Belsky 2002), “natural resource” sociology emphasizes the social aspects of resource use and management issues in rural community contexts. Thus natural resource studies focus on the environment as a source of raw materials, rather than as a “sink” for waste products or as humans’ “home” or living space (Dunlap and Catton 2002). An understanding of emergent forms of resource use is central to my analysis of redevelopment in Berlin, though I combine such a natural resource-sociological focus on resource use with a broader environmental-sociological approach. According to Buttel (1996), “The basic essence of environmental sociology has thus been to recover, and uncover, the ‘materiality’ of social structure and social life, and to do so in ways that yield insights relevant to solving environmental problems” (p. 57–58). This emphasis on “materiality” is vital to my analysis and understanding of change in Berlin.

Studies of Community and Regional Decline

Economic decline most often refers to the loss of industrial work, one of the fundamental transformations of late-20th century America. The first public use of the term “deindustrialization” was in descriptions of the Allies’ approach of stripping Germany of its industrial power after World War II (Cowie and Heathcott 2003). However, less than four decades later such terminology became relevant to the plight of industrial areas undergoing dramatic restructuring in the 1970s and 1980s in the US. Bluestone and Harrison (1982) were among the first scholars to document and characterize the dissolution of industrial life in America’s cities, defining the underlying
dynamic as wholesale disinvestment in urban America's basic productive capacity. This relocation of productive capacity away from formerly industrialized cities and regions (often toward rural communities and the South), or its outright elimination, arose as corporate management's response to high labor costs and increasing international competition.

The undoing of industrial communities' economic base entailed fundamental social change for workers, families and communities. The "social contract"—an understanding between workers and management centered on relatively high wages and the idea that capital and labor were engaged in an enterprise for shared benefit—dissolved, and workers could no longer count on industrial work. Roughly 35 million jobs disappeared during the 1970s in the US, and displaced industrial workers often ended up making substantially less than they would have had they not lost their jobs. Industrial disinvestment in the 1960s and 1970s brought with it a two-decade period of falling wages and rising inequality in the US (Bluestone 2003; Cowie and Heathcott 2003).

Communities across the nation, but particularly those in the Northeast and Midwest, were devastated. The community effects of deindustrialization include joblessness, outmigration, increased substance abuse and crime, a deteriorating housing stock, familial breakdown, the loss of local businesses and civic institutions, fiscal stress, increased levels of poverty and public assistance receipt, decreased access to health care, and in some cases elevated suicide rates (Anderson 1990; Bensman and Lynch 1987; Brady and Wallace 2001; 2006; Wilson 1987; Wilson 1996). Several of these studies of urban community decline have illustrated the role of middle-class residents in
maintaining healthy, functional communities. As the work of Anderson (1990) and Wilson (1987; 1996) shows, when the underlying economic base of a urban community is disrupted, community decline occurs as middle-class residents relocate, taking with them resources of human and financial capital and ultimately leading to the failure of local institutions such as schools, churches, banks, and local businesses.

Deindustrialization and its community effects also have a symbolic aspect to them. The term “Rust Belt,” applied to the industrialized Midwest and Northeast surrounding the Great Lakes, signified shift in the meaning and image of the region in the 1970s and 1980s. Where for much of the 20th century the region was viewed as America’s industrial heartland and symbolized productivity and growth, its new identity reflected negative popular representations of abandoned and demolished factories, urban blight, and environmental degradation (High 1997). Some large Rust Belt cities, such as Chicago and Pittsburgh, have since reinvented themselves—both their economies and images—through diversification into finance, healthcare, and other sectors.

However, many smaller cities that do not possess the resources of larger metropolitan areas have not been able to do so, and have been relatively insulated from recent economic upturns and associated improvements in community conditions (Matthews, Maume, and Miller 2001). While redevelopment efforts ranging from the innovative reuse of former industrial sites to old-school boosterism are afoot in many small and mid-sized cities, there are few true success stories. Because communities are fixed in geographical space while capital is not, some scholars have stressed the inefficacy of local action aimed at turning disinvested communities around in the face of
global capitalism. Dandaneau’s (1996) study of Flint, Michigan, the poster child of post-industrial decline in Michael Moore’s film Roger & Me, draws this conclusion.

The challenges of industrial restructuring are not unique to urban areas (Falk and Lobao 2003) or the Northeast and Midwest (Minchin 2006). Many rural communities that depended on mining, primary metals manufacturing, textiles, and other industries have been left facing joblessness and environmental devastation when capital relocates. For example, Anaconda, Montana experienced deindustrialization and its effects when the copper smelter there closed down in 1980, taking with it thousands of jobs and leaving behind a mammoth environmental challenge (Curtis 2003). Green (2001) points out that rural areas have been losing manufacturing jobs since the 1980s—and the negative community effects of deindustrialization do not take place only when employers close down. Miller (2007) found a steady decline in perceived quality of life and social capital in her study of a Wisconsin paper mill town where the mill passed through four different corporate owners from 1975 to 2005, each ownership change bringing economic disruption and widening the gap between the interests of mill ownership and those of the community. Berlin is just one of many communities faced with the challenges deindustrialization presents.

In addition to studies of decline per se, a considerable volume of work has focused on underdevelopment in the American context, particularly in Central Appalachia. This region, centered where eastern Kentucky, West Virginia, and Virginia come together in a natural resource-rich, rugged landscape of mountains and valleys, has for decades been the focus of studies aimed at understanding the origins and persistence of its economic hardship, and its prospects for change (e.g., Billings and Blee 2000;
Bowman and Haynes 1963; Duncan 1999; Gaventa 1980; Plunkett and Bowman 1973; Walls and Stephenson 1972). In some ways, the genesis of poor socioeconomic conditions in this part of the country can best be viewed as the inverse of the trajectory of the Rust Belt communities that were devastated when industry left. Rather than suffering as a result of their decoupling from industrial capitalism, Appalachian communities have to a great degree languished precisely as a result of the character of their integration into the global capitalist system. Though the region was at least somewhat integrated into national markets and extra-regional commodity chains prior to the large-scale exploitation of its coal deposits, its colonization by industrial interests in the late 19th century entrenched patterns of inequality and patronage, and established extra-local control of its resource base (Billings and Blee 2000; Eller 2008; Gaventa 1980). These changes did not knock the region off a perch of prosperity, as its economy was still dominated by subsistence agriculture. Rather they combined with cultural and political factors to set it on a course that would decades, and even centuries, later lead to its position as one of the poorest and most environmentally challenged regions of America. Pointing out its uniquely disadvantaged position among rural American regions, McGranahan (2003) posits Appalachia as the archetype for an “internal colony,” a situation involving geographical isolation, industrial overspecialization, outside ownership of productive enterprise and associated profits, a degraded environment, and a labor force lacking in skills in demand beyond the dominant industry.

Despite its differences from the Rust Belt, Central Appalachia has not been immune to industrial restructuring, having been decimated by job losses in the industries on which it has depended—most notably the extraction of coal. Mechanization of the
coal fields in the 1950s brought about the loss of tens of thousands of jobs, resulting in massive unemployment and outmigration, and forced the region into the national spotlight as the focus of Johnson’s War on Poverty in the following decade (Walls and Stephenson 1972). In this case, capital did not relocate out of the region, but was substituted for labor in the rapid technologization of the coal industry. The pulp and paper industry saw a similar process of technologization and resulting decreases in employment take place through the 20th century, though they have unfolded on a longer time scale.

Duncan (1999), in a comparative analysis of the causes of poverty three rural regions of the US, points to the deep economic and social divisions that plague Appalachia’s communities in her explanation of why poverty persists there. Lacking the strong middle class that defines the fabric of social life in more prosperous rural places, Appalachian communities are mired in poverty because their poor residents are isolated from the mainstream opportunity structure—a structure occupied and run by local elites to their own advantage. Echoing Wilson’s (1996) social isolation thesis, she sees many of the same problems that plague disinvested urban communities in poor rural communities. The genesis of these deep divisions, Duncan argues, lies in the initial development of the coal industry in the region, which almost immediately occupied a space of not only economic, but political power. Taking an even longer-term perspective, Billings and Blee (2000) see the roots of deep inequality in the pre-corporate, agrarian social structures extant from the time of the region’s initial settlement during which local elites emerged. But regardless of their origins, such divisions are only reinforced by the boom-bust cycles common to the modern coal industry, stymieing social change and new
forms of community and economic development (Freudenburg 1992). Duncan’s insights into the importance of social class divisions for the persistence of socioeconomic disadvantage, and the role of a strong middle class and rich civic culture in providing resilience in northern New England, form part of the frame in which I analyze change in Berlin. Building on the studies of community decline and impoverishment outlined above, I explore the connections between the local middle class and community stability and change.

An important literature in rural sociology looks at community decline in the context of boom-bust cycles common to resource-based industries, particularly in the energy sector (see Smith, Krannich, and Hunter 2001 for a thorough review of this literature). Such acute boom-bust cycles do not precisely reflect the experience of Berlin, which experienced a protracted period of declining employment in the pulp and paper industry after more than a half-century of industrial growth. However, some general lessons from these studies of decline may be applicable to, and perhaps provide reasons for optimism for, cases of longer-term decline such as Berlin. For example, when boom-induced busts occur, levels of social well-being fall before rebounding with no evidence of lasting negative effects (Smith, Krannich, and Hunter 2001). Related to the literature on boom-bust cycles, some researchers have focused on the social effects of economic shocks, which are disturbances of the status quo that may take the form of the loss of major employers, natural disasters, or the development of new industries. The loss of a major employer is commonly thought to be one that produces negative social outcomes. However, whether or not such a shock has a positive or negative effect on social well-being is contingent on how it is perceived by local residents—whether it is viewed as a
positive or negative development for a community (Besser, Recker, and Agnitsch 2008). In the case of Berlin, then, the near-term community effects of the pulp mill's closure are largely dependent on whether or not its closure has been seen as a step in the right direction by the people of the city.

The Increasing Significance of Natural Amenities and Attractiveness of Place

The literature outlined above corresponds in many ways to Berlin's past, which features long-term demographic decline and, more recently, deindustrialization. At the same time, a newer body of work focused on the increasing significance of aesthetic and recreational factors in rural development informs my understanding of Berlin's present. Many rural communities are undergoing new patterns of growth driven not by the land as a source of commodities such as timber or forest products, but as the foundation of desirable physical environments that can attract new residents and businesses (Johnson 2006; Johnson and Beale 1994; Johnson and Beale 2002; McGranahan 1999; Nelson 1997). This has been particularly the case in the American West, where changes in forest management policy have involved decreases in commodity production from public lands, and new emphases on environmental protection (Charnley, McLain, and Donoghue 2008). Communities that have undergone structural shifts in their economic bases, and related amenity-driven in-migration, have been wholly reshaped throughout the mountain West (Winkler, Field, Luloff, Krannich, and Williams 2007). However, communities in other forested regions dominated by private landholdings, such as the Northern Forest, have also been affected by a more general shift toward new ways of valuing forestland not necessarily centered on commodity production. Such a development represents
fundamental shifts in conceptions of what forests (can) do for the communities they surround, and the drivers of demographic change in these places.

But this sort of growth does not necessarily result in beneficial community effects. Though it has been increasingly held as a key to strategy for rural areas, amenity-based development may not even be a realistic option for many rural areas, and in some cases where it does take root, it may result in overspecialization in industries such as tourism, fiscal stress for local governments, increases in cost of living, tensions between newcomers and long-time residents, wholesale shifts in tradition and the meaning of places, and environmental damage (Krannich and Petrzelka 2003). It appears that amenity driven growth increases mainly low-skill, low-wage service sector jobs (Saint Onge, Hunter, and Boardman 2007), and any economic gains for residents may be offset by increases in cost-of-living (Hunter, Boardman, and St. Onge 2005).

While not scoring particularly highly on the USDA ERS Amenities Scale (3 on a scale of 1 to 7), which skews in favor of places with mild winter climates and an abundance of sunshine, Coos County is indeed a land of rich natural amenities. White and Hanink (2004) found that even moderate environmental amenities could have important effects on economic growth in Northern Forest counties, conditional on their accessibility to populations outside the region. However, Charnley et al. (2008) caution us not to assume that a given community will experience amenity-driven population and economic growth just because it is close to forestland, regardless of what might be occurring at the regional and county levels. In the American West, at least, whether or not a community experiences such growth depends on its particular characteristics; not all communities in a given region hold the same appeal to potential in-migrants. As my
analysis shows, amenity-driven growth is by no means a foregone conclusion for Berlin, despite emergent discourse focused on the beauty and recreational opportunities of its surroundings.

Natural features are not the only factors reshaping rural communities in the early 21st century, nor are they the sole source of optimism regarding redevelopment in places affected by industrial restructuring. In *The Rise of the Creative Class*, Florida (2002) articulated a theory of economic growth centered on the ability of cities and regions to attract and retain workers in “creative” occupations—artists, engineers, scientists, musicians, designers, and others who work in fields where innovation, autonomy, and flexibility are highly valued, and who comprise the new backbone of America’s changing economy. These workers are attracted to places that provide an appropriate mix of social, cultural, and technological features conducive to creative activity in all realms of their lives, not merely the labor market, and thus concentrate in places that facilitate a particular lifestyle. Places that provide such a “creative milieu,” it is argued, have tended to thrive since the late 20th century. This perspective on what underpins vibrant regional economies has been extended to the study of rural areas, with findings generally supporting Florida’s theory (McGranahan and Wojan 2007; Wojan, Lambert, and McGranahan 2007).

**From Spaces of Production to Spaces of Consumption**

Berlin is at a critical juncture, between industrial decline and potential future growth based on characteristics not previously the focus of economic activity there, such as the physical attractiveness and lifestyle opportunities of its surroundings. It is thus
worth considering what such a transition would mean for its identity, meaning, and function in the regional, national, and even global economy. Che (2005) points out that amenity migrants have furthered the transition from production to consumption as the fundamental orientation of many rural landscapes. Green (2001) sees the relationship between economic development and rural communities’ resource bases as a fundamental challenge because of the increasing consumption value of these features, rather than their value as sources for production. As Bascom (2001, p. 53) wrote:

The significance of the ‘rural’ is shifting from a production orientation (e.g., agriculture) to a consumption-oriented role (i.e., the symbolic value of a rural identity by which to market a particular place to inhabitants, investors, visitors, and funding sources)...The new, rural modus operandi is a consumption-oriented role for space rather than a production orientation.

Some have termed such a wholesale shift in the function and meaning of rural places as the “postproductivist transition” (Roche 2003). Spaces historically associated with the agricultural sector have received much of the attention vis-à-vis this transition, but the forest sector has also undergone such a shift in much of the industrialized world, and perhaps done so in a more distinct fashion (Mather 2001). In this sector, the transition is one of a relative decline in timber production in light of an increased emphasis on the provision of environmental goods and services such as carbon sequestration, the protection of water quality, and aesthetic functions. Though by no means a wholesale one, precisely such a shift has been evident around Berlin in recent years.

The commodification of the rural landscape is nothing new, but its commodification in terms of representations and meanings centered on a particular lifestyle, rather than its value as the source of material commodities such as timber or
minerals, is a relatively recent development. Britton (1991) situated the study of place-based consumption (in the forms of leisure and tourism) within the wider study of capitalist economic and social structures—where previously these activities were treated simply as “free time”—by calling attention to the ways in which this set of industries and activities shape the material bases and meanings of places, and underpin their (re)integration into the capitalist system of production. Building on Britton’s perspective, Ateljevic (2000) does not see tourism, and the spaces and places associated with it, simply as a set of free-floating nodes of consumption, but rather as the product of a dialectic between processes of consumption and production—between culture and economy. That is, tourist consumption is produced and constructed out of action, communication, institutions, ideals, and values, and is the product of negotiation between producers (e.g., chambers of commerce, tourism bureaus, and other marketers) and consumers (see also Styhre and Engberg 2003). Simultaneously echoing Britton’s call for the reconceptualization of leisure, travel, and culture as fundamental elements of capitalist production while pointing ahead to Florida’s emphasis on lifestyle components in the economic success of metropolitan regions, Zukin (1998 p. 825) wrote of urban places:

Changes in the material and symbolic fabric of cities alter previous conceptions of consumption as a residual category of urban political economy. Cities are no longer seen as landscapes of production, but as landscapes of consumption (p. 825).

However, such spaces tend to disguise the underlying logic of profit, as lifestyles and identities are the focus of promotion—and are thus sold—rather than a discrete product (Lucas 2004). Hopkins (1998) sees the shift to rural spaces of consumption as primarily driven by advertising, and marked by a set of representations that comprise a
generic rural identity centered on alterity—the idea that rural places are *not* other places such as cities and suburbs—that can be used to give meaning and character to any rural place in need of a new and marketable identity. Not writing solely about the rural, and perhaps extending an argument more applicable to urban spaces, Styhre and Engberg (2003) argue that spaces of consumption have eclipsed those of production in terms of their overall importance in determining large-scale patterns of social organization.

**A Third Way? Sustainability, Conservation, and “Green” Development**

The production–consumption trajectory laid out above is a compelling model for change in a place like Berlin. However, the city is facing the challenge of economic reinvention at a time when ideas about sustainability and the integration of environmental conservation into development efforts are increasingly prominent. The term “sustainable development” emerged in the late 1980s (WCED 1987), and has since been at the center of discussions about the relationship between human societies and the environment (Perz 2001). Sustainable development is an inherently ambiguous term, meaning different things to different people (Duncan 2004; McMichael 2000)—What is to be sustained, and for how long?—and partly on the basis of this is difficult to evaluate in terms of widely-accepted quantitative indicators (Parris and Kates 2003). However, concerns about sustainability in economic development are, across the globe, figuring into policy directed at regional production processes, transportation systems, waste disposal and recycling, among other sectors (Hudson 2007). The institutional and community conditions under which sustainable development (or related themes such as “productive conservation” in the case of Perz 2001) can emerge has also become an area of inquiry
for social scientists (e.g., Haque, Deb, and Medeiros 2009; Weber 2003), though precisely what is meant by “sustainable” can be left largely undefined (e.g., Brennan, Luloff, and Finley 2005).

Rural development policies in both the developing and developed worlds have increasingly been oriented around terms such as _stewardship_ (Cocklin, Dibden, and Mautner 2006). In the developing world, by 2002 “ecotourism” was being billed as an exemplary form of rural sustainable development by the UN and other advocates (Butcher 2006), predicated on notions of indigenous stewardship, be they well-founded or not (Fennell 2008). The very notion of stewardship has also been problematized in first world contexts, in such cases as the use of tree planting by the timber industry to improve its environmental image despite its ineffectiveness at countering environmental degradation (Cohen 2004).

Today much of the popular discourse about integrating concerns of sustainability and conservation into economic activity employs the term “green” as a catch-all for ideas linked (however remotely, it seems) to ecological well-being. In urban and suburban settings, questions of sustainability in development became increasingly prominent beginning in the 1980s, though earlier strains of planning for green communities were visible as far back as the late 19th century (Berke 2008). The redevelopment of “brownfields,” or polluted formerly industrial areas, as green (in the literal sense) space has become viewed as a key for sustainable urban development (De Sousa 2006; see also Rodenburg, Baycan-Levent, van Leeuwen, and Nijkamp 2001). Increasingly, governments are incentivizing environmentally sustainable—green in the figurative sense—practices, particularly in building design and construction, in the redevelopment
of brownfields (Edwards 2009). In regions hit especially hard by deindustrialization, such as the Rust Belt, plans to green shrinking cities by converting vacant properties to green infrastructure have emerged (e.g., Schilling and Logan 2008). The term has also been used extensively by academics in a number of fields where economy and environment intersect. For example, Jones et al. (2003) argue that rural communities across America are likely to become greener through the in-migration of more environmentally-minded residents. From a consumption-oriented perspective, scholars have begun to pay attention to the social and environmental effects of green consumerism, or the purchase of ostensibly environmentally friendly products (e.g., Harrison 2006; Todd 2004).

But perhaps most importantly for places like Berlin, “peak oil,” climate change and the resultant push for renewable and/or carbon-neutral energy sources and production technologies have created new green-collar jobs, though it is not clear precisely what occupations fit that description (Kahn 2009), nor what their aggregate effects on standard of living might be (Pearce and Stilwell 2008). In the US, energy policy has increasingly promoted innovation and use of renewable energy sources, including wind, solar, and biomass. The latter, particularly woody biomass energy development, presents opportunities for “conservation-based development” in which place-specific environmental needs are considered on par with economic and social ones (Rasmussen, Hibbard, and Lynn 2007). However, though it might be consistent with discourses of sustainability and energy security, renewable energy development seems to be as prone to community conflicts over land use and siting decisions as other forms of energy development (e.g., Pasqualetti 2001).
In New Hampshire, the state government has endorsed "25 x 25," an effort to have 25 percent of the state's energy come from renewable sources by the year 2025. The state is also a participant in the Regional Greenhouse Gas Initiative, a market-based "cap-and-trade" program to reduce carbon emissions in ten northeastern states by 10 percent by the year 2018. Both programs involve incentives for renewable energy development, and New Hampshire's governor has stressed the suitability of the state's wood supply for the pursuit of such goals (through the conversion to energy in biomass power plants), along with lesser emphasis on wind and hydroelectric development (State of New Hampshire 2006). As I show in this analysis, Berlin's identity, location, natural resources, and industrial infrastructure are conducive to renewable energy development, though its scale, scope, and community effects remain open questions.

Conclusion

The literature outlined above suggests a general model of change in rural communities, yet points to newly prominent themes in development that pose an alternative to the traditional production–consumption trajectory. What course is Berlin on? The dismantling—literally—of its productive capacity has been the defining characteristic of the city in recent years, along with the images of blight and emergence of environmental issues brought about commonly by the disappearance of industry. At the same time, opportunities presented by new ways of valuing the region's physical features—notably their worth as aesthetic and recreational amenities—are being explored and pursued to one degree or another. Where once the city was known and defined as a place where material things were made—certainly as a space of production—it is now a
place in search of a new identity. With the closure and dismantling of the pulp mill, the physical source of the city's image as a polluted, "smelly," and otherwise undesirable place disappeared, presenting the city with an entirely new set of development opportunities. But it is unclear if the city will necessarily continue on a course toward a new definition, identity, and function as a space of consumption—replete with shifts in its demographic and socioeconomic structure—or if it is turning a corner and entering a previously uncharacterized phase of development based on sustainability-oriented or "green" themes such as renewable energy production. Contemporary change in Berlin is being negotiated, and is contingent on a complex set of local and non-local forces. The nature of this negotiation and contingency is the focus of this study.
CHAPTER 2
METHODS

Community as the Unit of Analysis

In some respects, the contemporary Northern Forest is in a position analogous to that of central Appalachia several decades ago, when growing mechanization and productivity in the coal industry brought dramatic decline in employment and outmigration, followed by decades of stagnation and continued underdevelopment. But conditions in the Northern Forest differ in important ways, including a more egalitarian regional political economy, a robust tourism sector, and what some see as a strong ethic of environmental stewardship and respect for a balance between humans and nature (Judd 1997). At the same time, regional characteristics mask the substantial differences that exist from one place to another; communities across the region differ greatly in their social, economic, and environmental contexts. Not all communities in the region are facing the same types of economic disruptions, and the community responses through which economic redevelopment takes shape will not be identical in any two places. I use a multi-method approach to interrogate the post-productivist transition thesis, and to understand how place matters for the course of community change. Berlin is a community broadly representative of many others that have experienced deindustrialization in the context of substantial natural amenities. However, it is a place with a distinct set of qualities. My questions thus focus on the community, and this is the
fundamental unit of analysis. However, I use many forms of data at several levels in addressing these questions.

Place Character

As Archer and Blau (1993) note, the strength of community studies is their contextual approach to the analysis of change. Two overlapping goals for this community case study are to understand the place character of Berlin, and then to understand how change is conditioned by this set of local elements. Place character refers to the “set of patterns in meaning and action that are specific to a distinct locale,” borne out of the “particular combination of geography, history, economy, demography, politics, organizations, culture, and aesthetics” that inhere there (Paulsen 2004 p. 245). The concept carries an emphasis on how social action is situated in place-specific contexts, making it particularly useful for a study of community change. In keeping with Paulsen’s approach to understanding the ways in which change is conditioned by local context, I heed Gieryn’s (2000) advice to treat the three aspects of place—location, material form, and meaningfulness—as “bundled” and inseparable to preserve the complexity and completeness of the phenomenon of place in my analysis. Lyon (1989) offers a definition of community centered on “people living within a specific area, sharing common ties, and interacting with one another” (p. 5). Such a definition is useful in its breadth, but I deepen it to include the place itself, treating space as more than the container of social and economic life. The city’s built environment, the former mill site, the surrounding forest resource, and the meanings with which specific locales are imbued
all occupy central roles in my analysis and represent, in Gieryn’s words, agentic players
in the game of redevelopment.

Paulsen (2004) argues that understanding of place character can be built through
several methodological strategies focused on the community, two of which are employed
here: learning from local accounts, and examining responses to exogenous forces. Using
these two ethnographic approaches in conjunction with other methods, I blend what Falk
fundamentally qualitative approaches. However, the former involves moving in an
inductive fashion, “upward” from the data, while the latter involves the interrogation of
preexisting theory from “below.” I evaluate the post-productivist transition thesis in light
of ethnographic data surrounded by contextual quantitative data, and in doing so I am
influenced by Burawoy’s approach. But in exploring just how the case of redevelopment
in Berlin differs from what the post-productivist transition thesis suggests, I discover and
emphasize the specificity place. Here, I primarily move “up” from the data, in the style
of Falk, with my explication of the most powerful elements of place driven by the
perspectives of the people I spoke with as well as the voices I listened to—in city council
meetings, public hearings, news accounts, and other forums. Themes of community
stigma, the centrality of spatial forms, and a differentiated small business community
emerged largely on the basis of this ethnographic data. But here again, I situate these
emergent themes within existing bodies of work, such as the environmental stigma and
civic community literatures. I thus turn back to the interrogation of theory, exploring the
utility and limitations of these bodies of work for understanding the shape of change in
Berlin.
Lobao, Hooks, and Tickamyer (2007) outline two general modes of inquiry into questions of spatial inequality—the society in place model, and the place in society model. In the former, places are seen as the locations in and across which large-scale social forces play out. In the latter, places are taken as specific sets of circumstances and characteristics that shape social reality. Just as I combine the two methodological approaches outlined above, I mix these two modes of inquiry into the relationship between place and society. I treat Berlin as a site affected by large-scale social forces such as deindustrialization and an increased emphasis on amenities in development, but also as a place which itself affects the course of historical change through its specific set of characteristics. My study of Berlin aims to further our understanding of how such large-scale forces play out across space, and how and why the local context matters.

**A Model of Redevelopment**

A study such as this one, geared toward a round understanding of change in a place and time marked by fundamental economic transition, does not lend itself to a neat, simple treatment of independent and dependent variables. However, my general framework is as follows. In a broad sense I treat deindustrialization as the independent variable. That is, the dismantling of the historically dominant pulp and paper industry in Berlin is the basic impetus for the patterns of change and redevelopment I am attempting to characterize. The questions raised in Chapter 1 are fundamentally about redevelopment, and in a similarly broad sense, I treat redevelopment as the dependent variable in my analysis. The term implies change and transformation, and importantly, intentionality—a sense or description of what happens next, and why. The term
redevelopment is a vague one, yet here its utility lies in its breadth. For communities like Berlin, with the decline of traditional industries and some potential for amenity-based growth, the crucial question is what the nature of their new economy is going to be. Hence, I focus largely on emergent forms of economic activity in Berlin, and explore the factors on which they are contingent. But redevelopment is not only about economic activity—it simultaneously contributes to and is a part of larger patterns of community change that involve local residents, institutions, and social conditions that are not fundamentally economic in nature, such as measures to address local housing issues.

In treating redevelopment as the dependent variable, I examine patterns of community change with an underlying concern for what they mean for the future economy of the place. But the concept’s utility through breadth also presents measurement issues. How can I assess the nature of redevelopment in Berlin in 2009 when the new economic identity of the place has not yet become fully clear? In attempting to do so, I characterize economic redevelopment in three ways. First, I assess redevelopment in terms of efforts that have emerged since the early 2000s that are either operational or under construction, such as the state and federal prisons and an all-terrain vehicle park. Second, I focus on currently proposed projects, such as biomass power plants and a local tourism initiative. Third, I focus on the discourse of redevelopment in Berlin, which may or may not correspond to existing or proposed economic ventures, but contains the ideas and conceptions of what is or is not viable or appropriate there.

Place character can be treated as both an independent and dependent variable, or neither in the case of phenomenologically-oriented studies that emphasize processes of structuration (Molotch, Freudenburg, and Paulsen 2000). Here, I treat it primarily as a
moderating variable on which patterns of change and redevelopment are contingent, but which is simultaneously rooted in the history of the place. However, carrying the questions posed by this study forward into the future, it is also something of a dependent variable, as place character not only shapes, but is reshaped by, action.

Figure 2-1: Conceptual model of factors affecting community response to economic disruption in Berlin

Figure 2-1 provides a basic model of my analysis, and a streamlined model of change in Berlin. The horizontal line represents the community’s response to the loss of its historical economic base. This pattern of change is conditioned by the community’s place character—key social, economic, and environmental aspects of Berlin—as well as by extra-local forces such as energy prices, state and federal policy, and information technologies. While place character is the focus of my analysis, it interacts continually with the various extra-local forces that form the context within which Berlin itself is operating. For simplicity’s sake, the diagram does not reflect the myriad ways in which place character is rooted in history, but these factors are addressed throughout my analysis. In including spatial and material forms as key contextual forces that are
constraining and facilitating various forms of redevelopment in Berlin, I employ a fundamentally environmental-sociological approach to the study of community change.

**Research Questions**

Several related research questions corresponding to the effects of deindustrialization and place character on redevelopment structure this study. The specific themes of interest were developed largely out of my conversations with people in Berlin. First, taking the decline of pulp and paper as the taken-for-granted independent variable: How are social, economic, and environmental forces shaping redevelopment in Berlin? Put another way: How is community change contingent on local factors, and how is it a product of negotiation at the local level? There is a great deal of overlap between social, economic, and environmental factors as Gieryn’s (2000) perspective on place in sociology suggests, but I will try to parse them as they relate to specific questions about effects on redevelopment.

With respect to social and economic factors, several questions pertain to the present impacts of the legacy of a single dominant employer in Berlin. How has the community’s history as a pulp mill town structured its identity? How has an historical reliance on the mill shaped other elements of the local economy? What roles do small businesses and the people who run them play in determining the course of redevelopment? What roles do “anchor institutions” like schools, hospitals, and relatively large non-mill employers play in patterns of change? To what extent has the city experienced fiscal stress in recent years, and how has the course of redevelopment been shaped by fiscal concerns? How is the class structure of the community changing?
With respect to environmental factors, what role does space (i.e., the material form of Berlin and its surroundings) play in redevelopment? More specifically: How are development opportunities in Berlin shaped by the city's built and natural environments? How are redevelopment discourse and opportunities constrained by the cityscape? How does the city's built environment interact with the fiscal manifestations of deindustrialization? How do the surrounding lands, including the condition of forest resources, shape conceptions of what is possible or desirable in Berlin?

Finally, as outlined in Chapter 1, does the "post-productivist transition" thesis hold in Berlin? Put in the language of that general paradigm: To what extent has the city experienced a transition from a space of production to a space of consumption? What new development strategies have emerged or been proposed? Has the image and identity of the place changed, and if so, how?

Figure 2-2 displays the elements of place character most central to my analysis in terms of their social, economic, and environmental orientations. The cityscape, or built environment, is at the literal center of my analysis in this schematic, embodying not only its physical form but also elements of image, identity and meaning, and sets of economic causes and consequences. Community stigma embodies both environmental and social issues, while the small business community is primarily a social and economic entity. As I treat it here, the forest resource has a primarily economic and environmental orientation. Of course, all of these elements of place at least touch on social, economic, and environmental phenomena, but they are arranged thusly to provide a visual guide to how I conceptualize them in my analysis.
Figure 2-2: Key elements of place character by primary orientation.

**Data Sources**

**Qualitative Data**

I use three main types of data, drawn from a variety of sources and methods, to investigate the research questions laid out above. Secondary and survey data are used primarily to complement the qualitative data which drive my analysis, and from which the key elements of place character depicted in Figure 2-2 emerged. The qualitative data, obtained primarily through field work in Berlin, inform all areas of inquiry outlined
above. My field work included semi-structured interviews with key informants and residents, participant observation in local meetings, and visual and photographic accounting of the community that took place over the course of approximately 18 months, from mid-2007 to early 2009. Other methods included reviewing historical materials such as local and regional histories, and annual city reports. I reviewed records of city council meetings as well as the local daily and weekly newspapers from mid-2007 to late 2009. I also reviewed stories on the city and North Country published the *Manchester Union Leader* from 2006 to 2009.

**Semi-Structured Interviews.** Between summer 2007 and spring 2009, I conducted 18 interviews with local residents, businesspeople, civic leaders, and other key informants intimately familiar with the city and region. Four of these interviews were conducted by phone, and the rest were face-to-face at people’s place of work. I combined purposive and snowball sampling to obtain my sample. My initial entrée into the community was through a professional working in a field related to economic development. He agreed to be interviewed, and at the end of the interview I asked him for the names of three people that he thought it might be good for me to speak with in order to get a variety of perspectives on the community. I did the same for each respondent that grew out of that initial interview. Simultaneously, I approached several other people because of their positions in fields related to economic development, because they owned local businesses, or because I believed they could provide me with new perspectives on the community. Most were glad to speak with me, while some, primarily small business owners, initially agreed and then declined to be interviewed. I spoke with five small business owners, six professionals working in local businesses and...
organizations, and four professionals working in various capacities for the City of Berlin. One respondent was a college student, and two worked in the regional forestry sector. I obtained a mixture of people originally from Berlin or the Androscoggin Valley, and people who had moved to the area as adults. Three of my respondents were return migrants. Thirteen were male, five were female, and all were non-Hispanic white. While 18 interviews is not a terribly large sample, the community is the fundamental unit of analysis here (N=1), and I draw on several other types of quantitative and qualitative data to contextualize the interview data and provide a rich description of the place.

Though I used an interview protocol to guide the conversation toward certain themes, the interviews were largely conversational in nature. I used a series of questions primarily with the goal of prompting respondents to simply start talking about the place. To begin to get at the place character of Berlin, I followed Paulsen’s (2004) strategy of asking people how they would describe the place to someone who’s never been there. In each interview I attempted to cover basic personal background such as respondent’s migration history, level of education, how they ended up in their current position, and their parents’ occupations. With respect to the place, I focused on what they saw as the biggest changes unfolding in the city, their perceptions of the biggest issues the community is faced with, how the mill has shaped the city, and where they see the community heading in the next few years. I also asked about their level of civic engagement and how involved they are with what goes on in the community. To get at issues of class structure in the city, I asked basic questions about who the middle class in Berlin are, and how respondents think about their own social class standing. I also asked, where relevant, what they would miss most if they had to move away. This question
turned out to be quite fruitful, as respondents often touched on aspects of the place they had not previously covered. As the interview schedule progressed and it became clear how central it was to questions of redevelopment, I asked about respondents’ perspectives on the redevelopment of the former mill site.

The goal of this strategy was to use the data collected from these individuals to better understand the characteristics of the community, and how the place was changing. Often, a question related to one theme would lead to a useful answer related to another, so I let respondents talk at length. Sometimes this resulted in extended passages not immediately relevant to my questions of change and redevelopment, but more often respondents touched on a new, as yet uncovered issue related to my interests. For example, the issue of community stigma arose by virtue of these, as Falk calls them, “little surprises.”

Interviews lasted from 35 minutes to three hours. I recorded these interviews using a digital voice recorder, and took notes while they were in progress. I transcribed the interviews personally, and ended up with roughly 500 double-spaced pages of interview data. While this was time consuming, I found that by getting and remaining close to the data I was able to identify key points and themes that I’m sure I would have missed otherwise. Hearing respondents’ words over and over again while simultaneously typing them out transported me back into the original setting of the interview, and brought back memories such as what their office was like, what I saw in the city as I drove to meet them, and what the most important local news issues of the day were.
I then used the qualitative data analysis program N-VIVO to code and analyze the data. While this thesis is a *case study*, the case is the community—not an individual or set thereof. I therefore pursued an issue-focused analysis of the interview data, rather than a case-focused approach (see Weiss 1994). My coding scheme reflected a pre-existing topical framework, focusing initially (see Lofland and Lofland 1995) on general topics such as *issues* and *change* in the community, which broadly paralleled the sets of questions in my interview protocol. As I reviewed these initial codes, I refined the coding scheme to reflect the more specific themes emergent in the data, such as the impacts of the mill on the community. In this case, for example, I parsed these impacts into economic, social, and environmental effects as outlined in Table 2-1. Further, within *social effects of the mill*, I elaborated several other categories such as *community identity*.
(not shown in Table 2-1). I further parsed environmental effects of the mill, into codes focused on air, water, and ground pollution (not shown in table above). Codes were not exclusive, so that one passage could be coded simultaneously under two categories within a single overarching theme, as well as under another separate theme. This approach to the data led to a complex set of overlapping codes focused on themes such as the downtown, blight, mill site, the river, community class structure, and community identity.

I also classified my respondents in terms of basic demographic characteristics such as gender, age, level of education, occupation, where they grew up, and where they were living at the time of interview.

My overall approach was to draw on the interview data for insight into patterns of community change, and then to ground the interview data in other forms of data as outlined in the sections below. There is an almost inherent conflict in learning about a community by talking with individuals. People can tell you a lot about what is happening in a given place, but they are always offering their own assessment of the situation. The task of the researcher is to integrate these individual perspectives on community into a larger whole that reflects the complex reality of place. In some cases initial conclusions drawn from the interview data were deepened by the integration of interview data with other data, while in others the contextual data served to check conclusions that could have been drawn from the interview data alone. While my analysis is driven primarily by the interview data, and the voices they embody thus privileged to an extent, by contextualizing these voices in other sources of data on the community I was able to hopefully provide a comprehensive and balanced account of community change in Berlin.
Where I quote respondents (or others as outlined below) I have edited out any verbal fillers (“um,” “ah,” etc.) unless their omission would have meant a loss of meaning for the passage in question. In some passages, these pauses reflected a real hesitancy or searching on the part of the respondent, and I decided to include them in order to convey the sense of how the respondent expressed herself. In some cases respondents touched on one issue, shortly addressed another, then came back to the original issue. In cases where it did not unduly disrupt the meaning of the respondent’s words I chose to string together nearby passages on a single theme.

**Participant Observation.** Between fall 2007 and spring 2009 I attended several public hearings and meetings related to economic development in the city and region. In some cases, I recorded these meetings, which lasted anywhere from one to three hours, but in all cases I took notes on what was going on around me. I also spent time in local restaurants, listening to the conversations, and observing daily life in Berlin’s public spaces. I also toured the paper mill down the road in Gorham as I attempted to gain a better understanding of the industry on which Berlin was built for more than a century. I took extensive field notes during each trip to Berlin, and typed these up as soon as possible, generally that evening or the following day. Usually, I would make the two-and-a-half hour trip north to Berlin in the morning, spend the day, and drive home at night, but in a few instances I spent the night at a motel down the road in Gorham. In total, I spent roughly three weeks in the community, though not consecutively.

**Visual and Photographic Accounting.** I spent a considerable amount of time simply exploring Berlin in my car or on foot, taking roughly 300 digital pictures. As my time in the city, and interview schedule, progressed I became drawn to the importance of
the community's physical structure. I thus began to focus on capturing various aspects of
the built environment. I focused on the mill site in the center of town, blighted or
burned-out properties, the Androscoggin River and its hydroelectric facilities, the
downtown area, and the state of the surrounding forest resource. Over time, I was able to
capture some change via photographic records, such as the demolition of the pulp mill
and processes of blight and restoration. I also focused on the natural environment around
Berlin, documenting the natural amenities of the area in terms of the views from the city,
and also patterns of timber harvesting visible from high points there. I also reviewed the
collection of photographs of Berlin and its mills at Plymouth State University's Beyond
Brown Paper website (beyondbrownpaper.plymouth.edu) to gain an understanding of the
historical physical structure of the community and the nature of work in the pulp and
paper industry.

**Other Qualitative and Historical Methods.** I constructed a historical overview of
the settlement, initial development, and culture of the city and North Country from
various local and regional histories and other materials, to place recent trends in Berlin in
historical and geographical context. Historical dynamics, as well as shifting patterns of
land use (Cronon 1983) and, more recently, land tenure and ownership play a part in
present change in the community and region. I also read extensively on the pulp and
paper industry to gain an understanding of its structure and production technologies.

I reviewed electronic records of City Council meetings to keep track of
conversations and public comments about redevelopment in that setting. I collected and
reviewed reports on land use and ownership in the region, wood supply and the forest
products industry, the economic impact of mill closures and prison construction, a
Superfund site in the city, and summary reports based on other data from the community such as a survey done by Plymouth State University. I also reviewed materials related to the tourism industry in the region, including a newly-developed regional branding and marketing strategy. I also reviewed several chapters of the city’s new master plan; the chapter on economic development is particularly important in my analysis.

I read the *Berlin Daily Sun* every day, and the *Berlin Reporter* every week, saving and cataloging each paper according to themes related to redevelopment or key local issues. I also collected articles from the *Manchester Union Leader* (via LexisNexus searches) that contained the words “Berlin” or “North Country” in the story headline between 2006 and 2009. I collected and reviewed news stories focused on the city and region from New Hampshire Public Radio. I also reviewed several blogs and websites related to local issues and redevelopment to inform my understanding of development discourse. These included laidlawenergy.blogspot.com, berlinfuture.wordpress.com, citythattreesbuilt.com, cfanv.com, coosconversations.com, and 2much2do4now.typepad.com/bytechew.

**Public Secondary Data**

I use publicly-available quantitative data from a variety of local, state, and federal sources to understand how Berlin arrived at its present condition. Most are data from the US Census Bureau (both the decennial census and the Bureau’s Population Estimates program). They provide an overview of socioeconomic and demographic trends and conditions, including the historical growth and decline of the region and recent shifts in the size of the middle class. I used Economic data from the Economic Census’ County
Business Patterns and Bureau of Economic Analysis Regional Economic Information System to assess the historical and current economic structure of Berlin and the North Country, along with employment and wage data from the New Hampshire Economic and Labor Market Information Bureau. Tax records and records of expenditures from the City of Berlin were used to gauge fiscal conditions there. I used US Forest Service Forest Inventory Analysis data to compare the condition of forest resources around Berlin to that of several comparator regions. I also drew on data from the US Environmental Protection Agency’s Toxics Release Inventory to provide one measure of the environmental harm produced by the pulp mill over the final years of its operation.

Survey Data

The Community and Environment in Rural America Survey. I use primary data from the Community and Environment in Rural America survey, an ongoing project conducted by the Carsey Institute and administered by the UNH survey center (see Appendix A). I designed the CERA survey with Lawrence Hamilton, Mil Duncan, and Jennifer Sherman in spring 2007. The first stage involved telephone interviews with a random sample of 7,842 people living in seven clusters of counties across the rural US, including one comprised of Coos County, NH (N=967), and neighboring Oxford County, ME (N=753), in 2007. These seven clusters were chosen to represent four broad types of rural places, characterized as amenity/growth, amenity/decline, declining and chronic poverty. Hamilton et al. (2008) provide an overview of the survey methodology and results. I compare data from the Coos/Oxford cluster to data from other study clusters in central Appalachia, Alabama’s Black Belt, and the Mississippi Delta. About 100 survey
questions covered topics that ranged from respondents' personal background and experiences (such as family, jobs, education and life situation) to their migration history and views about their local government, the community and environmental issues. Data were weighted to bring the age-sex-race composition of the sample in line with 2006 Census Population Estimates. Using random-digit dialing, the UNH survey center achieved American Association for Public Opinion Research #4 response rates of 26.2% in New Hampshire, 26% in Maine, 19.2% in Alabama, and 23% in Mississippi.²

I use the CERA survey data primarily to provide additional context for my discussion of the issues Berlin is grappling with. Data aggregated by place are used to construct a profile of community conditions in Berlin (N=242), and to put conditions there in regional and national context. I pay particular attention to measures of civic culture (social trust, social cohesion, and civic engagement). I also employ data on income and occupation to create a profile of the middle class in and around Berlin, focusing in particular on small business owners.

The Fall 2009 Granite State Poll. In late 2009 I had the opportunity to add a set of questions to the Granite State Poll, a quarterly public opinion survey done by UNH's Survey Center. The survey was administered between October 2nd and October 9th using random digit dialing to select a sample of 502 adults, and achieved an AAPOR #4 response rate of 30%. Based on the emergence of community stigma as an important theme related to redevelopment, I developed two questions designed to gather data on New Hampshire residents' perceptions of Berlin. The first question was designed to assess respondents' general impressions of the city—positive, negative, or neutral. For

those that had a positive or negative impression of the city, they were asked, in open-ended form, to explain why they had that particular impression (see Appendix B). I then coded these open-ended responses according to the most prominent themes, positive or negative.  

-Naming the Community-

I headed into this study interested in Berlin as a community, and how it was changing. As I proceeded with my analysis, I became concerned with Berlin as a place. Researchers commonly assign pseudonyms to the places they study, most often out of concerns for confidentiality. But pseudonyms and the act of not revealing the specific location in which research is carried out implicitly say something about the generalizability of findings; the setting is a place, rather than this or that specific one. I chose to identify Berlin for a few reasons. First, since I was not dealing with issues that posed much risk to respondents, and I was focused on the community instead of individuals as cases. Second, the vast majority of development efforts and discourse that I chronicle in Berlin unfolded in the public sphere, and was open to public scrutiny from the outset. Third, the identity of the community would likely have been revealed on the basis of my extensive citations of local histories, newspaper accounts, and online sources. But most importantly, as Becker (1998) points out, everything is somewhere. Any given phenomenon inheres in a specific place, and whatever is true of that place is going to affect the object of study. Place is not just the backdrop of action, it forms the environing conditions of the phenomena under analysis. My analysis emphasizes the specificity of one place—Berlin—as crucial for understanding the course of change there. In doing so,

3 Chapter 4 treats the survey findings and coding scheme in detail.
I adopt a primarily Weberian, historicist-interpretive sociological stance (see Orum 1988; Ragin and Becker 1992). Attempting to mask its identity would have meant masking some of the specificity so crucial to the perspective on change articulated in the chapters that follow.
CHAPTER 3
DEVELOPMENT AND DECLINE IN BERLIN

The challenges facing Berlin today cannot be understood without first looking back at its history. The area has a long history of using forest resources for economic production, its inhabitants first logging its hills for sawmills, then to feed the paper mills along the Androscoggin river (Pike 1967). Davis (1897), in the first history of Berlin, provides a thorough overview of the settlement and initial development of the community. Berlin’s first settlers of European descent came to what was then called Maynesborough from nearby Shelburne and Gilead around 1820. The first logging camp was established around 1825 on the east bank of the Androscoggin. Berlin was incorporated as a town in 1829, when its population was roughly 70. The origin of the town’s name is uncertain (Leukhardt 2008a; Leukhardt 2008b), though it appears to have been chosen in part because it did not appear elsewhere on the New Hampshire map at the time. By 1847 its population had grown to 175. The Atlantic & St. Lawrence Railroad Company built a line (later leased by the Grand Trunk Railway) to Berlin in 1852, and the following year a sawmill built by H. Winslow & Company, a group of businessmen from Portland, ME, began operations at the head of the falls on the Androscoggin, using the flow of the river for mechanical water power. In 1866 H. Winslow & Co. was renamed Berlin Mills Company, which would be wholly acquired by Portland businessmen William W. Brown and Lewis T. Brown two years later. The Brown family would be central to Berlin’s well-being for the next several decades.
The company held about 300,000 acres of timberland, employing as many as 800 men at the sawmill in the summer, 1,200 lumbering in the winter, and 450 river drivers in the spring (Davis 1897).

Despite the vast wealth created by the processing of trees into lumber, paper, and other products, the North Country has a history of economic hardship. Luloff and Nord (1993) note that the major factors affecting community health in northern New England lie beyond residents’ control, and this is especially so in mill towns where the decisions of nonresident business owners, in conjunction with macroeconomic trends, carry enormous community effects. To understand the economic, social, and environmental history of Berlin, it is necessary to understand the industry that dramatically reshaped the city beginning in the 1880s—pulp and paper.

**The Pulp and Paper Industry**

Modern societies, despite recent technological advances, are largely predicated on the use of paper. Paper is extensively integrated into culture and economy (Smith 1997); the printing of this thesis on expensive stock is evidence of as much. Not only does paper hold a fundamental place in our lives, but its manufacture has enormous impacts on the world’s forests. The increased demand for paper in the 19th century, driven by industrial growth, created the demand for a substitute for the traditional raw material of cotton rags, as well as greater production capacities. Roughly one-fifth of all the wood harvested in
the world, and 42% of all wood harvested for industrial uses, is used to make paper (Abramovitz and Mattoon 1999).

To make paper from trees, hardwood or softwood species are cut and trimmed, debarked, chipped, and then processed to extract cellulose fibers from the resinous lignin which binds them together. Wood pulp was initially produced by mechanical means in which wood was ground into a pulp that contained natural contaminants, such as lignin, in addition to the cellulose. Lower-density coniferous species such as spruce and fir were the only ones suitable for such applications (Smith, Larson, Kelty, and Ashton 1997). However, the development of chemical pulping processes in which these impurities could be dissolved out allowed more wood species, including hardwoods, to be used in papermaking.

In chemical pulping, the pulpwood is cooked with either a mixture of sodium hydroxide and sodium sulfide (in the kraft process), or with sulfurous acid salts (the sulfite process). In the 1940s the kraft process became dominant in the industry as it is more cost-effective (due to the recovery of chemicals used in the process), produces stronger fibers, and is compatible with more types of wood than the sulfite process. It is also relatively less polluting; the sulfite mills at Berlin and down the river in the Maine towns of Rumford and Jay were a huge source of pollution for the length of the Androscoggin (see Judd and Beach 2003). But while about 95% of the wood in mechanical processes ends up as pulp, chemical processes are only about 50% efficient, with much wood lost in the sludgy waste “liquor” that is these days commonly burned in recovery boilers for power and to recover pulping chemicals. However, in either method,

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4 Abramovitz and Mattoon (1999) provide a brief and useful overview of recent trends in paper production and consumption, and Smith (1997) provides a thorough overview of recent technological change in the industry.
pulp digesters emit methyl mercaptan, a byproduct of the decomposition of wood, which smells like rotten cabbage and gives paper mill towns (in conjunction with other chemicals emitted in the pulping process) their malodorous reputation.

Figure 3-1: Wood chips being loaded into chemical digester in Burgess pulp mill, 1937 (Plymouth State University 2009).
The pulp is then washed, and often bleached in a process which can require the use of up to 150 pounds of chlorine per ton of pulp (Smith 1997). It is then sometimes dyed and mixed with other additives, depending on the product to be made. The pulp, either dried in large rolls or suspended in a slurry, then makes its way to a paper mill where it is transformed into paper. A papermaking stock, containing 99% water and 1% pulp, is strained at the “wet” end of a paper machine, and the wood fibers begin to bind together forming a mat. The mat is fed through the machine, which can be several hundred feet long and 30 feet wide, and in which massive rollers progressively heat, dry, and compact the pulp to form paper. The paper may then be coated with clay or other substances to make it glossy and more suitable for printing applications before being collected in massive rolls en route to being processed into some finished product such as newsprint, boxes, or writing paper.

Figure 3-2: Men “on the wrenches,” tightening digester cover in preparation for a “cook,” 1937 (Plymouth State University 2009).
Pulp and paper is one of the most energy-intensive industries in the world, and is the second largest consumer of energy in the United States. It also uses the most water per unit of output of any industry (Abramovitz and Mattoon 1999). It is the single most capital-intensive manufacturing sector in the US as measured by capital expenditures as a percentage of sales, which averaged 6.9% per year from the mid-1980s to the mid-1990s—twice the percentage for all manufacturing industries (Smith 1997). As a mature resource-based chemical processing industry, it is roughly as structurally rigid as the basic chemicals, primary metals, and oil-refining industries. Like plants in those industries, pulp and paper mills consist of equipment and infrastructure designed for the production of particular commodities, and are not easily adapted to changing market conditions. Equipment and physical plant costs are extremely high; pulp and paper manufacturers have huge amounts of capital, sometimes more than a billion dollars, invested in facilities that must run nearly full-time to be profitable. In these ways, the domestic industry embodies the Fordist antithesis of the “flexible specialization” model of production—predicated on ceaseless innovation and multi-use equipment—identified and advocated by Piore and Sabel (1984). Partially as a result of high capital costs, industrial research and development spending in pulp and paper is the lowest among all manufacturing sectors, and technological leadership has shifted away from the US to Canada and Scandinavia, where institutional arrangements such as governmental support for innovation and networks of collaboration between non-governmental organizations and the industry are quite different from those in the US (Parto and Herbert-Copley 2007; Smith 1997).
Between WWII and 1960, the industry in the US spent over $180 million in capital improvements to its mills, purchasing new machines and upgrading older ones, and growth in the industry continued through the 1960s (Condon 1995). From 1972 to 1992 total annual production increased by 42% while employment declined by roughly 9,000 jobs; labor productivity increased 52% over this period as a result of technological advances. At the same time, production centralized in larger and larger mills; the total number of mills declined by 21% while average output per mill increased by 91% (Smith 1997). The restructuring of the sector has continued into the 21st century, with the number of full and part-time employees in the broader Paper Manufacturing industry in the US declining from 621,000 to 484,000 between 1998 and 2005 according to data from the Bureau of Economic Analysis Regional Economic Information System.

Pulp and Paper in New England and the North Country

The development of the pulp and paper industry in the North Country was part of a broader region-wide phenomenon in which New England became a center of paper production. Although it is a relatively advantaged region of the US, New England has few mineral deposits or other sources of raw materials beyond common minerals such as granite (Eisenmenger 1967). However, it does have a vast forest suitable for pulpwood production. The first practical application for pulping wood was invented in Germany in the 1850s, and by 1860 New England accounted for roughly half the value output of the

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5 This classification (NAICS 322) includes pulp mills, paper mills, and establishments that make products from purchased paper.
American paper industry (Eisenmenger 1967). By 1912 the annual cut of pulpwood in New England eclipsed that of sawlogs\(^6\), and

The old whine and snarl of the saws gave way to the stink of sulphur, smellable seven miles away on a clear night, and thousands of acres of softwood were cut every year to provide the American people with their Sunday funnies (Pike 1967 p. 263).

The development of the pulp and paper industry in New England was perhaps most vigorous and expansive in timber-rich Maine, where papermaking began at the end of the 1860s (Clark 1977). Paper companies began to buy up spruce-rich forestland in Maine in the 1880s, as new pulping processes allowed spruce, the most plentiful species in the state, to replace poplar as the pulpwood species of choice, and as demand for pulpwood exceeded that which could be brought to mills by contracted farmers (Clark 1977). Timberland in Maine was extremely inexpensive at this point, as it had been stripped of its pine and large spruce in earlier decades. The paper industry was buying not forests at this point, but feedstock supply (Muir 2000).

The number of pulp and paper mills in Maine increased from 21 in 1885, to 109 in 1906 (Lipfert, Judd, and Wescott 1995), and paper towns across the state were rapidly developed by the companies, which built dams, roads, and railroads. The town of Rumford\(^7\), about 40 miles east of Berlin on the Androscoggin, followed just such a pattern of development. Between 1890 and 1902, the town saw the end of its identity as an agricultural village of about 1250 residents, with a railroad, hydroelectric generating stations, and three pulp or paper mills constructed there. By 1906, the town was firmly established as a national papermaking center, with 1,600 out of a population of 6,500

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\(^6\) Sawlogs are logs of a large enough diameter as to be suitable for milling into lumber. In the North Country, this diameter is generally 11 inches for hardwoods, and 9 inches for softwoods. Smaller logs are usually chipped for pulping or other uses.

\(^7\) Data are for Rumford and the neighboring town of Mexico, which form a single community.
employed in papermaking and/or bag manufacturing (Leane and Burns 2004). The population would grow in the thriving town (reaching a high of 15,107 in 1930), with several thousand employed in the mills, until the onset of the Great Depression.

At the end of the 19th century, paper companies owned roughly 40% of Maine’s total forestland (Hassinger 2001), and were consuming almost half of all timber cut in the state each year (Lipfert, Judd, and Wescott 1995). The pulp and paper industry reinvigorated Maine’s forest products industries in the early 20th century, as many of its large sawmills had shut down between 1910 and the late 1920s due to competition from Great Lakes and southern mills as well as increasing costs of extraction and shrinking stocks of high-grade timber (O’Leary, Allin, Vickery, and Judd 1995). By 1970, the six largest paper companies in Maine owned almost 50% of the commercial forestland in the state, and 25% of the state’s manufacturing workforce worked in pulp and paper mills (Condon 1995).

In northern New Hampshire, the development of the pulp and paper industry followed a similar pattern, including significant corporate ownership of the forest resource itself. By 1980 three forest products companies—International Paper, Brown, and Pinegree—owned about 50% of the 600,000 acre Mahoosuc region which runs from Berlin and Gorham, north to Errol and across the Maine line to Bethel (Weinberg and Larson 2008). Earlier, logging activity during the 19th century was centered in the southern part of Coos and adjacent Carroll and Grafton counties, and several railroad lines were established there in the 1880s to bring the region’s resources to market (Heffernan and Stecker 2004). The exploitation of forest resources was often pursued with little regard for the forest itself, and by the early 1900s harvesting practices had
prompted public outrage at the condition of the lands, and a burgeoning public consciousness of the need to protect those lands from overexploitation would lead to the passage of legislation designed to do so (Heffernan and Stecker 2004). Concern about overharvesting in New Hampshire was driven by the relatively small size of the state's forests, a regional human ecology in which commercial lands were close to settled areas and highly visible, the rugged topography which exacerbated the effects of heavy cutting, and the importance of the tourism sector in the northern part of the state (Judd 1997). In response to this concern, the Weeks Act of 1911 facilitated the federal acquisition of forestlands across the nation for stream-flow protection, and led to the establishment of the White Mountain National Forest, part of which lies in Coos today.

**A Century of Growth and Decline in Berlin**

Berlin's pattern of development was similar to that of many communities across the region. The town was dominated by a number of small saw, grist, and other mills up to the later part of the 19th century, when pulp and paper mills were established and the population began to explode. These businesses were drawn to Berlin for the same reasons as the original saw and grist mills: a fast-moving river that could be dammed to provide first mechanical and then electric power, transportation infrastructure including the railroads and river, and a plentiful supply of raw materials. The first pulp mill in Berlin, Forest Fiber Company, was built in 1877. The Glen Manufacturing Company came to Berlin in 1885, taking advantage of a ten year tax exemption by the city for any company that built a mill (Bates College 1997), and set
up a paper mill that would employ 500 by 1897. This mill was built by the owners of
the Boston Globe and New York Times to provide newsprint for their papers. The
Riverside Groundwood Mill was erected in 1888, then the two-machine Riverside
Paper Mill (with a pulping facility attached) was erected in 1891–1892, across from the
groundwood mill. 100 men were employed between the two in 1897. The Burgess
Sulphite Fibre Company, run by the Brown family, began making pulp in 1893 and
employed 250 people by 1897. Almost all other manufacturing concerns produced
some sort of wood product, though a machine shop, foundry, and shoe factory were
also operating in town at this time (Berlin Historical Committee 1929).

To feed the mills, some logs came out of the woods year-round on numerous
short-line logging railroads, but massive amounts of softwood species such as spruce
and pine—which float, unlike heavier hardwoods like oak and maple—came down the
Androscoggin every spring in great log drives. Thousands of lumberjacks would
spend the winter in logging camps deep in the woods on vast industrial woodlots,
cutting and staging logs at the banks of rivers and lakes. When the spring thaw came,
lumberjacks would move the logs down from as far north as the Rangeley Lakes to
Lake Umbagog, and then on down the Androscoggin which empties out of the lake.
From north of Berlin, wood was not only sent to the Brown Company mills, but further
downstream to the mills in Rumford, and even further to Lewiston. Log drives on the
upper Androscoggin took place until the mid-1960s (Parrella 2009a), and the boom
piers that were used to bisect the river, thus keeping one company’s wood separate
from another’s, are still visible in the middle of the river for miles above Berlin.
In 1896, with its population roughly 7,000, the town became a city. The centrality of the pulp and paper industry to Berlin’s development and growth cannot be overstated. Davis (1897), in the first history of Berlin, wrote that the growth of the town:

Has been due principally to two causes, her magnificent water power and her proximity to the forests. Berlin’s foundation, geographically speaking, is solid rock, but from a commercial standpoint she is founded on wood, and all the product of her mills has had its origin in the forest, her pulp and paper, also her lumber, and it is through her large corporations that advantage has been taken of those natural facilities and to them she owes the wonderful prosperity she has had, and to them will she still owe, in a larger part, her future growth and prosperity (p. 103).

Davis’ history features glowing praise for the business acumen and largesse of the Brown family, emphasizing the investments made by the Browns in the community and their commitment to the advancement of the condition of Berlin’s residents:

Now the Berlin Mills Company [has] not only been ‘in the town,’ but they have been ‘a part, and a very important part, of it,’ for all that portion of Berlin Mills village lying above the ‘Narrows,’ owes its existence almost entirely to them. The company, or the individuals composing it, made possible the building of the Congregational church, and they have always assisted liberally in its support. When there was no public library in town, they maintained a circulating library themselves, and when the town established a free library, they turned their valuable collection of books over to the town. And, as has been said they maintain a free reading room, billiard room, etc., for their employees and in many ways have contributed toward raising the standard of living in the town (p. 91).

Passages such as this seem to intentionally flatter the Brown family, but they point out the fundamental centrality of the pulp and paper industry to not only economic but social life in Berlin, and the ways in which the industry and the community have been historically inseparable. Over a century later, one resident with close ties to the forest products industry explained the inherently social nature of industry throughout Berlin’s history:
I think it was a family within itself. For example, the people who worked in the woodyard, and the lumberjacks, and the wood suppliers themselves... the industry was the glue to bring them all together, to bond them together. So, you probably get different sections of families relative to the industry. You had the foresters and woodland people supplying wood, and that became its own island, and then you had the actual pulping operation, and then the paper mill itself physically being three miles down the road. So, a lot of the friends and relatives probably rallied around the core industries that they supported. A lot of the people who worked in the mills were third, fourth generation, so you've got that legacy that came down, and if your father worked on the paper machines then there was a good chance that you would have that opportunity to work in the mill as well, providing that your father was in good standing. So, I think in that case it did supply a bond, [for] the community.

The industrial growth of Berlin was part of the rapid industrialization of the region—driven in large part, though by no means completely, by pulp and paper. Between 1890 and 1900 the number of manufacturing establishments in the county more than doubled, from 132 to 278, and the annual value of products in manufacturing, not adjusted for inflation, more than quadrupled from $2,221,211 to $9,416,296 (University of Virginia 2009). As noted above, concerns about resource depletion in northern New Hampshire were becoming prominent in public debate around the turn of the century. Partially in response to these concerns in and around Berlin, local historian Davis (1897) expressed the view that the forest was, for all intents and purposes, a limitless resource:

In every community there are always 'croakers' who are always prophesying disaster and trouble and they say that in a few years the forests will be stripped of their timber and Berlin will have to stop, but when it is remembered that there are many millions of acres of forest lands where as yet the sound of the lumberman's axe has never been heard, within easy railroad distance, we venture the opinion that the time is far distant when it will be impossible to obtain spruce logs in any amount desired by these companies, to manufacture pulp, paper, and lumber in any quantity (p. 103).
In 1898, the International Paper Company—founded down the river in Rumford when Portland industrialist Hugh J. Chisolm brought together 20 pulp and paper mills across New York, Vermont, New Hampshire, Massachusetts, and Maine—took over the Glen mill from the Glen Manufacturing Company. By 1900, the city’s population had grown to 8,886. The IP Cascade mill was built two miles downstream from the plants in Berlin in 1904, when it was the finest paper mill in existence, and also the largest self-contained unit making both pulp and paper. As a largely French Canadian immigrant labor force flooded into Berlin to find work in the expanding mills, the Brown Company moved into Canada to expand its production capacity. In 1906 a Canadian subsidiary of the Berlin Mills Company acquired a site at LaTuque on the St. Maurice River in Quebec, along with extensive timberlands and cutting rights. A kraft pulp mill was completed there in 1907.

In 1910 Berlin’s population was 11,780. By 1912, the entire production of the Riverside mill was kraft paper, and the same was true for the Cascade mill by 1917. By World War I, during which the Berlin Mills Company became known as the Brown Company to avoid potential market effects of anti-German sentiment (Parrella 2009b; Website 2009), the chemical pulp mill in Berlin was the world’s largest, and the city was a world center in the production of industry-standard kraft paper (Heffernan and Stecker 2004). In 1916 it became officially known as “The City that Trees Built” (Bates College 1997). By 1920 the city’s population had grown to 16,104.
The 1920s were Berlin’s economic and social heyday. The city’s 1929 Centennial provides a wealth of information on pre-depression Berlin. By then the Cascade mill was producing 9 percent of all the kraft paper made in North America, and Berlin had grown into an ethnically diverse city of just over 20,000. The program for the city’s Centennial Pageant lists Belgian, English, Irish, Italian, Dutch, Norwegian, French and Indian girls, among other ethnic groups. This diversity is also captured in the names of the thirteen churches and religious organizations in town, including three Roman Catholic churches, the Congregational Church of Christ, St. Barnabas’ Protestant Episcopal Church, St. Paul’s Scandinavian Lutheran Church, Mt. Forist Methodist Episcopal Church, First Baptist Church, Norwegian Methodist Episcopal Church, Christian Science Church, Greek Catholic Church of the Resurrection, and Beth Israel Congregation. The robust civic culture of the community
is also documented in the Centennial, with 21 fraternal organizations, 7 banks, and 13
civic and service organizations in town. One resident who grew up in Berlin during
the 1960s and 70s described how the growth of industry shaped the city’s human
ecology, both with respect to its dense settlement and neighborhood ethnic
composition:

_It was built as a walkable community, that’s what’s interesting. It really
was built as a city where people walked to work. And now, you know
people gotta have three cars in the driveway, ha-ha. So that’s a big
physical component. And it’s not so apparent now, but the city was
divided into its ethnic groups. And it was a melting pot in itself, but at
different times in its history it attracted, because of its growth, different
groups. And so there’s an Irish Acres section, and there’s the
predominant French East Side, there’s a Scandinavian section, there’s a
Russian section. And the city’s trying to hold onto that heritage now. So
that was definitely shaped by the mill growth._

The booming pulp and paper mills supported several related industries in town.
The Berlin Foundry and Machine Company, which was incorporated in 1904 and
today still sits just south of the mill site on the east side of the river, advertised in the
1929 Centennial paper and pulp mill equipment, cylinder moulds, gate valves, iron and
bronze castings, and machine work as the products and services it provided. The
Centennial’s advertisements universally remark about the city’s prolific and sustained
growth. While this reflects the usual degree of boosterism, the city was in fact a
booming community and a center of industry through the 1920s. An advertisement for
Gill’s Flowers reads as such:

_Did you know that Berlin is the fourth largest City in the State? We have
the largest Sulphite Mill in the world, one of the largest paper machines in
the world is here. When the International Convention of Chemical
Engineers met in America in 1926, they met in Berlin, New Hampshire.
Why? Because its President, Dr. Hugh K. Moore, lives here…Berlin is
located in Coos County in the Androscoggin Valley, with the
Androscoggin River flowing through, which furnishes more power than_
any other river of its size in the world. We are less than twenty miles from
the summit of Mount Washington. The Old Man of the Mountain, Echo
Lake, Lake of the Clouds, and the famous Glen Ellis Falls, the most

The historical scale—and past glory—of industrial activity in Berlin is a common
theme in conversations about the place today. One resident who graduated high school
in Berlin in the mid-1950s recalled the size of the Brown Company before and during
his youth:

> At one time, Brown Company, in its heyday, had eight thousand
employees. Most of them were in the woods. But, in Berlin itself—
because the paper mill’s in Gorham, the pulp mill was in Berlin—you had
just about two thousand, twenty five hundred. When I was in school,
that’s how many men worked in Berlin.

From Growth to Decline

Despite the above references to the city’s industrial dynamism and its
proximity to tourist attractions and natural amenities, by the 1930s the city was
wrestling with the industrial ugliness and pollution that had begun to define the place
to outsiders. The July 24th, 1936 issue of The Berlin Reporter chronicles the city’s
early efforts to establish a municipal park on a YMCA field adjacent to the Burgess
pulp mill site. The city’s planning board, expressing both pride and shame of place in
a report on the project, wrote:

> The field offers by far the most important chance remaining in Berlin to
restore to our city some of the beauty which this valley had 100 years ago,
but which man’s thoughtlessness has largely destroyed...The time has
gone by when Berlin can be content to be ugly...Travelers up the valley
from the mountains below us are depressed by the contrast in the beauty
they have left behind them, and few stop here to discover the fine things
we really have.
This local sense of environmental degradation was likely heightened by the severe effects of the Great Depression on Berlin. International Paper closed its mill down in 1931, and the Brown Company mills and logging operations went silent in the winter of 1931–1932. Brown company went bankrupt in 1935 (Bates College 1997). In response to widespread unemployment, residents formed the Berlin Farmer-Labor Party, which oversaw public intervention and investment in the Brown Company as it was kept afloat through federal dollars (City of Berlin Website 2009). The Great Depression was equally tough on Rumford, with the IP mill there operating only about two-thirds of the time between 1929 and 1934. In 1936, the Continental Paper and Bag Company went out of business, and it and the IP mill were disassembled and shipped out of the community, leaving Oxford Paper as the last paper company in Rumford (Leane and Burns 2004).

By 1940 the city’s population had begun to decline, losing about 1,000 residents in the 1930s as the pulp and paper industry entered what would be a decades-long period of declining employment. After declaring bankruptcy in 1935, the Brown Company was sold three times by 1940 (Bates College 1997). In the early 1940s the Brown family was forced to sell its remaining interest in the company to outside investors beginning a pattern of increasingly non-locally oriented control of industry and resources in Berlin (City of Berlin Website 2009). However, the industry and company remained central to the well-being of Berlin and, to an increasing extent, the region. World War II presented the company with an unusual source of labor in the woods: from 1944 to 1946 the Brown Company used German prisoners of war for woodcutting operations on company lands near their prison camp in Stark, with each
prisoner required to harvest one cord of wood per day to maintain pulping operations (Heffernan and Stecker 2004). WWII also presented Rumford with a shortage of labor in the mills and woods in Rumford, with lumberjacks going off to shipyards and munitions plants for higher pay. German POWs were also used (and compensated) in Oxford Paper’s wood camps near Princeton, ME (Leane and Burns 2004). After the war, in 1947 the Brown Company built a large kraft pulp mill in Berlin. Partially as a result of the war effort the city’s population declined precipitously in the 1940s, down to 16,615 according to the 1950 census.

Figure 3-4: Population of Berlin, Coos County, and Rumford, ME, 1820–2008.
In 1954 the kraft pulp mill at La Tuque was sold to Canadian International Paper Company as the now completely investor-controlled Brown Company realigned its interests and sought the more efficient utilization of its timberland resources. These included the construction of a kraft bleachery as an adjunct to the recently-built kraft pulp mill, and the purchase and expansion of a hardwood veneer mill in North Strafford, NH. As its pulping process became increasingly outdated, the company’s large sulphite pulp mill at Berlin shut down permanently on March 30, 1963 (Berlin Historical Committee 1979). This left northern bleached hardwood kraft pulp as the sole commodity produced by the Berlin’s mill.
In 1967 the struggling Brown Company mills in Berlin and Gorham were bought by Gulf & Western, which reduced the workforce by several hundred to roughly 1,600 (Bates College 1997)—almost 1,000 less than the mill employed in the mid-1950s. Part of this workforce reduction was accomplished through the closure of the research and development arm of the mills (City of Berlin Website 2009), once a source of competitiveness for the mills and pride for the community. Even today, the technological innovation and productivity of the Brown Company remains a source of pride for city residents:

*If you read about the Brown Company mill, it wasn’t just a mill, it was perhaps one of the premier mills of its day—the research that was done here. I’m sure you’ve heard some of that. They made paper for the Boston Globe and New York Times. And although it was really hard work—working in a mill is not the most pleasant job at times—I think there was a real pride in the product that they put out.*
One resident familiar with the pulp and paper industry explained that closure of the research and development department at the Berlin mill was part of an industry-wide phenomenon in which operational decision-making has been driven by a corporate concern with minimizing overhead and maximizing short-term profits:

One of the biggest downfalls in the paper industry is the cutoff of all the product and development efforts. The old Brown Company research and development, that bit the dust in the 50s or 60s. Almost all the paper companies in the United States have shut down their research and development buildings and efforts, which to me means that you’re really... cutting off all opportunities for new products.

After a short rebound in the 1950s, the city’s population declined through the 1960s and 1970s, and was down to 13,084 in 1980. Though the city was now decades into a phase of declining employment at the mills, and heading toward tougher times, the mill still supported a number of local businesses and kept the downtown relatively bustling. As one resident who graduated from high school in the mid-1970s recalled:

Even when I was in high school you could come and, you know, the main street was full of stores—women’s clothing stores, men’s clothing stores.

Gulf & Western controlled the mills until Virginia based James River Corporation purchased them in 1980, a year after Berlin saw the Converse Rubber shoe factory in town close down resulting in a 15% increase in the unemployment rate (Luloff and Nord 1993).
Declining employment at the mills and other plants was part of the larger phenomenon of deindustrialization unfolding across the region and nation, a pattern evident in REIS data from 1969 to 2000 as shown in Figure 3-7. From 1969 to 2005, the percentage of all Coos County jobs in manufacturing declined from 34% to 10%. Job losses in the pulp and paper industry account for much of this trend. In the mid-1980s, the services sector became larger than the manufacturing sector in terms of employment in the county, and in the late 1990s manufacturing was supplanted even by retail employment. As shown in Figure 3-8 the relative importance of manufacturing earnings declined as well, falling from 45% of total earnings in 1969 to 19% in 2005. The percentage of total county earnings from pulp and paper mills declined even more precipitously, falling from 36% in 1969 to 11% in 2005.

8 The "Services" sector in the old Standard Industrial Classification system was replaced by a variety of smaller sectors in the North American Industrial Classification System in 2001.
As the manufacturing sector waned countywide, the relative socioeconomic well-being of Berlin began to decline. Figure 3-9 shows 30-year trends in median family income (MFI) for Berlin and New Hampshire. After lagging behind but keeping pace with the state’s MFI through the 1970s, Berlin’s MFI as a percentage of the state’s plummeted through the 1980s and 1990s, and was about two-thirds of the state level in 1999. Per capita income in Berlin virtually mirrored trends in MFI, and had also declined about two-thirds of the state level in 1999, $15,780 to $23,844. In 1999, 9.1% of families in Berlin were below the poverty line, compared to 4.3% in the state.
Figure 3-9: Median family income for Berlin and New Hampshire, 1969–1999.

The city’s population continued to decline in the 1980s, and by the early 1990s, Berlin was exploring options for economic revitalization by looking beyond the manufacturing sector, including tourism-related opportunities (Bates College 1997). But despite regional declines in manufacturing employment, the sector was still at the center of Berlin’s livelihood and identity at the end of the 20th century. Figure 3-10 shows the percentage of residents in Berlin, Coos County, and Rumford employed in pulp or paper mills, and in manufacturing more broadly. Roughly 13% of Berlin residents worked in pulp or paper mills in 2000, a greater percentage than that for the county, while just over one-fifth of both Berlin and Coos residents worked in the broader manufacturing sector. These percentages were slightly higher in Rumford, by then home to a large integrated pulp and paper mill owned by MeadWestVaco (as of 2009, Newpage Corporation controlled the Rumford mill, which has recently seen production cuts and layoffs).
Figure 3-10: Employment in pulp & paper and manufacturing by region, 2000.

The Mill’s End

In 1993, James River installed a $100 million Babcock & Wilcox chemical recovery boiler to burn the black liquor produced in the production of kraft pulp, thereby recovering the chemicals used in the process and producing heat and electricity to help power the mill (Paiste 2007). In 1994 Crown Vantage, Inc. was spun off by James River and acquired the mills in Berlin and Gorham (Bates College 1997). Crown Vantage operated the mills until 1999, when the New York-based American Tissue Corporation purchased them for $45 million (in addition to taking on Crown Vantage debt). This acquisition was the biggest yet for the company, which was built through a strategy of buying distressed mills for relatively little capital (Vardi 2002).
By the end of the 1990s the city's population had declined to just over 10,000—a point not seen since just before the 1910 census. American Tissue would operate the mills under the subsidiary name Pulp and Paper of America for two turbulent years in which it would fail to pay the city, workers, and suppliers on several occasions (New Hampshire Public Radio 2007). During this time, Berlin vehicles displayed bumper stickers reading “Mehdi Go Home,” a reference to the company's Iranian CEO, Mehdi Gabayzadeh (Vardi 2002). In an ostensibly temporary move, the mills were shut down for two weeks in August 2001 as the company responded to poor market conditions for pulp and paper. Relations between the company and community further deteriorated, with the company threatening libel suits against the Berlin Daily Sun and other newspapers for their coverage of the mill's troubles (MacPherson 2006). The initial two
week shutdown was stretched to three, then four as the company attempted to work out its financial issues (Darman 2006). American Tissue went bankrupt on September 10, 2001, after shutting down the mills the month before and leaving 800 workers jobless (Darman 2002). The city's annual unemployment rate spiked to over 10% in 2002, twice the state rate as shown in Figure 3-11. The mills in Berlin and Gorham would be oversaw by a court-appointed trustee over the next few months while they were put up for sale. During this time, the Berlin mill was producing no pulp, and employing only a skeleton crew to maintain the plant (New Hampshire Public Radio 2007). Five years later, Gabayzadeh would be sentenced to 15 years in prison for a $300 million fraud aimed at preventing the company's bankruptcy (Taub 2006).

In May of 2002, Toronto-Based Fraser Papers, Inc. purchased the Berlin and Gorham mills for $31.5 million. In 2003, they expanded operations at the pulp mill in a move that prompted optimism among city residents (New Hampshire Public Radio 2007). However, three years later, in March 2006, Fraser announced that the pulp mill would be closed permanently, and on May 6 it closed for the last time. 250 workers lost their jobs, though a few were able to find positions at the paper mill in Gorham. Fraser cited rising costs for wood, energy, and chemicals as reasons for its decision to close the mill (New Hampshire Public Radio 2006a). The mill closure was greeted with a mixture of hope and pessimism, though it was widely regarded as bringing a wholesale shift in the city's identity (New Hampshire Public Radio 2006b).
Figure 3-12: Looking west across former pulp mill site, April 2008. Androscoggin River and northern end of downtown Berlin immediately behind recovery boiler and stack.

The 121-acre mill site was sold to Michigan-based North American Dismantling Corporation (NAD) in October of 2006. According to real estate transfer tax stamps, NAD paid $500,000 for the facility, plus an undisclosed percentage of NAD’s profits from the dismantling of the mill. NAD began dismantling the 600,000 square foot mill buildings that year, selling off millions of dollars worth of scrap material and equipment along the way. The mill site contained hazardous waste in the forms of CFCs, PCBs, mercury, pulping liquor, and other solvents (NAD 2009). In September 2007, three of four smokestacks on the site were imploded as thousands of residents looked on. Some cheered, while others, including many older men who had likely worked in the mill, looked on in a near-funereal silence only broken by utterances like, “I never thought I’d ever see those stacks come down.” In an event that symbolized how powerful a
component of Berlin’s identity and landscape the industry was, the third stack did not go
down without a fight, requiring a second unsuccessful attempt at implosion. After
workers moved in to try and weaken the stack, it fell the wrong way, damaging vehicles
and homes and injuring several onlookers (WMUR 2007).

When NAD was done clearing the site, only the Babcock & Wilcox recovery
boiler, its stack, and a few small buildings remained standing as a reminder of the growth
and the decline of pulp and paper in the North Country. Between 1990 and 2006, the
number of manufacturing jobs in Berlin declined from 1,942 to 308 (New Hampshire
Economic & Labor Market Information Bureau). Since 2006, in addition to the Burgess
pulp mill, two other pulp or paper mills in the county—the Wasau Papers and Groveton
Paperboard mills, both in the village of Groveton—have shut down after years of periodic
closures and layoffs, permanently eliminating more than 400 relatively high-paying jobs.
Today, the Cascade mill in Gorham is the only remaining paper mill in the county, with
roughly 150 employees working there in early 2009. In June 2009, Fraser Papers filed
for Chapter 15 bankruptcy protection, though the company stated it had no plans to
permanently close the Cascade mill.

Figure 3-13 displays Community and Environment in Rural America survey data
on perceived community effects of the loss of forest-based jobs and income. Just over a
year after the Berlin mill closure, but months before the two Groveton mills closed, two-
thirds of Berlin residents saw their community as having been affected in a major way by
the loss of such jobs. 58% of Coos residents and about half of Rumford residents
perceived major community effects. While not as high as that for Berlin, these figures
illustrate the substantial region-wide community effects declining pulp and paper employment, even in places where mills had not yet closed down.

![Bar chart](image)

**Figure 3-13**: Perceived community effects of loss of forest-based jobs/income, CERA Survey spring-summer 2007.⁹

**Conclusion**

Berlin’s development was part of a larger, regional process of industrialization based on the North Country’s forest and water resources. The mill and community grew rapidly as production technologies advanced and an ethnically diverse labor force flowed into Berlin. The city’s growth continued until the onset of the great depression, when it entered an almost 80-year period of economic and demographic decline which culminated in the 2006 closure of the pulp mill. The pulp and paper industry was central

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⁹ The question read: “I'm going to read a list of environmental issues that might be problems in some rural places. With regard to the place where YOU live, for each issue I'd like to know whether you think this has had no effect, had minor effects, or had major effects on your family or community over the past 5 years.” “Loss of forestry jobs or income” was the second item on the list; see Appendix A.
not only to the economy of Berlin, but to its social fabric, civic infrastructure, and identity, for over a century. Figure 3-14 provides evidence of just how central the mill has been to the community’s identity and self-definition. In the official seal of the city, a pulp mill, smoke emanating from its stack, sits behind a log pile and among spruce trees.

Figure 3-14: The official city seal of Berlin.

The announcement of the mill closure signaled the end of the pulp and paper industry in Berlin. But its sale and demolition in 2007 marked an absolute, physical finality to the conclusion of its era as a pulp mill town, and set the challenge of redevelopment and reinvention squarely before the community. A young businessperson who grew up in the city stressed the connectedness of the industry and community identity:

*It was the most efficiently run mill for the longest time. We produced more pulp than any other mill in the world, and for that I think that it was great to be that mill. But...we’re not that mill anymore, and it’s gone and it’s time to move on.*

Moving on is precisely what the city has begun to do in the three years since the mill closed. But as I show in the following chapters, options for redevelopment in Berlin—ideas and possibilities of what the community could or should be—are shaped in powerful ways by the character of the place it has become.
CHAPTER 4
COMMUNITY IDENTITY, IMAGE, AND CHANGE

Since the mill closed, several different paths to redevelopment have emerged in Berlin. One major theme is renewable energy, with a proposed wood-fired biomass power plant at the figurative and literal centers of the city’s future. Another is embodied in the federal prison currently under construction. And a third focuses on the potential drawing power of the area’s natural amenities and recreational opportunities; to this end, the city has been interested in expanding tourism development since at least the early 1990s. This chapter focuses on key elements of Berlin’s place character—its internal identity and external image—that are directly traceable to its industrial past, and that currently constrain the community’s ability to pursue goals oriented around tourism development. Three years after the mill closure, and nearly two years after three of four stacks were demolished, negative images and attitudes regarding environmental conditions in Berlin linger despite a reduction to near-zero point source pollution from the former mill site (see Figure 4-1 below). To understand why this is the case in the city, it is necessary to understand the environmental legacy of the pulp and paper industry.

The Androscoggin and the Environmental Costs of Pulp and Paper Production

Pulp mills are part of a group of industries known as “chemical processing industries,” which involves the use of large quantities of chemicals in their production processes and includes oil refineries, synthetic materials manufacturers, and primary
metals processors (Smith 1997). Partly on the basis of its chemical intensiveness, the history of the pulp and paper industry in the North Country is in many ways one of environmental degradation. Nowhere is this more evident than on the Androscoggin River which connects Berlin and Rumford. The condition of the Androscoggin was a primary impetus for the passage of environmental legislation in the US in the 1960s; the legacy of pollution from papermaking on its banks has been detailed by Osborn (1974) and Judd and Beach (2003). Leane and Burns (2004) note that there were no summer homes or camps on the banks of the Androscoggin below Berlin, as mills from there down to the Gulf of Maine pumped waste into it. According to a local saying, the river in Lewiston, ME was “too thick to paddle, and too thin to plow.”

Edmund Muskie, who grew up in Rumford and served as Governor of Maine (1954–58), US Senator (1958–80), and US Secretary of State (1980–81), was affected at an early age by the condition of the Androscoggin, which was then one of the ten most polluted rivers in the nation (Hassinger 2001). In the summer of 1941 a prolonged drought led to extremely low water levels, exposing river sediments and causing severe odor problems as, in its “death throes,” it began to emit rotten egg-smelling hydrogen sulfide strong enough to darken paint on houses (Leane and Burns 2004). Muskie was instrumental in the passage of the Clean Air Act in 1963 and the Clean Water Act in 1965, both of which were significant strides against pollution in the North Country—pollution that stemmed chiefly from the discharge of untreated waste from pulp and paper mills.

Though vast improvements in water quality have been made in the last 40 years, the stretch of river between Gorham (just downstream from the former pulp mill site in
Berlin) and the Maine state line is catch-and-release only due to high mercury and dioxin levels. A fish consumption advisory stands for the remainder of the river in Maine, and while the state Department of Inland Fisheries and Wildlife recommends no more than six to twelve fish meals a year from these waters, few would eat even that many.

The past and present condition of the Androscoggin was a common theme in my conversations with community residents. When asked generally about how the mill has shaped the community, a professional recalled the condition of the Androscoggin during her youth in the 1960s and 1970s:

And the river at one point—the entire Androscoggin river, because it also was heavily polluted in Maine—I think it was a National Audubon magazine article that called it ‘the most beautiful sewer in America’ or something. And they say you could tell what color paper the mills were producing by looking at the river.

She spoke generally about the river’s condition, and emphasized that it was in poor condition for its entire length as an industrialized waterway. But another respondent, a local professional, talked specifically of its condition below the pulp mill in Berlin during the same era. He immediately turned to the river when asked a broad question about the biggest changes he’d noticed in the community since his youth:

When I was a child the Androscoggin River was heavily polluted. And the perception of the pollution was that if you—and obviously below the mill, downstream of the mill—but the perception was that if you stuck your arm in that it would virtually eat the flesh off the bone. I mean, that’s what everybody thought.

He went on to describe changes in not only in actual river conditions, but patterns of river use by himself and others in the region, especially since he returned to Berlin in the mid-1990s:

In the first year that I came back I started seeing mink, and bald eagles, which were indicative of a much healthier ecosystem. I have since
actually kayaked the stretch of river from Shelburne down to Bethel, Maine. And it's just amazing. I did that last spring with a bunch of people, and I was just amazed that we were actually in that river. Because, still, in my mind it was heavily polluted. But it's used recreationally now. We saw many other kayakers and boaters. So that's a massive change, I think. And of course they had stopped polluting in the rivers before, in the 70s. But again, the perception even into the 80s was that it was still a pretty nasty, nasty place.

The passage above points out several key themes related to the Berlin’s prospects for redevelopment. First, environmental conditions in the area have greatly improved due to both federal policy and, most recently, the demise of the pulp mill. Second, the Androscoggin, by virtue of the environmental harm created by the industries along its banks, was defined for decades as a “nasty place.” And, importantly, the negative images and meanings associated with the Androscoggin lingered for years after environmental conditions improved—a sort of temporal lag between conditions and perceptions. Nonetheless, the Androscoggin has largely undergone a shift in its definition and meaning, from a space unsuitable for human contact, to a site with substantial recreational value. To some degree this shift represents the active efforts of regional groups such as the Androscoggin River Watershed Council. According to the group’s website:

It also used to be that if one fell into the Androscoggin, one was taken directly to the hospital for fear of infections. It also used to be that visitors could smell the river from 20 miles away. The Androscoggin is in the middle of a renaissance—a very exciting rebirth. We have GAINED a new resource. While the river is still used to support industries, it can ALSO be used for fishing, boating, swimming, tourism, education, drinking water supply...any number of possibilities that never existed before! (ARWC 2010)

The historical environmental condition of the Androscoggin is certainly relevant to Berlin’s reputation as a polluted place. The city’s identity has always been tied to the
river in terms of both the raw materials that traveled downriver to Berlin, and the pollution that traveled downriver from there. However, it is not the most salient environmental force in the city’s historical and present image. The poor condition of the Androscoggin affected not just Berlin, but virtually all the communities through which the river runs. The river’s deplorable condition was not just a product of the mill at Berlin, but of the many other mills located in downstream communities like Rumford, Jay, and Lewiston. But the pulp mill’s effects on air quality, most notably the odor it produced, were realized primarily within the city itself, and thus Berlin was defined to itself and the outside world largely in such terms. One respondent who grew up in Gorham in the 1990s recalled how conditions in Berlin were perceived and experienced by residents of nearby towns:

*Berlin was founded on industry, it was ‘The City that Trees Built,’ and it had the Burgess mill that produced nothing but pollution and emissions, and, and just hell. From Gorham, we were fine, we had nothing at all. The Androscoggin River kind of stunk, but we didn’t quite have—when you went to Berlin, you knew. I remember, I can still smell that smell. You could be a kid driving, my dentist was in Berlin. You just knew when you entered there—this, this odor.*

Just as the Androscoggin was largely defined by industrial pollution, so for over a century was the city of Berlin. And though environmental conditions there have improved, the city continues to be associated with the pollution produced by the pulp mill—despite the fact that the mill no longer exists. Partly on the basis of the momentum of its identity as an industrial and polluted place, the city has yet to be redefined as an attractive place for non-industrial activities, and the community today is reckoning with problematic aspects of its historical image and identity.
Community and Environmental Stigma

In the preface his book *Stigma*, Erving Goffman (1963) defined the term as “the situation of the individual who is disqualified from full social acceptance.” Goffnan’s insights into the experiences of the stigmatized have inspired hundreds of like-minded investigations of the impacts of stigma on individuals (see Link and Phelan 2001). However, researchers have more recently documented the relationship between negative external perceptions of poor urban communities and their inability to attract new investment, a dynamic in which community stigma functions as a sort of “Achilles heel” in attempts at redevelopment (e.g., Erickson, Reid, Nelson, O'Shaughnessy, and Berube 2008; Sampson and Raudenbush 2005). These negative external perceptions are formed through regional news outlets and word-of-mouth accounts, and can affect feelings of self-worth among community residents (Hoyt and Leroux 2007).

Scholars have also begun to pay attention to the processes by which certain places become stigmatized, coming to be associated with environmental risk and viewed therefore as undesirable. In a groundbreaking development of the concept of environmental stigma, Edelstein (1987) defined the it as “an inherent property of any discovered or anticipated change to a community, an object, a product or a place due to its association with exposure to a toxic substance” (p. 21). Building on this framework, Gregory and Satterfield (2002) define technological stigma as the condition in which “certain products, places, or technologies (are) marked as undesirable and therefore shunned or avoided, often at high social, economic, and personal costs” (p. 347). 10

Central to the concept of environmental stigma is the sense that the right and natural

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10 Here, I primarily use the term environmental stigma, treating it as interchangeable with technological stigma due to common conceptual and empirical foundations.
order of things has been violated (Kasperson, Kasperson, Pidgeon, and Slovic 2003). Communities tainted by environmental stigma, it is argued, suffer economic losses as a result of their negative characterization in public discourse. Kasperson et al. (2003) stress that negative labels and images can “fundamentally alter the identity of the place or technology, so that it is viewed as tainted and discredited by residents of the place…and by outsiders” (p. 29). The primary empirical evidence of environmental stigma is the existence of negative images, descriptions, and perceived risks of a particular place (Satterfield 2000). The environmental stigma literature focuses most prominently on entities that represent acute and severe forms of risk, such as chemical plants, hazardous waste disposal sites and nuclear facilities (Edelstein 1987; e.g., Satterfield 2000; Slovic, Flynn, and Gregory 1994; Slovic, Layman, Kraus, Flynn, Chalmers, and Gesell 2006), and tends to cast the negative effects of community stigma in economic terms (e.g., Ellerbusch 2006; Noonan, Krupka, and Baden 2007). However, the framework has also been applied to the study of environmental stigma as it arises out of relatively low-risk facilities such as landfills (e.g., Baxter, Eyles, and Elliott 1999), and manifests itself in physical and social (i.e., not purely economic) ways (e.g., Satterfield 2000).

In places that have become stigmatized, be it on the basis of poverty, racial or ethnic composition, or particular technologies or risks, the perception is often substantially worse than the reality. Three years after the pulp mill closure, this is very much the case in Berlin. However, the city’s environmental history poses a number of challenges to redevelopment efforts. The environmental stigma framework can be used to understand this facet of the mill’s impact on Berlin’s prospects for the future, and in doing so move the framework beyond a focus on the risks posed by specific, well-defined
incidents (e.g., Slovic 1993), to incorporate the stigmatizing effects of real environmental harm that unfolds over long time horizons.

**The Burgess Pulp Mill and Pollution in Berlin**

To give a picture of the extent of air pollution produced by the pulp mill, Figure 4-1 shows total reported toxic releases from 1989 to 2005, according to the Environmental Protection Agency’s Toxics Release Inventory (TRI). The graph also shows total toxic releases for Newpage’s integrated pulp and paper mill in Rumford for comparison. In 1989, the James River pulp mill in Berlin released a volume of toxic air pollutants, about 1.6 million pounds worth, equal to that reported by all facilities in the entire state of Vermont (Sayen 1994). Emissions and toxic releases began to decline in the early 1990s as James River phased in new emissions controls, including the installation of a new chemical recovery boiler at a cost of nearly $100 million in 1993. From 1993 until 2005, annual toxic releases averaged 748,000 pounds during years in which the mill was operational year-round. The main chemical emitted was methanol, though large quantities of ammonia, hydrochloric acid, sulfuric acid, and other compounds were released each year.

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11 In 2001 there were no officially reported releases from the pulp mill, though the mill operated through the summer until Pulp and Paper of America shut it down and filed for bankruptcy protection.
In 2005, the pulp mill accounted for 87 percent of all air emissions in Coos County, and 13 percent of all air emissions in the state of New Hampshire (mapecos.org). The vast majority of toxic releases were through the mill’s four smokestacks, though each year thousands of pounds of toxic compounds were also released into the Androscoggin. The data presented in the graph do not include the hydrogen sulfide, sulfur dioxide, and methyl mercaptan responsible for the objectionable odor in Berlin, as these compounds do not fall under the purview of the TRI. However, they provide one illustration of the profound environmental effect of the pulp mill. And it is worth noting that TRI data are only available starting in 1989, decades after the passage of the Clean Air and Clean Water Acts; the annual amount of environmental harm produced by the mill was no doubt...
much greater during the century before. But by the middle of 2006 point-source pollution coming from the mill site was reduced to close to zero.\(^\text{12}\)

**The City's Identity and Image**

As “The City that Trees Built,” the community identity of Berlin is fundamentally rooted in the pulp and paper industry. The industry contained or directly supported thousands of local jobs that formed a distinctly blue-collar occupational mix, from loggers, to truck drivers, to papermakers, to machinists. Based on the traditionally dominant forms of work there, respondents described the place and its identity with terms like “mill town,” “blue-collar,” and “working class.” A local businessperson described the place this way:

> It's very much a working class—it's a mill town. And everything revolves around that mill, or has, in the sense that you either worked at the mill, or somebody in your family worked at the mill, or knew someone who worked at the mill.

Such descriptors entail positive connotations such as a strong work ethic, industriousness, and past prosperity, and can thus be a point of pride for the community. Yet today they also embody other ideas about industrial communities: the “mill mentality,” insularity, decline, and a certain roughness of people and place. Another local businessperson described the community with similar language:

> Yeah, it’s just a blue collar, hard working, working class community. I don’t think there’s any question. It’s what people do up here, you know?

Like many respondents, he stressed how the closure of the mill has meant the beginning of a wholesale change in the city’s identity:

\(^{12}\) As I discuss in the next chapter, the site of the old “cell houses,” a Superfund site where chlorine for the pulp bleaching process was produced using mercury cells that were later buried, remains a source of considerable pollution. Beads of mercury can be observed leaching into the Androscoggin from the bedrock below the 4.6 acre site.
It's in the process of creating a whole new identity for itself. It for years and years and years had that identity as a paper mill town, and now that's something that it's having a hard time to get rid of that image. But it's being forced to.

This comment touches on some negative elements ("getting rid") of the city's identity and image as an industrial community, and emphasizes the difficulty of moving beyond a deep association with industry.

However, a more specific, and more problematic from a development perspective, element of identity and image was formed out of the particular industrial technology on which the city depended for so long. Despite the fact that the mill stopped emitting air pollution in 2006, the negative environmental impact of the mill—specifically, the odor it produced—on the identity and image of the community was a theme in roughly half the interviews conducted for this study. A prominent local businessman, when asked about how he thought people outside the city view it, explained that he thought Berlin was still associated with the negative effects of the pulp mill:

I still think the town...the southern part of the state, they still think of it as a stinky mill town. And it's not the case. Did you drive into town, did you smell anything?

His response embodied a heightened sensitivity to the way the community is viewed from the outside—its external image. Another respondent, who now lives in the city, recalled her memories of traveling to Berlin as a youth in another nearby town and emphasized the distinct local effects of pulp mills as compared to paper mills:

I grew up in Groveton, which also has a paper mill. But, we didn't have the pulp mill that Berlin had. So as a kid coming to Berlin, there was always the smell. It was always like, 'oh, Berlin smells.'

When asked about how the mill shaped the city, she stressed the duality of the community's relationship with the industry on which it depended:
I think that the mill was sort of a...it's two pronged. In one sense, it was a sense of security and you could grow up always knowing that you could go to work in the mill and have a good job. I also think that it was sort of a...sensitivity on the part of the community that—because the smell was so bad, and over the years the pollution, too—that there was sort of a sense that...inferiority. It was like, 'oh, but look what it's done to the city.' You could always count on it when the national press came up to cover presidential people in the primary, somewhere in the top part of the story they'd mention the smell. 'Here we are, in Berlin where the smell of...overwhelming,' or something.

Her response highlights the role of media accounts in defining the community as a polluted place, and how these negative images and representations resulted, over time, in a sense of inferiority at the community level. She went on to talk about how the relationship between the community and the mill has affected the contemporary identity of the community:

And I think that plays on your psyche, you know, on your sense of self-worth. Someone once told me, it was someone who moved to Berlin, said that in some ways Berlin reminded her of an abused spouse or something. There was always this sense of...defeatism.

Other respondents also perceived a negative self-image at the community level. One recalled his experiences as a local youth in the 1970s:

People would always refer to it as the place that smelled, which is not something you want to be associated with. But nonetheless to people from here, that's what it was. And I remember going to high school hockey games in Concord, and the opposing teams would be chanting, 'burn down stinktown.' You'd hear that year after year. I think that in part is what helped the city develop this negative image of itself. You know, it's probably been told from the outside, 'you're something less than standard.'

Another respondent, who grew up in the 1940s and 1950s, had a very similar recollection from his time as a youth decades earlier:

Berlin, in my view, has been the ugly duckling of the region for a long time. Kids coming up from Manchester, Concord, or wherever else to
play sports up here, hockey or basketball or baseball, used to say that they were coming to play in 'stinktown.'

He went on to stress the negative effect of such an identity on the community’s residents.

You just can’t have that kind of reputation and it not have some kind of impact on the people, their idea of who they are, and what they’re worth. I mean, it’s like if you’re the child of parents who are alcoholics, or derelicts or jailbirds, or something like that—the stigma of being part of that community.

The city’s image as a polluted and undesirable place is distinct and widely perceived in the region. One resident recalled her experience with classmates at a university in the southern part of the state:

When I was in college I would be like, ‘oh, I’m from Berlin.’ And [they would say], ‘oh, it stinks.’

A respondent who grew up in Gorham in the 1990s bore out this negative external perception of Berlin, and linked the city’s industrial identity to broader ideas about social class and status:

The image of Berlin from Gorham was that they’re...of a lower class. They’re of a lower stature. You know, it was labeled as a dirty stinking mill town. If you look at it from a completely ignorant point of view, that’s how we grew up—you saw Berlin as being as being lower.

The passages above demonstrate the profound effect the mill had on shaping the identity and image of the community, and embody a perception on the part of local residents that this negative external image has had real effects on the community’s morale. Respondents used analogies to abusive spousal and parental relationships, and spoke of a sense of stigmatization, negative self-worth, sensitivity, and inferiority at the community level.
The Momentum of Historical Identity and Image

In a March 2006 interview with New Hampshire Public Radio, a local restaurant owner expressed optimism that the impending pulp mill closure would mean a shift in the reputation of the city:

Berlin already has a bad rap because of the smell, just because you are from that's where the mill is, it smells so bad. I think it will help bring more tourists. It's a great area with mountains and hiking, and people are already coming for that. So if you take out that negativity, it will be much better place (Gorenstein 2006).

However, just as the reputation of the Androscoggin River as a “nasty place” endured in the years following dramatic improvements in its environmental conditions, Berlin’s odor-centered image and reputation have continued to resonate in the years after the mill’s closure. A sensitivity to the continuation of the city’s reputation as “stinktown” was evident in several interviews, and today one can still find negative representations of Berlin centered on the smell of pulp production. As an example, the following was posted in an August 2009 online discussion of Berlin in the “Rants and Raves” section of New Hampshire Craigslist (nh.craigslist.org):

No Crime in your city? Hell half of your city burned down not so long ago. And it was not by accident, it is the Smell STILL coming out of berlin from the old paper mills that still screws with your heads.

This posting is telling in two ways. First, the poster clearly perceives Berlin to still be affected by the smell of the mill, though it is unclear where she or he lives. But second, it points to a powerful new aspect of the city’s negative image: blight and urban decay.

13 I encountered an acquaintance on the campus of the University of New Hampshire in 2009 while gathering literature on community and technological stigma. When I mentioned I was studying Berlin, he remarked that “Berlin stinks.” I encountered similar perceptions while giving a guest lecture to undergraduates in a fall 2008 Urban Sociology course.
From Pollution to Physical Decay and Social Disorganization. The negative image of Berlin as “stinktown” is rooted in the environmental harm that was produced by the mill for over a century. However, today the negative image of the place is compounded by the physical effects of deindustrialization. As the city’s population declined by half in the second part of the 20th century, it was left with an excess of housing units, many of which ended up abandoned, unoccupied, or otherwise not maintained. As the tax base shifted from commercial and industrial to primarily residential, fiscal stress led to cutbacks in the maintenance of municipal infrastructure such as city parks and unused buildings. But perhaps the most visible manifestation of physical decay in the city has been the rash of structure fires that have hit it in the years since the mill closed.14

Between January 2007 and January 2009, 16 major structure fires took place in and around downtown Berlin (Tetrault 2009m). The fires claimed a number of mixed commercial and residential buildings, as well as several three-decker apartments and single family homes. Several of the larger fires were located in the heart of downtown, in spots highly visible to both residents and passers-through. Between January and August 2009, the city had another six major structure fires, for a total of 22 since early 2007. Thirteen of the fires were determined to be the result of arson or of suspicious origin.

Today, if a user goes to google.com/maps, and queries Berlin, NH, they are directed on the map to the downtown area as might be expected. However, Google Maps provides users with information relevant to a particular place—user-added photos and other content—in addition to basic geographic information. In Berlin’s case, four small

14 These themes are treated in detail in the next chapter.
photos appear just above a link to a Manchester Union Leader-added map titled “Arson charges in Berlin.” Clicking on the link will bring users to a map of downtown Berlin showing the locations of “six of the many building fires that have plagued the city in recent years,” as well as the home of the 27 year-old man charged with setting them. In August 2009, responding to a local blogger’s post about the Google Maps-Arson connection, an anonymous poster wrote:

Berlin is/was known for being stinky. Now it's getting known for fires. Can't get a break (lastprintjournalist.blogspot.com)

The fires are a common symptom of industrial decline as seen in many larger communities that have suffered the effects of deindustrialization. The contemporary negative image of Berlin is largely oriented around not only fires and arson, but also a more general sense of social disorganization centered on crime and joblessness. A respondent from Gorham summed up Berlin’s present image this way, linking it back to the city’s industrial identity:

I’d say from anywhere in Coos County, there are places that’s bad—parts of Groveton are pretty bad, too. But Berlin’s kind of seen as the epicenter of it all. You know, kind of a lower class...you know, but it’s industrial.

A comparison of newspaper articles focused on either the city or the wider North Country region is telling with respect to the ways they are portrayed to the rest of the state. From January 2006 to January 2009, the Manchester Union Leader, the newspaper with the largest circulation in the state, featured 105 articles with “Berlin” in the headline, and 85 articles focused on the “North Country.”15 Forty-six percent of the articles on Berlin focused on themes of fires, crime, a depressed economic climate, or the presence of state and federal prisons, while 25 percent focused on new development opportunities

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15 Obituaries were not included in the analysis.
or other generally positive aspects of the city. By contrast, 48 percent of the articles on
the North Country focused on positive aspects of the region, including new forms of
economic development, and only 13 percent focused on negative aspects of the region
such as those listed above. While these figures likely reflect real differences between
Berlin and the larger North Country region, what matters for Berlin’s external image is
the existence of a set of particular, largely negative images and representations of the
city.

Yet according to recent survey data, statewide external perceptions of the city are
not completely negative. In fall 2009, the UNH Survey Center administered its Granite
State Poll, a telephone survey (using random digit dialing) of 502 adults in the state of
New Hampshire. Respondents were asked whether they had a mostly positive, mostly
negative, or no impression of Berlin. Those that had a mostly favorable or mostly
unfavorable impression of the city were then asked to explain why they had such a view
of the place. Excluding those who answered “don’t know” or refused a response
(N=30), 59 percent of respondents reported having no impression of the city one way or
the other. Eighteen percent of respondents (N=82) said they had a mostly unfavorable
view of Berlin, and 23 percent (N=108) of respondents said they have a mostly favorable
impression of the city.

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16 Per the American Association for Public Opinion (AAPOR) Response Rate 4 calculation, the response
rate for the fall 2009 Granite State Poll was 30 percent. Data were weighted to correct for biases on the
basis of number of adults in household, number of telephone lines in household, sex, and region of
residence.

17 The survey questions were worded as follows. “Now I’d like to ask you about your impression of Berlin
[BUR’ lin], New Hampshire – a city in the northern part of the state. Would you say it is mostly favorable,
mostly unfavorable, or don’t you have any impression of that city one way or the other?” Respondents
with favorable or unfavorable impressions were asked “What is it about Berlin [BUR’ lin] that gives you a
favorable/unfavorable impression?”, and their responses were recorded verbatim.

18 Eliminating those who when asked did not have a reason for having a positive impression of Berlin
brings these figures to 18 percent unfavorable, 22 percent favorable.
Coding of open-ended explanations of respondents’ positive or negative impressions revealed distinct sets of community characteristics related to those perceptions.\textsuperscript{19} The most common themes among those with mostly negative impressions were a depressed local economy or high poverty (N=46), elements of social disorganization (N=20)\textsuperscript{20}, the smell or other negative aspects of pulp or paper mills (N=19), and blight or physical decline (N=15). On the positive side, the most dominant themes were related to Berlin’s location in northern New Hampshire. Twenty-five of 108 respondents talked about the scenic beauty of the region, 23 mentioned the city’s location “up north” or in the “middle of nowhere”, and 20 used language about it being a small town or a rural place. Thirteen mentioned the people of the city, using terms like “hard working.” In a sympathetic twist, 12 respondents said they had a positive impression of the city precisely because of the struggles and problems the community is faced with.\textsuperscript{21}

Though external perceptions of Berlin appear to be more positive than negative, analysis of the reasons for these perceptions points to an interesting difference in their bases. Negative impressions of the city were predominantly grounded in issues fundamentally about the community itself and specific to the place, such as a depressed local economy, blight, or the presence of the mill. But positive impressions of Berlin tended to be grounded in more general characteristics of the region in which the city is located, such as topography and scenic beauty, or in its generic identity as a small, rural, remote place. In these ways, to the extent that external perceptions affect a community’s prospects for redevelopment and point to particular sets of challenges and opportunities,

\textsuperscript{19} Coding themes were not exclusive, so responses could be coded into more than one theme.
\textsuperscript{20} “Social disorganization” includes references to crime, joblessness, a blighted physical environment, and substance abuse.
\textsuperscript{21} Dropping these respondents results in unfavorable/favorable percentages of 19 and 20 percent, respectively.
the problems Berlin faces are largely about what it is, while its primary set of resources for reinvention are mostly about where it is.

### The Shape of Tourism-Oriented Development

Link and Phelan (2001) denote five elements of stigma at the individual level—labeling, stereotyping, separation, status loss, and discrimination—and stress that stigma matters because of its negative impact on life chances. In other words, it is not merely the existence of stigma that matters, but what that stigma produces in the way of effects. At the community level, a place’s prospects for economic competitiveness are analogous to the individual-level concept of life chances. This is particularly the case for places that are experiencing a moment of profound economic disruption and thus are forced to reinvent themselves. Berlin is just such a place, and as Chapter 1 suggests, those prospects for reinvention are in part centered on the possibilities for tourism development in the city.

### Tourism Development in Berlin

The effects of Berlin’s image—historically centered on the pulp mill’s odor, and currently focused on physical and social decay—are most salient vis-à-vis the city’s efforts to expand its tourism economy. At a fall 2007 public hearing on the reuse of the former mill site, a local businessman with ties to the forest products industry commented on the effect the pulp mill had on the city’s ability to tap into tourism markets:

*It was tourism repellent, that’s what we were spraying.*
For most of its history, Berlin was a place that outsiders either passed through on their way to tourism destinations north and south of the city, or that they avoided altogether. Tourism development in the city was almost nonexistent. The sector is the second largest in the state and accounts for a fifth of Coos County’s economy, but it accounts for only 4 percent of Berlin’s (berlinnh/gov). Even today, there is only one motel in town, and it is generally regarded as an extremely low quality option for local lodging. Virtually all local lodging options are several miles south of the city, in Gorham. A local businesswoman talked about a social division between the two communities based on their different industrial identities:

*You know, it’s sort of a mentality that Gorham is better than Berlin for some reason. Because the mill town—we have the mill town and they have the beds. We have no hotels in Berlin. They have the hospitality piece, and we have more of the business industry piece. So I think that’s why the communities were different.*

However, despite the city’s historical lack of involvement in the regional tourism economy, several efforts at expanding the sector in the city have recently emerged. These are outlined below.

**Northern Forest Heritage Park.** Perhaps the most immediately visible and established case of tourism development in Berlin is the Northern Forest Heritage Park, which is located just north of downtown in an old Brown Company building along route 16, and immediately above the first hydroelectric facility on the river. The park was established in 1994, and contains exhibits oriented around the industrial and multi-cultural history of the region. The park’s features include a waterfront site from which boat tours of the river above Berlin are launched, a replica logging camp, and a museum and gift shop (northernforestheritage.org).
**Jericho Mountain State Park.** In 2004, the City of Berlin contacted the New Hampshire Department of Resources and Economic Development (DRED) and expressed the desire to develop all-terrain vehicle (ATV) recreational opportunities in the area. In 2005 the state purchased 7,200 acres of heavily-logged forestland land a few miles northwest of downtown Berlin along route 110, from Maine-based TR Dillon Logging (New Hampshire Bureau of Trails 2006). Since, the state has been building out a planned 136-mile ATV trail network in and around the park, and the city has developed a plan to link that network, via downtown Berlin, to an existing network of trails in the unincorporated territory of Success east of the city (Tetrault 2009b). In summer 2009, DRED announced a North Country marketing campaign, planned for summer 2010, the first component of which is an event to show off the park.

**The Coos County Branding Project.** The third element of new amenity-based or tourism-oriented development around Berlin is taking shape primarily at the county level. In 2007 the Northern Community Investment Corporation, with support from the Coos County Commissioners, hired Destination Development International to guide the creation of a countywide tourism marketing strategy, giving the region an ostensibly distinct identity as a destination. The branding effort has focused on the presence of three “grand” hotels in the county (which date back to the gilded age and have a special designation within the National Trust for Historic Preservation): the Mt. Washington Resort at Bretton Woods, the Mountain View Grand Resort in Whitefield, and the Balsams Grand Resort Hotel in Dixville Notch. In an attempt to capitalize on recent growth in adventure tourism, the project has developed the tagline, “Grand Resorts, Grand Adventures,” and focuses on the creation of a distinct aesthetic, a countywide
wayfinding system, branded visitor packages and guidebooks, targeted advertising, and a new county tourism website (see Destination Development International 2008).

**Berlin’s 21/21 Initiative.** In summer 2009, the city’s economic development coordinator proposed to the city council an initiative aimed at establishing Berlin as a major tourism and recreation destination. The “21/21” moniker was chosen to symbolize a community coming of age in the 21st century. As stated on the city’s website:

> The goal of the 21/21 Initiative is to transform the economic and social fabric of Berlin from that of a 20th century heavy manufacturing community, to that of a 21st century center of commerce based on unique outdoor recreational experiences in an urban setting. With the Androscoggin River in its downtown, Berlin is surrounded by the beauty of the White Mountains with Mount Forist as its signature icon. With several major ski areas within a 30 to 45 minute drive, the White Mountain National Forest within its boundaries, hundreds of miles of snowmobile trails and the State ATV Park all near downtown Berlin, opportunities for outdoor recreation is the low hanging fruit for a new economy for the City. Where Berlin once stood as the economic center of the region because of its paper mills, the City can once again regain its economic health and stature by reinventing itself as a user friendly, “place to go” outdoor recreation destination (berlinnh.gov).

The project is heavily focused on motorized recreation—ATV riding and snowmobiling in particular. While it lays out a vision for the city’s economic future, at this point it is still a proposal and does not outline concrete steps to reach its stated goals; the proposal calls for the formation of a task force to implement the initiative. Marketing a new community image has become an area of interest for the city administration, though at present it has not materialized into a concrete strategy specifically focused on the city.

**The Androscoggin Valley Tourism Promotion Project.** In summer 2009, the Androscoggin Valley Chamber of Commerce paid a Maine-based television production company to produce a 30-minute video highlighting various aspects of the Androscoggin Valley which would air in the northern New Hampshire and southern Maine television
markets (localdiscovery.tv). The video highlights Northern Forest Heritage Park, Jericho Mountain State Park, a moose tour service in Gorham, and the community college and arts center in Berlin, and has been posted on several of the featured organization’s websites as well as on youtube.com.

The Role of Image and Identity

The identity and image of Berlin is playing a central role in the city’s attempt at cultivating a tourism economy. The last of the five tourism-oriented development efforts outlined above embodies the difficulties for redevelopment posed by Berlin’s historical image. Standing in Berlin on the banks of the Androscoggin with the lone remaining stack visible in the background, the video’s host introduces the region with a clear attempt to redefine the environmental image of the area:

This area used to be known as a mill town, but those days are long gone. In fact, the mill you see behind me is the last remaining mill of the bunch. And today, the air smells good, the water is crystal clear, and thanks to a group of forward-thinking individuals, this whole area is reinventing itself.

The need to counter its historical and contemporary image has been an increasingly prominent theme in development discourse around Berlin. For example, in an August 2009 newspaper article, the director of the Northern Forest Heritage Park commented on the regional economic impact of Berlin’s negative image:

The perception of Berlin on the other side of the notch hurts the entire Androscoggin Valley (Eisele 2009a).

Beyond its negative image, the identity of the community as a blue-collar, working-class mill town and the historical occupational mix from which it arose is also at
the center of tourism-oriented development strategies. With respect to the city’s ability to capitalize on the Coos County branding effort, the project’s action plan remarks that:

Berlin’s current assets for brand development are somewhat limited. Its geographic location is ideal as an outdoor recreation base, but it does not have the supporting infrastructure of lodging, dining, and nightlife to attract visitors to stay for a period of time” (Destination Development International 2008 p. 34).

The tourism-oriented entities which currently exist in the city—Northern Forest Heritage Park and Jericho Mountain State Park—both embody and are centered on its industrial identity. The former is devoted to the city’s history in the forest products industry, and to the various forms of work—and patterns of intensive resource use—which underlie it. The ATV park features a site devoted to motorized recreation, as opposed to hiking, mountain biking, or other non-motorized and less resource-intensive activities. In keeping with this theme, the city’s 21/21 Initiative stresses motorized recreation as a key to the city’s economic future. Motorized recreation, with its high levels of energy consumption, intensity of resource use, generation of pollution, and reliance on elaborate support infrastructure (fuel, transportation, maintenance, etc.), reflects the city’s identity as an industrial community. Further, motorized or other high-impact forms of recreation is more compatible with heavily logged or intensively managed land (on which both the ATV park and in the Success trails are located) than other recreational activities. By contrast, nonmotorized or other lower-impact recreational activities are more consistent with pro-environmental and ecological value orientations (Berns and Simpson 2009; Hunt, Twynam, Haider, and Robinson 2000; Jackson 1986; Klein and Wolf 2007). Thus, Berlin’s present strategy to tap into tourism markets relies on a rather specific niche focused on motorized recreation. Its options for broader tourism-oriented development
appear rather limited, and contingent on a fundamental reworking of both the identity and image of the city.

**Conclusion**

Through over a century of industrially-produced environmental harm, Berlin became defined in large part—to both outsiders and within the community itself—as a dirty and polluted place. In this process a set of negative images and representations of the city, centered on the environmental effects of the pulp mill, circulated widely across the region and state. Interviews revealed a set of negative images and meanings centered on the odor produced by pulp production; the nickname “stinktown” emerged as a mark or label affixed to the city by outsiders which symbolized the undesirability of the place. Some respondents linked a sense of collective inferiority, low morale, or diminished self-worth to the environmental effects of the mill. These negative effects are consistent with those elaborated in the community and environmental stigma literatures, despite the fact that the latter tends to focus on the community effects of *risks* posed by particular technologies, rather than the type of *experienced* environmental harm that defined Berlin for more than a century. Since the 1990s, past and present environmental conditions have combined with its image and identity as a mill town to constrain and shape tourism-based development efforts. Some real efforts at cultivating a new consumption-based economy do exist in Berlin, though they are symbolically and practically tied to the city’s identity as an industrial community.
Stigma: Form and Content

While the community’s stigma is historically rooted in long-term and experienced environmental harm that is virtually nonexistent today, a new stigma is emerging based on decay and social disorganization. Thus, elements of both community and environmental stigma inhere in Berlin. In the process of stigmatization, a “symbolic space” pertinent to the city was formed, and occupied by negative images and representations. The closure and dismantling of the mill opened up space for new definitions, meanings, and representations of the city. The technology of pulp production provided the original form and content for the stigma, but when the pulp mill ceased to operate, the content of the community’s symbolic space shifted. However, rather than a shift away from images focused on odor and pollution, which would be advantageous for redevelopment opportunities, new images of decay and disorganization came to occupy the space in which Berlin is defined. Importantly, once a space for negative images of the community was formed, new negative content could occupy that space quite easily. In a general sense, Berlin did not have to be redefined from a “good” to a “bad” place; the basic space for negative content was already in place. Compounding the challenges Berlin faces, this new set of negative images has provided a sort of temporal momentum for the traditional set of images and meanings of the city, and so its reputation as a polluted place endures, though it ebbs slowly. Yet, while survey data show that characteristics specific to the community are generally viewed as negative, Berlin does not have a completely negative image by virtue of its generic qualities as a small, remote northern New Hampshire community.
Ascertaining the Invisible Costs of Stigmatization

Some social and economic costs of stigmatization are evident in interviews, and others can be gleaned from the almost total lack of a local tourism economy as well as the community’s need to consciously redefine itself in the attempt to cultivate one. However, evidence of perhaps the most significant costs of stigmatization cannot be observed directly because they manifest as investment or other beneficial activity that does not occur specifically on the basis of the community’s negative image; these costs are what does not happen. Given that, it is still possible still find evidence of these hidden costs in external discourse about the community.

The following exchange took place on New Hampshire Craigslist (nh.craigslist.org) in early July 2009:22

I am thinking about buying a multiunit property in berlin and wondered about the town and the people there? Would this be a mistake?

These four responses followed over the next few days:

(1) Berlin NH is the Black Hole of NH.............it consumes money, lives, and souls.....it's appetite is insatiable, Great deals on multi multis, usually means evil surrounds them.

(2) You will never find a more wretched hive of scum and villainy. You must be cautious.

(3) Was a nice town long ago. Now the prison is being built every scumb,welfare,loser is moving in here to live off the state. Unless you are already loaded w/ $$ it's a bad idea there is NO jobs here no $$ .Every day we see more & more freaks ,scumb,etc here this is why we are moving out. This town turned into a hang out for low income people w/ 10 kids no job losers & once the prison is in all the Rif Raf from the prisoners will be moving in to be closer to them losers in jail.DON'T DO IT.Drive around every other house is for sale NO ONE wants to live here any more !!!!

22 Newspaper reporter Erik Eisele at the Berlin Reporter brought this exchange to my attention via his blog, http://lastprintjournalist.blogspot.com/. The exchange is reprinted here unedited.
(4) Berlin was a nice place once, but with the paper mill that failed, it was the beginning of the end for that one company town, now it's looking more like West Hollis St in Nashua, sad.

The original poster followed up with this response:

thank you for the info, I will not invest in Berlin.

Though somewhat ephemeral, remote, and anecdotal, such exchanges can inform our understanding of the importance of a place's image in its prospects for development or investment. But as I show in the next two chapters, while symbolic elements of place are important for the present course of change in Berlin, the material structure of the city and its surrounding forest resources are also shaping redevelopment in profound ways.
Almost two decades ago, Freudenburg (1992) pointed out that extractive industry tends to physically reshape, often in negative ways, the environments of communities which depend on it. The ability of these places to advantage of new opportunities in a global economy is thus often hampered. While Berlin has not depended on extractive industry per se—the forest resource is a resilient and renewable one, and the community is more directly dependent on wood processing than wood extraction—Freudenburg’s observation can be applied to the course of redevelopment there. Though Berlin’s reputation as a polluted place is something of an anachronistic specter since the mill has been gone for years, as Chapter 4 shows the city’s industrial and environmental history is very much alive in its contemporary response to the challenges of redevelopment. But while the environmental harm produced by the pulp mill in large measure no longer exists, the material basis of its past as a center of industrial production, from the cityscape to the surrounding forest, is shaping the contours of redevelopment in profound ways. The ways in which space itself is an historical product of social relations in Berlin, and how that space is in turn shaping patterns of social and economic change in the city, provide a paradigmatic example of society-environment interactions at the community level. Here in Chapter 5 I focus primarily on the impact of the city’s built environment on the course of change in post-mill Berlin.
The Production of Space

The work of Marxian philosopher and sociologist Henri Lefebvre further illuminates the course of redevelopment in Berlin, and calls attention to the interplay between the social and the spatial in processes of change. In *The Production of Space*, (1991) Lefebvre redefines the role of space in social relations, doing away with conceptions of space that treated it as a passive medium *in* which the social exists. Instead, he argues that every mode of social organization produces a material reality that is a consequence of the social relations it contains. However, space as a product of a particular mode of social relations (i.e., mode of production) is not merely an artifact of those relations, but rather their very foundation; space is the means *through* which social relations are made real. As Lefebvre (1991) writes, “A social relationship cannot exist without an underpinning” (p. 401). For Lefebvre, social relations exist only to the extent that they exist spatially:

Social relations, which are concrete abstractions, have no real existence save in and through space. Their underpinning is spatial. In each particular case, the connection between this underpinning and the relations it supports calls for analysis. Such an analysis must imply and explain a genesis and constitute a critique of those institutions, substitutions, transpositions, metaphorizations, anaphorizations, and so forth, that have transformed the space under consideration (p. 404).

Space is produced in ways that are appropriate and necessary for the social relations it underpins; as a society materializes itself in space, it reproduces itself through that space. Space is thus seen as both a medium of social relations and a material product that consequently affects them. Further, for Lefebvre (1991), the importance of space is ever-increasing as capitalism advances:

Space is becoming the principal stake of goal-directed actions and struggles. It has of course always been the reservoir of resources, and the
medium in which strategies are applied, but it has now become something more than the theatre, the disinterested stage or setting, of action...its role is less and less neutral, more and more active, both as instrument and as a goal, as means and as end. Confining it to so narrow a category as that of ‘medium’ is consequently woefully inadequate (p. 410–411).

Lefebvre distinguishes the concepts of abstract and social space while positing a dialectical relationship between the two. Abstract space refers to space as it considered by those holding positions of knowledge and power in political and economic arenas, such as planners and developers. Social space, however, refers to space as it arises from the everyday material practices and experiences of all members of society (Gottdiener 1993). In this dialectic, then, the relations of individuals and communities (social space) to larger structural forces (abstract space) are manifest in and revealed through the material world.

However, in 1980 Edward Soja responded to what he perceived to be an overly deterministic approach to theorizing space, articulating the “socio-spatial dialectic” (1980) and expanding on Lefebvre’s framework to reconsider the role of space in processes of change. In Lefebvre’s work, Soja saw a fetishization of space in which it becomes a structure in and of itself, governed by laws of construction and reproduction independent of the social relations which it expresses. For Soja, like Lefebvre, space embodies and thereby makes real social relations (relations which are thus simultaneously social and spatial). However, for Soja space constrains but does not determine social relations—and thus patterns of change.

Together, the work of Lefebvre and Soja provide a framework for understanding space as both a mediator between structure and agency, and a structural element in and of itself. Attention and interrogation is thus brought to bear on the role of historical-
material forces in contemporary patterns of change. While the notion of the centrality of space in social life has received considerable attention in recent years, virtually all such research has focused on urban spaces in metropolitan contexts (e.g., Gotham and Brumley 2002; Logan and Molotch 1987; Massey and Denton 1993). Here, I focus on the spatial nature of shifting social relations in a small urban setting in a rural region, thus addressing an area largely ignored by most contemporary inquiries into the production of space (but see Tickamyer 2001 for a look at spatially-oriented rural research).

The Built Environment in Berlin

At a macrosociological level, Berlin’s economic history can be understood in spatial terms as part of a regional and increasingly global process of geographically uneven capitalist development, expansion, and reproduction. In the 19th century the community was made into a node of capitalist production through investment by interests based in urban centers to the south which were attracted to Berlin by the confluence of a local raw material supply and power source with the emergence of new transportation and production technologies. By the early 20th century, the city was a globally renowned center of pulp and paper production from which goods, technological advances, and profits flowed. As these spatial processes of capitalist expansion progressed across the globe through the 20th and into the 21st centuries, the city ultimately found itself on the losing end of competition in an increasingly globalized market for pulp and paper. Qualities of its geography that once posed no obstacle to development, such as the remoteness initially overcome by the introduction of rail lines in order to bring product to market, increasingly became liabilities as the global distribution of production—and
resultant points of economic opportunity—shifted. At one level, then, the city can today be seen in regional and global terms as the geographical downside of intensified uneven development.

The Cityscape

While the history of Berlin can be understood in such macrosociological terms, analysis of contemporary patterns of change necessitates a focus on the material structure of the community itself. Berlin’s historical existence and nature as a node of capitalist production was made real through, and is today revealed in, the spatial organization of work and residence in the community.

Figure 5-1: View of Berlin from Mt. Forist, looking northeast, Mahoosuc Range in background, 1970s.²³

The historically dominant Fordist pattern of economic and social relations in Berlin, outlined in Chapter 3, is quite evident in the spatial structure of the city. With the pulp mill site at the physical heart of the community, the city has been fundamentally oriented toward it since the mid-1800s. Figure 5-1 provides an aerial view of the city in which this orientation is clearly visible, as is the extent to which Berlin’s East Side bore the brunt of the air pollution produced by the mill. The mill sits on the eastern bank of the Androscoggin River just across from the downtown area while residential streets run up the sides of the valley perpendicular to the river. Just as the mill has been central to the social and economic identity of the community as outlined in Chapter 3, the mill site has long dominated the cityscape. Berlin was built around the pulp and paper industry, and the cityscape presents a case in which the ways that this pattern of social and economic relations became real through space are particularly clear. And just as its fundamental physical orientation is toward the mill site, the community lies on either side of a heavily industrialized stretch of the Androscoggin, a fact emphasized later in this chapter.

A local professional working for the city, in talking about how the mill shaped the community, emphasized that the mill’s dominance produced a very dense settlement pattern:

*Going back to the whole environment, you know, people walked to work. I lived on Burgess Street, and everybody else, because they had a bridge, they walked across. So what you see—very, very dense. And it was made, you know, one car parking lots, and you look at these big three tenement houses and there’s room for three cars. And the cars stayed home during the week, and everybody walked to work. Because if you look at the size of the parking lot at the mill, you couldn’t have two thousand employees working there, they didn’t have it. People just walked.*
Such a close physical relationship between the industrial heart of the city and its primary residential areas exemplifies, and is indeed a part of, the close relationship between the mill and the wider community which characterized Berlin for over a century.

Figure 5-2: Looking northwest from Berlin's East Side, August 2007. Machine shop on left, mixture of single-family and multi-unit dwellings on both sides of street, recovery boiler at center of frame.

Figure 5-2 provides another perspective on the physical centrality and dominance of the mill. The mill did not simply create a spatial pattern in which it sits at the center of the community, but that the pulp and paper industry's dominance imbued the majority of the community's residential spaces with a distinctly industrial feel. Looking toward the downtown area from many parts of the East Side, the remnants of the mill dominate the view while businesses historically related to the pulp and paper industry such as machine shops are scattered throughout the city, even in primarily residential neighborhoods. A
similar dynamic also exists on the west side of Berlin, where machine shops and truck repair shops line Route 110 as it winds through densely arranged three-deckers on its way out past another of Berlin’s industrial corridors and northwest to the mill town of Groveton.

Just as the mill was the center of social life in Berlin, so was it the center of space itself in the community. In fact, these two aspects of dominance are fundamentally intertwined; as Lefebvre (1991) would argue, industry dominated the community socially on the basis of its spatial dominance. As I discuss later in this chapter, the centrality of the mill site—and the fundamental orientation of the community toward it—is an issue of more than just simple geographical location. Rather, it is part of a larger pattern of control, investment, and disinvestment that permeates the entire spatial structure of the city.

Blight

But perhaps the most immediately visible manner in which Berlin has been affected by the demise of the pulp and paper industry is not found at the mill site itself, but in the commercial and residential spaces across the community. As I showed in Chapter 4, in recent years the city has experienced profound physical decline, and negative elements of its identity today are rooted in its appearance. In a public debate leading up to the November 2009 election, the mayor of Berlin emphasized the challenges to redevelopment posed by physical decline:

*If we want to get some economic development, we’ve got to improve the infrastructure of this city. We’ve got to improve the looks of this city.*
These issues of blight are the physical embodiment of industrial disinvestment in Berlin. In many ways, the decline of pulp and paper in Berlin—predicated on specific decisions made in Lefebvre’s realm of abstract space—has been rendered real through the social space of the community.

Downtown. The physical condition of downtown Berlin was a theme that came up in many interviews when I asked respondents to talk about change in the city. Eight respondents specifically addressed issues of blight in the downtown area, and how it negatively affects the city’s present options for redevelopment and growth. Many respondents talked about the development potential of historic features of the downtown area while simultaneously acknowledging the need to reverse physical decline. A young professional working in a development-related field put it this way:

Berlin has a lot of character to it in terms of its historic churches, its historic downtown that is definitely in need of...some tending to, for lack of a better word.

She went on to talk about the issue of blight with specific respect to how it colors external perceptions of the community:

First thing you see on the edge of town is the impression of the city, and if we don’t have a good downtown...you go over to Portsmouth, and you get this great impression of the city. And anywhere you go, that’s what you see, you know—your impression. And if it’s not a good impression, you know, where are we gonna be?

A former Gorham resident bore out the negative external perceptions that stem from the condition of the downtown area, emphasizing the regionally unique extent of blight in Berlin:

You know, their city right now, it’s depressed. I walk downtown Berlin, it’s burned down, terrible, it’s awful. You don’t go anywhere else and see that except for that area.
Unfortunately for the community, the physical appearance of the downtown area has taken on heightened importance just as the city is poised to enter a phase in which economic development has at least as much to do with attracting people as it does with exporting products. As a civil service official put it:

*My biggest pet peeve is the downtown. I mean, if you don't make a viable downtown, or a user-friendly downtown, then people really don't have a reason to come here.*

Figure 5-3: View north from the southern end of Main St., Berlin, August 2007.

Figure 5-3 provides visual evidence of the recent condition of downtown Berlin, showing the remnants of a burned-out mixed-use building on the east side of Main Street during summer 2007. This pile of debris was one of the first things anyone entering the city from the south saw for months on end. Across the street, between northbound Main and southbound Pleasant Streets, several burned-out blocks have occupied space in the
heart of the downtown area for the past few years.

During the immediate post-mill years, the blighted condition of downtown Berlin has become something of a source of embarrassment for the once proud community. Figure 5-4 is a cropped version of a paid political advertisement that ran in the Berlin Daily Sun during the run-up to the November 2009 municipal election, run by a group of candidates running in opposition to the sitting mayor and council.24 As I discuss in Chapter 7, the imagery and language in the ad resonated broadly across Berlin, striking a chord on the basis of Berlin’s historical identity as a stable, hardworking community. It is important to note that the burned-out building pictured in this ad, which stood in this condition for nine months while the city went through the tax-deeding process and prepared for demolition, lies just one block north of the burned-out building pictured in Figure 5-4. Together, these images begin to capture the considerably blighted condition of the downtown area.

Figure 5-4: Excerpt from political advertisement prior to 2009 election depicting downtown blight, Berlin Daily Sun 10/27/2009.

24 I discuss the significance of the 2007 and 2009 municipal elections in detail in Chapter 7.
**Housing.** While issues of blight are severe in the city’s commercial center, the residential side of local real estate presents just as pressing issue with respect to the physical decline of the community. The city has a glut of surplus housing units within an exceedingly old housing infrastructure. Per the 2000 Census, 59.7 percent of housing units in the city were built before 1939, compared to 38.2 percent in Coos County, and 23.7 percent in the state. Decades of outmigration have reduced the city’s population to less than half of its historical high, and the local housing market has become depressed as a result of a preponderance of surplus housing. According to Census data, in 2000 36 percent of owner-occupied housing units were valued at less than $50,000, compared to 22 percent in the county and only two percent in the state.

Twelve respondents talked about housing as a major issue facing Berlin today. A local businessperson, in talking about blighted housing as a major issue facing the community, pointed to absentee landlords’ lack of investment and associated costs to the community—common themes in these interviews:

> What’s happened over the years is we’ve had outside people come in, and they’ve purchased our buildings for nothing almost, and they’ve left them to rot. And so we’re paying a price today.

A city official saw the 2001 closure of the mills as a turning point in the local housing market, accelerating the entrance of absentee landlords into the community:

> I want to say 2001 really brought the—it created a vacuum. Everybody left. They wanted to fill them, they filled them cheap, and especially the guys who could stand it—the ones who paid cash for the buildings. They paid cash, they had no insurance on the building, they didn’t worry about it—that was it. They formed these little LLCs that, you know, kind of protected them, and you see a lot of houses owned that way.

A professional working for the city pointed to how absentee landlords contribute to blight in a similar way:
Even though we've made significant strides, it's still an issue. There's just a number of properties in the community that are in disrepair, that have turned over significantly. When the mill closed the first time, and property prices kind of bottomed out for us...I mean, just several slipping of properties where people thought they were gonna make a quick dollar, and they didn't. People would come in and go out without making a dime as an investment. And so, those properties are still in need of upgrade, rehabilitation, or in some cases, really they're beyond that...and need to come down.

In 2006, the city undertook a study of the condition of residential buildings in five neighborhoods immediately adjacent to the downtown area. Properties were evaluated visually from the street with respect to the condition of porches, doors, stairs, siding, windows, roofing, retaining walls, masonry, outbuildings and other aspects of appearance. The study found that over a third of residential buildings were in need of some form of work, repairs that were estimated to cost $5,300,000.25 In June 2009, the city received $4.3 million from the federal Neighborhood Stabilization Program, of which $1 million was slated for demolition of blighted properties. The remainder of the grant was to be used for renovation of existing buildings and construction of new housing.

Figure 5-5 depicts a common sight around the city, in which burned-out three-decker apartment buildings sit in otherwise fairly stable residential neighborhoods comprised of a mix of single-family and multi-family dwellings. Though not necessarily an absentee-owned property, this scene captures what residents perceive to be the consequences of absentee ownership; in 2008 there were roughly 250 absentee-owned residential buildings in the city.26 In response to worsening blight the city hired a

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25 Personal communication with city official.
26 Personal communication with city official. In 2000 there were 5,111 total housing units in the city. Assuming that each absentee-owned property contains three housing units, 15% of total housing units were
housing coordinator and code enforcement officer in 2004 to work specifically on issues related to blighted housing, and it has become more diligent about holding property owners to the city’s housing ordinances.

A local professional linked the increased presence of absentee landlords to the changes in the housing market brought about by the decline of the local population, and talked about the city’s efforts to deal with the problem:

*Well, if you look at the population of Berlin it’s now ten thousand. Berlin’s the issue with the housing. They’re the ones that had the 25, 30 thousand residents, and they only have ten thousand left, so there’s a lot of housing available. People come here for the low rent. There’s several landlords from away, all they care about is just getting the money from these people, and it’s deplorable conditions. So what we’ve done in the last nine or ten months, is to try to hit that issue head on with increasing*

controlled by absentee landlords. Using this figure with an estimate of 2,000 rental units in the city (there were 1,765 renter-occupied units in 2000), 38% of rental units are controlled by absentee landlords.
the inspection and the safety awareness and the building codes, to say either shape up or you're out of here, which is a great step forward.

A local official talked about encountering resistance to measures designed to address blighted housing, and the importance of such an approach for new development:

There's a lot for sale, I looked at one the other day. The grass was high. If I'm gonna buy this property, obviously I can tell nobody's maintaining it. So why would I want to buy that property? And this ordinance, the people that have been complaining, it's not gonna affect them. Their properties are well-maintained...it's the people that have broken windows, or it's not boarded up properly. Trash all in front of their house, tires stuffed underneath the porches, those properties that are vacant will be taken care of. And that's how you produce a cleaner environment, which I believe that people will be more apt to come here, you know?

When respondents talked about the negative impacts of the housing market on the community's prospects, many of these passages were permeated with language about an influx of low-income residents drawn to Berlin because of its cheap rents.²⁷ A local professional working for the city explained it this way:

We've had an influx of, ah, low income...see, the state and the region have some serious housing issues, and so does Berlin. But ours is opposite, because we have a surplus of housing. It has attracted...you know, it has attracted...uh...less than desirable...people to move in here. People who are, you know, on one form of assistance or another. And as a result it's, ah, burdened the schools. We have tremendous numbers of kids that need special Ed., ah, clinics. I mean we've got some serious, serious issues. And it revolves around housing. We've had a surplus of housing for, you know...I mean it's getting progressively worse...been probably 40 years having surplus housing.

The issue of blighted housing in Berlin is related to the housing market in two ways.

First, the depressed real estate values made it easy for absentee landlords to acquire

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²⁷ As I discuss in the next chapter, some respondents perceived a shift in the community's class structure that has been driven by an influx of low-income residents from the southern part of the state. There are no readily available Census data that depict such a trend. However, data from the 2007 CERA survey show that 55% of low-income (annual household income under $20,000) respondents not originally from the city said that better/more affordable housing opportunities were a "very important" consideration in their decision to move to the city, compared to between 0 and 23% for other income groups. Further, only 30% of low-income newcomers in the rest of Coos County said that housing opportunities were very important in their decision to move there.
property in the city in the years leading up to and following the closure of the mill. Second, the city’s low rents made it relatively easy for these landlords to fill their newly acquired units.

While a blighted physical environment represents a set of constraints on redevelopment, these costs are seen by respondents as mostly about missed opportunity—what development hasn’t taken place in Berlin on account of it. However, the city’s housing situation, which results from underinvestment in the waning years of the mill’s existence, now presents a substantial economic burden. The city has been increasingly proactive in dealing with the situation, crafting local ordinances that penalize owners of dilapidated properties and expending substantial resources on physical cleanup efforts. According to data from a city official and the city’s 2008 Annual Report, between 2005 and 2008 the city spent over $500,000 of its own money to remove burned, dilapidated, or condemned properties. The cost of cleaning up burned buildings alone accounted for over $300,000. During this time, the city’s only means of recouping property cleanup expenses was to sell the land on which the property was located, amounting to a $25,000 loss per cleanup.

Though the cleanup of the burned-out buildings which remain scattered across the city represents a considerable effort to deal with issues of blight, it leaves the city with blight of a slightly different nature: a number of vacant lots where homes or businesses once stood. Figure 5-6 depicts such a scene just to the north of downtown Berlin. The cityscape features a number of such cases where gaping holes in the city’s residential and commercial infrastructure exist. And while certainly not as problematic as piles of
rubble, they do not stimulate or even symbolize growth or revitalization in their own right.

Figure 5-6: Site of fire on North Main St. after cleanup by City, April 2008.

Public Safety Expenditures. In an era of population decline, public safety issues related to blight and decline have actually become larger in quantitative terms. Even as the population of the city declined by 11.5 percent from 1997 and 2007,\textsuperscript{28} police calls increased by 21 percent according to the city’s 2007 Annual Report. Over the same period, calls to the Fire Department increased by 48 percent. This increased burden on the police and fire departments meant that municipal expenditures on public safety increased by four percentage points from 1997 to 2007, from 10.4 to 14.3 percent of the city budget.

\textsuperscript{28} From 10,956 to 9,699 according to Census Population Estimates data.
Together, the costs of addressing the physical and social symptoms of blight and decline represent a substantial economic burden the city has been forced to take on, and a redirection of resources—not only money, but time and creative energy—that might have been spent on new approaches to economic and community development.

The Infrastructure Issue

While the population of the city has dwindled in size over the past several decades, its physical infrastructure has not. At a public debate leading up to the November 2009 local election, a candidate for mayor argued in favor of the proposed biomass power plant on the former mill site by invoking the pressing fiscal issues posed by the city’s population and industrial decline:

Berlin was built for 20,000 people. We have 72 miles of streets; we have 72 miles of infrastructure. We can’t wait for the cavalry to come, because the settlers will all be dead by the time the horses roll in to save us... Absent of the Laidlaw project on that mill site, it would be 50 years before anything would be done with it.

Six respondents talked about the problem of an oversized physical infrastructure for the city’s current population of roughly 10,000. A local businessperson explained, emphasizing the impact on tax dollars:

The problem at the city level is we’ve got the infrastructure for 23,000 people, and we still have to maintain that infrastructure and its expenses even though we’ve only got 10,000 people in the city...there’s only so many dollars to go around.

A professional working for the city expounded on the issue, emphasizing its apparent intractability:

The city was laid out, roads, water, sewer, for a population that at height, I believe it was close to 21,000. And now we’re just hovering around ten, so obviously we still have to maintain...sixty miles of streets, plow those
sixty miles of streets in a storm, even though the population isn’t here. So, you could all of a sudden say, ‘you know what, we’re just gonna stop plowing this corridor of streets because there’s nobody living there.’ I mean there’s still people living there... So yes, the infrastructure is still really large to maintain, but we couldn’t make the decision that we’re not gonna maintain here or there, or do something to change that or make it easier to deal with, because it’s just the way that the population is spread out.

Another professional working in a development-related field linked the issue back to questions of vacant, and therefore potentially blighted, municipal and civic properties:

*Our school system, I mean, we have a lot of empty schools in the city, and part of that is the population decline. I think that the closures of our schools and the closures of some of our churches, that you see a lot...so what are we gonna do with those empty buildings once they’re closed? That’s an issue.*

She went on to link the issue of unused municipal and civic buildings to the larger need to bring unused buildings back onto the city’s tax rolls. A professional working for the city explained the fiscal impact of the first mill closure in 2001:

*When the mill closed, during that point we literally were days away from being a bankrupt community in the sense that when we lost the tax base that went along with the mill, I mean...we had no money at all. It was fortunate enough that we had a very fiscally responsible council at the time, and a wonderful comptroller that really held it together for us. And we were fortunate that we were able to pull through that.*

**Fiscal Stress.** Fiscal stress is a serious constraint to innovative community development. Fiscal stress arises from declines in industrial, commercial, and/or residential tax bases, which takes place as employment and population decline. Several studies have focused on how cities respond to deindustrialization and the related fiscal crunches felt in northeastern American and British cities through the 1970s and 1980s (Burchell and Liskin 1981; Clark and Ferguson 1983; Dreier, Mollenkopf, and Swanstrom 2001; Levine, Rubin, and Wolohojian 1981; Rose and Page 1982; Rubin 1982). However, some have extended this area of inquiry to rural places, albeit in ways
that lose focus on the causes and consequences of fiscal circumstances in particular specific communities. For example, Johnson, Pelissero, Holian, and Maly (1995) explored rising fiscal pressure on local governments in nonmetropolitan counties in the US, but used the county as the unit of analysis by aggregating local government revenues to the county level.

Rubin (1982) describes fiscal stress as narrowing financial options for cities, as well as producing potentially higher costs for those options that are available. She notes that the effects of fiscal stress can be enormous, and include shifts in power across interest groups, layoffs, and declines in service levels, emphasizing the roots of fiscal stress in the relocation of people and jobs to places beyond city boundaries (see also Clark and Ferguson 1983). However, she also points to the in-migration of lower income populations as potential drivers of fiscal stress in urban areas: these populations require more social services than middle-income and affluent groups, and thus represent a greater fiscal burden. The in-migration of poor residents can result in increased poverty in rural areas as well, and can bring significant negative effects on communities including conflicts over social norms and problems more generally associated with concentrated poverty, such as declining school quality and a diminished local tax base (Foulkes and Newbold 2008). Further, related to the issues of blight outlined above, "physical decline directly affects the assessed valuation and attractiveness of an area, which in turn affect the desirability of living in the city" (Rubin p. 33). Notwithstanding the fact that the real extent and costs of an influx of low-income residents in Berlin is still an open question, the similarities between Berlin and the larger metropolitan cities studied in the fiscal stress literature is clear.
However, few studies link these fiscal constraints to community development, beyond the general theme of fiscal stress making cities more difficult to govern effectively. In general terms, Peter Drier et al. (2001) call the constraints faced by all cities when it comes to making decisions about spending “the iron cage of municipal finance.” The authors argue that even in cities that are viewed as fiscally healthy, options for achieving goals through municipal spending are severely limited due to the sheer number of services that municipalities are obligated to provide.

Property tax rates in Berlin have long been among the highest in the state of New Hampshire. In 1990, Berlin’s equalized property tax rate was seventh highest in the state. In 1995 it dropped to 15th highest, but by 2000 it was second highest, and it had the highest equalized rate in the state in 2002 (NH Office of Energy and Planning 2004). Figure 5-7 shows trends in Berlin’s total assessed valuation and local property tax rate over the past two decades based on data from the NH Department of Revenue Administration. The city achieved some tax relief in the early 1990s, largely on the basis of an increase in valuation brought about by the $100 million investment made by James River Corporation in the then-new chemical recovery boiler which now sits alone on the otherwise-vacant mill site. However, the city’s valuation dropped in the mid-1990s around the time that Crown Vantage was spun off from James River, with an accompanying spike in the tax rate. Valuation dropped again in the wake of the 2001 mill closure before increasing again in 2005. While not clear from this graph, the 2006 mill closure brought about another decline in total valuation, though it was offset by the expiration of a tax agreement between Fraser Paper and the city in which the hydroelectric facilities associated with the pulp mill was treated as part of the mill
property. When that tax agreement expired, a re-valuation of the hydro facilities showed that they were worth considerably more than the rest of the mill property. In 2008 the four hydroelectric facilities in Berlin were valued at a combined $73.3 million, compared to $5.4 million for the former pulp mill site (Tetrault 2008a).

![Graph showing valuation and tax rate over years]

Source: NH Department of Revenue Administration

**Figure 5-7:** Berlin total property tax valuation and tax rate, 1987–2006.

A local professional talked about how the tax burden in Berlin runs through every discussion of redevelopment in the city:

*There's been a shifting of the tax burden in these towns, as these plants have closed. The residential property owner is picking up more because there's less and less commercial and industrial property, and the value of what's there seems to be decreasing. So it's not just the tax rate that's going up, but in many cases, the percentage that's covered by residential. So you get sort of a double hit. This happened here in Berlin a couple years ago. So, getting new tax revenue helps.*
Figure 5-8 shows trends in the composition of Berlin’s tax base from 1997 to 2007 based on data from the City of Berlin. In 1997, while the mill was still going relatively strong, industrial and commercial property accounted for almost 60 percent of the city’s tax base. But by 2005, residential property comprised roughly 70 percent of the tax base, representing a wholesale shift in the city’s tax burden.

**Figure 5-8:** Composition of Berlin tax base, 1997–2007.

**The Mill Site**

While the above outlined issues of blight are perhaps the most immediately visible ways in which industrial disinvestment has manifested itself across space in Berlin, perhaps no issue is as central, literally and figuratively, to redevelopment as what to do with the 120-acre site on which the pulp mill once stood. The Mayor of Berlin emphasized as much during a public debate in the run-up to the November 2009 election:
Since the incorporation of this city in 1829, its fortunes and misfortunes have been decided by the businesses that have occupied the area along the Androscoggin River. This fact has determined our history.

As discussed in Chapter 3, when Fraser Papers closed and sold the pulp mill to North American Dismantling (NAD) in late 2006, it did so with the stipulation that the mill be demolished. This decision was borne out of Fraser’s desire to eliminate the possibility of another company acquiring the mill and resuming production, thereby competing with Fraser in the global pulp market. This destruction of physical capital—the literal deindustrialization of the mill site—was a dramatic material manifestation of industrial disinvestment.

One immediate consequence of Fraser’s conditions of sale for redevelopment becomes clear when looking across New England at the many examples of redeveloped mill buildings in other communities. From the Massachusetts Museum of Contemporary Art in North Adams, MA (located on a remediated Superfund site at a former Sprague Electric plant) to a branch of the University of New Hampshire in Manchester (housed in part of the former Amoskeag textile mills), the region is peppered with successful examples of reusing the shells of formerly industrial facilities. However, in Berlin the demolition of the pulp mill left the city without any industrial infrastructure in the heart of downtown that could be used for residential or commercial “infill” development. Rather than potentially using the old mill for condominiums, artists’ lofts, light manufacturing, or retail space, neither the city nor potential developers could pursue these (or other) options, because the infrastructure suitable for such redevelopment—mill buildings—simply no longer existed. While pulp production is in large measure a vertically-oriented process and thus requires buildings with different layouts and
dimensions than horizontally-oriented textile or even paper production, the course of future development on the former mill site was shaped greatly by Fraser’s mandate.

Figure 5-9: Looking southwest across mill site, April 2008. Recovery boiler and stack at center-left; downtown Berlin and Mt. Forist in background.

The Recovery Boiler. While NAD flattened virtually the entire mill site between 2006 and 2008, they left a few key pieces of industrial infrastructure intact. None are more prominent, physically or economically, than the $100 million chemical recovery boiler installed by James River Corporation in the early 1990s, and visible in Figure 5-9. In 2007, New York-based Laidlaw Energy Group, Inc. announced plans to acquire and modify the recovery boiler for use as part of a 65-megawatt wood-fired power station. In late 2008, Laidlaw purchased a property consisting of the boiler and 60 acres on the former mill site from NAD for an undisclosed price (Tetrault 2009k). Today, the boiler
and its 320-foot stack sit idle alongside the Androscoggin and immediately adjacent to
downtown Berlin.

Laidlaw’s plan to adapt the recovery boiler to wood-fired electricity production
involves two steps. The first is to essentially cut the existing bottom out of the boiler and
install a “bubbling fluidized bed” in which solids are suspended by and intermix with hot
air in the combustion process. Such boilers are highly flexible in terms of the types of
fuel that can be used; clean wood chips, construction debris, or coal can all be burned to
create heat. The second step to operationalize Laidlaw’s proposed facility is the
installation of a steam turbine generator (Laidlaw Energy Group 2009). As of late 2009,
Laidlaw owns the boiler and surrounding property, but has not yet filed an application
with the state’s Site Evaluation Committee for a permit to operate a renewable energy
facility.

Figure 5-10 illustrates the extent to which the mill, even now, hangs over
downtown Berlin. Redevelopment of the mill site, and Laidlaw’s proposed biomass
project in particular, have been at the center of public discourse around redevelopment in
Berlin since shortly after the mill’s closure. In fact, the April 1st, 2008 edition of the
Berlin Daily Sun even featured a fictitious headline which read, “Federal Prison to go on
Mill Site.” 29 A simple content analysis of letters to the editor in local newspaper also
demonstrates how much the mill site dominates public discourse. Of 65 letters to the
editor that appeared in either the Berlin Daily Sun or Berlin Reporter over an 18-month
period 30 and that addressed issues related to redevelopment, 48 (74 percent) were
specifically concerned with redevelopment of the mill site. Eight letters addressed the

29 As discussed in Chapter 7, a federal prison currently under construction will soon be one of the city’s
largest employers.
30 Between June 2008 and November 2009
possibility of a casino in Berlin, five addressed the state or federal prisons, and four addressed issues related to ATVs or other forms of motorized recreation.

Figure 5-10: View of the recovery boiler from northern end of downtown Berlin, August 2008. Androscoggin River is immediately behind commercial buildings.

Perhaps unsurprisingly, then, redevelopment of the mill site was far and away the most dominant theme in my conversations about change in Berlin. Every respondent touched on issues related to the mill site, mentioning the place explicitly, and most talked at length about the issue of redeveloping the site. A local professional talked about the centrality of the mill site to the crisis of identity post-mill Berlin has been experiencing:

*I think Berlin's going through that whole, I don't know if I'd call it an identity crisis, but trying to figure out where their future is. And you see that debate taking place in this issue over the mill property. Some people say, 'well, it's a beautiful site, let's clean it up, let's make it commercial and retail.' But there's a proposal for a wood plant, it makes sense to convert it and preserve that tax base for the city. And I think you see it going on, as, as what will the future be? And what will we be?
Everything's changed.

Her comments touch on several key themes. First, the identity of the city has historically been tied to economic activity on the mill site, and it continues to be today even as the site sits largely vacant. Second, the natural beauty and amenities of the region are central to many conversations about new, non-industrial forms of economic development in the city. And third, the fiscal situation in Berlin and the need to buttress the community’s industrial tax base in the wake of the mill closure is prominent in discussions about redevelopment.

Because it had determined the character and identity of the community for so long, many respondents saw the future of the former mill site as the fundamental issue currently facing the community. A local businessperson talked about the closure of the pulp mill as not only presenting the community with a crisis of identity, but with the opportunity to fundamentally reinvent itself:

*I think the number one issue is the ability to reinvent ourselves. And we have an opportunity right now to do something with that mill site that would allow Berlin to become a different city.*

A professional working in a development-related position talked about the reaction of some in the community at Fraser's decision to have the pulp mill torn down:

*The condition of the sale by Fraser Paper was that whomever they sold it to could not use it as a pulp mill. They wanted to get rid of the competition. So, we knew that that was the end of an era. And North American Dismantling, when they met with us, said 'we're tearing everything down, we're gonna implode the stacks and it's gone, you're gonna have a clean site.' And some of us said 'yes!' This is a chance to reinvent ourselves and do something that is gonna be more in harmony, not only with the times, but with the environment up here.*
He went on to talk about the city’s unique position in a regional economy that has for decades been dependent not only on manufacturing, but also on tourism and recreation-related industries:

Because we were kind of an anomaly in a way—I mean, you’ve got ski areas, you’ve got tourist areas, you’ve got fishing, outdoor recreation, all these other things, and then you had that stinkin’ pulp mill in the middle of it, you know, stinkin’ to high heaven.

These comments juxtapose the considerable natural amenities and beauty of the region with the substantial environmental harm produced by the pulp mill. In addition to shaping the community’s image and identity, these effects—air and water pollution chief among them—created an island of almost no tourism activity in a recreation-dependent county.

This sensitivity to the negative environmental effects of the pulp mill, detailed in Chapter 4, was featured in many conversations about what should be done with the mill site. Another local professional touched on this theme in recalling his initial reaction to Laidlaw’s proposed biomass project:

I’ll tell you what—I was very strongly a proponent of not having the biomass on that site. And basically for the reason I just said—because I grew up here and saw how the city suffered from the negative image or the stigma it had as a mill town. And so I thought that anything that perpetuated that image would be a bad thing.

However, he went on to talk about how his position on the issue shifted somewhat over time:

As I’ve thought about it more and more over time, I realize that the city’s gotta balance its desire to be something different with its immediate need of income. You know, I guess I still feel at this moment in time, I would rather not see the biomass there...if the city can hold itself together financially.
The community’s need for income and tax revenue formed the basis of his reconsideration of the issue. However, even given this recognition of the city’s financial state, his stance on the issue is still quite conflicted. Such mixed thoughts on the future of the mill site were common among respondents. A professional working for the city expressed his conflicted outlook on the issue:

*Because I think for us, a lot of things are gonna change. Right now, I’m hoping in a way...I’m not sure what I’m hoping for. My mixed, about Laidlaw...part of me says flatten the goddamn place. You know, and then we’ll have peace and quiet, and the city can pull together again.*

In addition to uncertainty at the individual level, these comments point out the divisiveness of the issue at the community level, and a need for resolution to the issue—for this respondent, even if it means living with a completely flattened mill site.

Beyond the biomass energy proposal articulated by Laidlaw, new visions for economic activity on the mill site tend to be understandably vague. A local professional, when asked what she would like to see happen with the mill site, answered in this way:

*To me, it’s a beautiful site. I mean, that boiler’s there, and I guess I could live with it. But given my druthers I’d like to see...something there. I’m not hoping it’d be a strip mall. I love what they’ve done with the old mill buildings in Manchester. But there aren’t old mill buildings here—they’re clearing the site. It wasn’t the same situation where there was all those nice brick buildings. But I’ve gone to Manchester a lot, and I’ve seen those mill buildings sort of evolve. I mean, they were not hot properties 25 years ago. But if you could get a mixture of restaurants and some housing. But also high tech, I mean, we don’t have much high tech come here, or electronics, or some commercial operations that would employ people.*

In articulating a vision of redevelopment inspired by what she has seen in other communities and broadly centered on a mixture of residential uses with hospitality and high-tech industries, she pointed to Berlin’s unique set of spatial structures borne out of the end of a particular industry at a particular point in time. As noted earlier in this
chapter, by virtue of different processes and technologies, pulp mills differ in layout from
the textile mills in Manchester. This fact, combined with Fraser’s decision to rid itself of
competition in the pulp market by mandating the destruction of the existing pulping
facility, created a space devoid of infrastructure immediately compatible with such mixed
uses. At the same time, James River’s $100 million investment in the recovery boiler—and
the physical capital seen on the mill site today—has combined with a new emphasis
on renewable energy production to create a space well suited to biomass energy
production.

Figure 5-11: Map of Berlin showing locations of 130-acre mill site (outline) and Chlor-
Alkali/cell house site (solid).31

31 Boundaries adapted from Planning for the Future: Reuse Planning Report for the Cell House Property of
the Chlor-Alkali Superfund Site, prepared for the City of Berlin Chlor-Alkali Reuse Planning Committee by
E2, Inc. and released in December 2008.
Gauging public support for the Laidlaw proposal has been difficult given its contentious nature, and content analysis of letters to the editor does not show a clear pattern. Of the 65 letters to the editor regarding mill site redevelopment that appeared in either Berlin newspaper between June 2008 and November 2009, 42 took either a pro-biomass or anti-biomass stance with respect to the mill site. Of these, 17 were in support of Laidlaw’s proposal to reuse the recovery boiler to produce electricity, while 25 were against biomass energy production on the former pulp mill site. Obviously, writers of letters to the editor do not represent a random sampling of Berlin residents, and several letters on each side of the debate were written by the same people over a period of time. However, these figures combined with data from participant observation at public hearings on the mill site’s future32 suggests that Berlin is indeed a divided community with respect to the industrial future of the mill site.

The Cell Houses. When most respondents mentioned or alluded to the environmental harm produced by the mill, they focused on the odor it produced and how the city’s image as “stinktown” has continued to resonate in the immediate aftermath of the mill closure. Yet, this negative image stems from pulp mill emissions that no longer exist today. The persistence of the city’s negative image is perhaps to be expected, but it is somewhat incongruous when considered alongside the city’s most serious contemporary environmental issue. The “Chlor-Alkali Facility,” a site of severe ground contamination, has taken on a relatively minor role in discourse about the place despite its status as a Superfund site. Though both instances of environmental harm (air pollution and ground contamination) are products of the pulp mill, the environmental

32 These data, and between-group differences in support or opposition for industrial use of the mill site are addressed in Chapter 7.
aspect of Berlin’s present negative image is based much more on diffuse environmental problems of the past than the acute environmental problems of the present.

From the late 1800s to the 1960s, the chlorine needed to bleach pulp at the mill was produced using the chlor-alkali process in “cell houses” located along the Androscoggin near the northern end of the mill site. In one version of this process—used by the Brown Company for decades—an electric current is passed through a brine containing sodium chloride, from a graphite anode to a cathode consisting of a layer of mercury beneath the brine. Eventually the process became obsolete, and between the 1960s and 1999 the cell houses on the site were razed and buried—along with the mercury, dioxins, and PCBs associated with the chlorine production process. In 1999 the site was capped by then-owner Crown Vantage. The property was not included in the 2003 sale of the property to Fraser Papers, and remained a holding of Pulp and Paper of America until the company was recently authorized to abandon it by a bankruptcy judge.

In 2005, the 4.6-acre “Chlor-Alkali” site was added to the Environmental Protection Agency’s National Priorities List and subsequently designated as a Superfund site. It has been estimated that 600 to 1000 tons of mercury entered the soil below the cell houses. In the past few years, beads of mercury have been observed seeping into the river from the fractured bedrock that underlies the site, and in 2009 EPA began investigating the extent of contamination on an additional 38-acre area which abuts the chlor-alkali site (Environmental Protection Agency 2009). The city has since declined to assume ownership, to which it is entitled on the basis of unpaid property taxes (Tetrault 2009c). The full extent of contamination on the site is still being evaluated, with final remediation scheduled to be completed by 2016 (EPA 2009).
Six respondents remarked on unknown amounts of ground contamination when talking about the mill site, though only two talked specifically about the smaller Chlor-Alkali site. When asked about contemporary environmental issues in Berlin, a professional working for the city introduced the condition of the Chlor-Alkali site this way:

*Well, when you say environmental, are you meaning something specific? I can tell you that we’re doing a Superfund project right now. Beautiful! The mill does have certain environmental issues, period—but there is a separate piece of five acres that’s been identified as a contaminated mercury site. So, for the community, I suppose, that’s probably the most tangible environmental issue that we’re dealing with.*

He went on to talk about the community-based site reuse planning process, which is part of EPAs ongoing Superfund Remedial Response process:

*It’s very valuable riverfront property that’s just really not in a good state of environmental cleanliness. And it’s still even just so early in their*
process that, even if we come up with something, and that's what the community rallies around, and everybody puts their stamp of approval on and whatever...well, during the cleanup process itself, it's very likely EPA could say 'you know what, that's just never gonna be a marina, we're gonna have to go back to the drawing board.' Because, really, there's just so many unknowns at this point. It's hard for the community to do. It's been a frustrating experience to kind of come up with whatever that future use is, now, even though there's so many unknowns out there. Trying to say, you know, what do we do to make this a functioning, taxable property in the future?

His comments highlight the ways in which the unknown extent of contamination makes it difficult for the community to envision a distinct set of future uses, even on such a centrally-located piece of riverfront property.33 Paradoxically, then, the one piece of the pulp mill site over which the community could have a definitive say over future use is in essence the least immediately developable parcel of land in the city.

But beyond the extent of contamination on the Chlor-Alkali site, the degree to which the soil on the larger 120-acre mill site may be polluted is also unknown, and can lend an ominous tone to general discussions of the site’s future. A young professional who recently moved to Berlin touched on the issue this way:

*Up at the demolition of the mill stacks, someone commented—they were talking about the cleanup effort, and the really old, the oldest parts of the mill property. And they were like, 'God knows what's buried there.'*

Another respondent working in the field of education mentioned the likely pervasive extent of ground contamination in juxtaposing the beauty of the Androscoggin Valley with the current reality of the mill site:

*If you're on the east side looking south, you're looking at this god awful—it looks like a war zone—mill site. Were you around when they were actually doing the demo? Did you ever go on the property when they were doing the demo? You know what they were doing? Anything they couldn't*

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33 The draft reuse framework developed by the reuse planning committee outlines a riverfront trail system, a heritage corridor, and light commercial activity as potential future uses of the Chlor-Alkali site (see E2 Inc. 2008).
salvage they were just burying. Oh yeah, that’s all buried there. People
don’t talk about that, but that’s what was going on. But you look at that
and you need only cast your eyes upwards a couple of degrees...looking at
just incredibly beautiful photographic opportunities, stunning mountains.

However, when it comes to articulating specific positions vis-à-vis pending
proposals for the redevelopment of the mill site, the specter of ground contamination
takes on heightened importance. Proponents of future industrial use of the site—
primarily Laidlaw’s proposed biomass power plant—commonly invoked the threat of the
unknown in public arguments for keeping the site industrial. For example, in the run-up
to the 2009 election, one candidate for city council who supported Laidlaw’s proposal
remarked that the community is “really limited with what you are going to be able to do”
with respect to future uses of the mill site (Eisele 2009b p. 2). Another city council
candidate and supporter of the biomass proposal was more specific in his assertion that
other forms of development are not viable on the site:

It is the best use of the property considering the history of the land. The
many foundations, sink holes and possible contamination makes it near
impossible for other development (Lyons 2009a p. 6).

The argument, in essence, is that since it’s known that the site is polluted, yet it’s
unknown what exactly is under the topsoil, it makes sense to keep it as an industrial
space. Combined with other negative aspects of the city’s built environment such as
blighted housing, the mention of a contaminated mill site can serve as a powerful
rhetorical device in arguments for continued industrial use of that space. A letter to the
editor in the March 6th, 2009 edition of the Berlin Daily Sun, in support of the Laidlaw
proposal, contained the following passage:

The last time I checked, there was a federal superfund site on the mill
property. Please tell me who is going to want to build a residential or
commercial facility in this area? Who is going to build a casino on the old
mill site, even if the super fund site was cleaned up? Have you looked at what surrounds that area? It is not pristine woodlands and beautiful landscapes, no it is run down housing, and a dump that can be smelled at that location. This is where I want to take my family on vacation...? (p. 4).  

In these ways, contamination of the mill site shapes the rhetoric surrounding the place into a form that stresses its incompatibility with uses beyond traditional industrial ones. However, the condition of the soil beneath the mill site is not the only aspect of the built environment pushing redevelopment in an industrial direction. As Figure 5-13 suggests, the community’s chief water resource—the Androscoggin River—has also been reshaped in profound ways over the course of the city’s history as an industrial center.

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34 The dump referred to in the letter is the so-called “Dummer Yard,” which lies just east of the mill site. The roughly 400-acre yard was used for a century as a storage and disposal site by the mill, and has more recently been used as a municipal landfill by the City of Berlin. This parcel, along with the Chlor-Alkali site, was last owned by bankrupt Pulp and Paper of America. It is now inactive as a landfill.
Looking north from the Chlor-Alkali site, one can immediately observe the first of many dams which straddle the river as it courses down the valley. Not only does the Androscoggin’s eastern bank bear the marks of a heavily industrial past, but so does the river itself.

The Industrial Androscoggin

With respect to the character of the Androscoggin, downtown Berlin represents an almost totally industrialized waterway. The river flows mostly unencumbered on its roughly 35-mile course from Umbagog Lake down to Berlin, save for a dam and hydroelectric facility at the Pontook Reservoir in Milan. This stretch of the river is a popular paddling destination as it courses through the 13 Mile Woods Scenic Area, a vast tract of conservation land. However, in Berlin the river takes on a fundamentally different character. There, the river is dammed at four spots over a two mile stretch from the northern end of the mill site to a location near the Berlin/Gorham line. These locations are the sites of four hydroelectric facilities with a combined generating capacity of 28 megawatts. Two are located directly along the mill site, originally built to provide power for operations at the mill, while the other two are situated further downstream; three of the four impound the river as it flows through the downtown area. Great Lakes Hydro, a subsidiary of the Canadian company Brookfield Asset Management, Inc. (which also controls the majority of Fraser Papers’ stock), owns three of the hydroelectric facilities (with generation capacities of 7, 3.2, and 3.1 megawatts). Public Service of New Hampshire, a subsidiary of the larger company Northern Utilities, operates the fourth and largest facility, Smith Hydro, with a capacity of 15 megawatts.
Despite its historical non-involvement in the regional tourism economy, Berlin is a fairly popular take-out spot for paddlers heading down the river from points north. Figure 5-14 shows the view south from the middle of the Androscoggin just above downtown Berlin; the northern Presidentialls, the old boom piers mid-river, the recovery boiler, and the first of many dams all coalesce in this image which captures Berlin’s past and present. This is essentially the view a kayaker or canoeist would enjoy as they paddle past the takeout just out of view on the right, and toward an almost certain demise at the first hydroelectric facility.
Figure 5-15: Satellite map of Androscoggin Valley with approximate locations of hydroelectric facilities marked (c. Google Maps).

Figure 5-15 shows the approximate locations of dams in the Androscoggin Valley. A quarter-mile past the Sawmill dam (pictured above in Figure 5-13) at the northern end of the mill site, the river is dammed again near the former pulp mill complex. A half-mile beyond that, in the heart of downtown, the river is impounded again. Just under a mile further downstream, the river is dammed again at another hydroelectric facility. And immediately after it flows from Berlin into Gorham, the river is dammed again at the Cascade paper mill. Altogether, there are eight dams from the Sawmill dam in Berlin to a hydroelectric facility 15 miles downstream in Shelburne, near the Maine state line.
The river figured fairly prominently in my conversations about the community. Nine respondents made specific reference to the Androscoggin during our interview. Five interviewees referred to the river’s troubled environmental history, but seven talked about its scenic qualities or potential as a developable asset in terms of recreation; four respondents touched on both themes during the interview. The following passage from a young professional and recent transplant illustrates both the river’s industrial history and her view of its potential as a natural amenity vis-à-vis tourism:

\[I\textit{know in terms of the river, pollution’s not really a big issue. That kind of stopped being an issue before I was even born, with a lot of mills dumping stuff into the river. So I think it’s one of the biggest resources here—aside from the woods, it’s the river}.\textit{ Keeping it clean and keeping it in good shape, it’s a great way to generate tourism. Skowhegan and Waterville are based very much on the Kennebec, so they’re starting to use that. They’re building whitewater parks and they realize the value of preserving the river}.\textit{ The big thing is, through all these cleanups, just keeping in mind that the river is more than just kind of, ‘oh, it’s just there, we can build a couple dams, some bridges.’ It’s utilizing the full potential, and focusing in on that and using it for tourism, because there’s definitely no shortage of natural resources or natural beauty in this part of the state.}\]

However, when asked if she saw a burgeoning interest at the community level in using the river as a recreational amenity, she responded this way:

\[I\textit{think I’ve maybe heard five minutes of discussion on it since I’ve been here. It was briefly mentioned at a city council meeting, but beyond that I can’t think that there’s been any discussion. And that short little blurp was even focusing in on exactly what I’ve been talking about with Skowhegan and Waterville, for transitioning use of the Kennebec. And they were kind of like, ‘oh, we could do that with the Androscoggin.’ And then it was like, ‘okay, moving on to something else.’}\]

Despite this perception that the promise of the river received short shrift at the community level, another respondent, a young small business owner, expressed a specific idea that the river could indeed be drawn upon as a recreational resource:
I'd like to see a whitewater park. Colorado has one. I don’t know if you’ve ever seen the falls there, but we have some amazing falls—you can’t see ‘em—and it would be very extreme whitewater—the most extreme that we probably have in New England. And it would attract people from all over the world to hit those rapids. It actually wouldn’t interfere with the hydro dams at all, because they’ve been done. Colorado, I think it cost ‘em sixty thousand dollars to build this little whitewater thing. It’s a small town, old mill town, and it generates 2.4 million dollars annually into this little town.

The words above suggest certainty as to the feasibility of a whitewater park in Berlin. However, they also illustrate the extent to which the river’s flow has been encumbered and the falls obscured—“you can’t see ‘em.” She went on to back away from the notion of a whitewater park as an immediate possibility:

But that’s just a wild idea. It’s things like that... you gotta have...a strong vision, and you see that that could come.

Another local business owner talked about the potential drawing power of the river in a more general way, though still making mention of the river’s substantial drop and rapids in stressing the need to look at the river in new ways when it comes to redevelopment:

We have the best rapids in this river, the drop between all of our dams. I mean there’s a lot of possibilities with the river running through a downtown. The foreman [of North American Dismantling] was down there saying how beautiful it was, you know, and as an outsider he would come up here, and he would make that drive for four or five hours to do all the things which we have here. So now that you have this once in a lifetime opportunity to have a site like that downtown, you really need to look at it.

Despite these respondents’ emphasis on the need to reconceptualize the community’s relationship with the Androscoggin, ongoing discussions of the city’s economic future rarely include the river. One look at the river from downtown Berlin begins to explain why. Figure 5-16 shows the view upstream (north) from a bridge across the river near the heart of downtown.
Figure 5-16: View north from bridge across Androscoggin River in downtown Berlin, April 2008.

A dam impounds the river and directs water to a hydroelectric facility located between downtown and the river’s western edge, exposing bedrock over which the river once flowed freely—and eliminating one set of rapids completely. Below the dam, the river trickles along its original course before the diverted water rejoins it roughly a quarter-mile downstream. While a park with walking trails is located along the western edge of the river’s original course, the rocky riverbed is largely inaccessible by foot. At times of high water the river resembles its former glory, though at most times warning signs instructing people to “leave the area at once” on the sound of a horn (which indicates an impending release from the dam) further dissuade most from recreating along the riverbed.
The industrial and almost anti-human character of the river in Berlin interacts with other elements of the built environment to shape ideas about what the community can realistically become as it attempts to reinvent itself. At a fall 2007 public hearing on the future of the mill site, a local businessman with ties to the forest products industry argued in favor of Laidlaw’s biomass proposal by making reference to Berlin’s industrial infrastructure and identity:

So, you say tourism. Well, I’d love to see tourism, too. But, realistically, are we gonna be a quaint New England town? Of course not. We’ve got the largest federal prison in New England. We’ve got the second largest state prison in the state. We’ve got the second largest landfill. We’ve got the most regulated river, in two miles, of any place in New England. We’ve got four dams in two miles. If you’re on the bank and you want to put your canoe in in Berlin, you can’t do that. It’s not what we are. The biggest thing is understand what you are, and do something with that.

The comments above point out the powerful effect of Berlin’s built environment on redevelopment possibilities. When paddling, one takes out at Berlin—one never puts in there.35 Thus, along its New Hampshire stretch, before it turns eastward to flow into Maine, Berlin represents the end of recreation on the Androscoggin. This is true in both a figurative, symbolic sense, and a literal, spatial one. The stretch of river from the northern end of downtown Berlin, to the eighth dam in Shelburne, is essentially non-recreational due to its highly industrialized and regulated nature.

Some communities—particularly those in the mountain west such as Buena Vista and Salida, Colorado—have built thriving tourism economies around whitewater parks located near their downtown areas. However, the physical environment and industrial history of such places are quite different from that of Berlin. Buena Vista and Salida, for example, were both railroad towns with little to no heavy industry located along the

35 However, as noted in Chapter 4, the Northern Forest Heritage Park runs motorized boat tours from its launch on the west bank of the river just above the first hydroelectric facility.
Arkansas River. While the idea of taking advantage of the rapids and turning Berlin into a whitewater paddling destination figured in two of my interviews, it is not part of the larger discourse about redevelopment in the city. While the power of the Androscoggin would indeed be a draw for water-borne adventure seekers, that power was harnessed by industry over a century ago. Today, the spatial arrangement of industry on the river makes recreational use a near-impossibility. And while more and more dams are being removed due to recreational or environmental concerns, these facilities tend to be marginal ones in which low energy production does not outweigh high environmental impacts. The dams in Berlin either work to produce substantial amounts of electricity, or are located along a stretch of river in which numerous other dams lie. In this sense, removing one or even two low-performing dams would not change the quality of the river from an ecological or recreational perspective; it wouldn’t make much sense to remove one unless you remove them all. Such a development is extraordinarily unlikely given the substantial outlay of capital that would be required to acquire and then dismantle the hydroelectric facilities.

Conclusion

Berlin’s built environment is not only the material manifestation of its industrial past, but also its deindustrialized present. During its phase of growth, the pulp and paper industry determined the fundamental spatial organization of the community around a centrally-located mill site. As industrial employment waned and pulp production eventually ceased, the cityscape experienced the physical effects of disinvestment. A

36 According to a New York Times article, 430 outdated dams have been removed in the US over the past ten years (see Preusch 2009).
37 As noted above, the hydroelectric facilities were worth $73 million at last valuation.
declining population resulted in a housing surplus and depressed local housing market, making the community vulnerable to external interests who continued a trend of underinvestment in the local housing stock. The downtown and surrounding residential areas have become blighted, and this physical decay has been integrated into the negative aspects of the city’s negative image and identity. At the same time, the city’s industrial tax base has waned, leaving residential property owners to bear the brunt of the city’s fiscal burden—a burden that is tied in scale to a municipal infrastructure meant to accommodate a population at least double in size. These issues of physical decline have exacerbated a sense of urgency in terms of new industrial development in the community; not only does the city need to replace the jobs lost when the pulp mill closed, but to restore the industrial tax base as well.

When the pulp and paper industry left Berlin, it did so literally as well as figuratively. Just as the arrival of the pulp and paper industry meant a new spatial order in the former Maynesborough, so did its departure. The mill site was demolished, leaving no immediately reusable buildings save for the recovery boiler, which represents and embodies the last round of significant industrial investment in Berlin. The traction of Laidlaw’s plan for biomass energy production on the former mill site is in part a product of the interaction between several elements related to the city’s built environment: the recovery boiler itself; the issues of blight and fiscal stress outlined above; and the substantial soil contamination on the mill site which shapes ideas and discourse about what is or is not possible there. Next to a heavily industrialized and non-recreational Androscoggin River corridor, redevelopment of the mill site is unfolding along industrial lines; industry is reproducing itself through Berlin’s built environment.
Lefebvre's (1991) notion of the production of space—that modes of social organization fixate themselves in the material world and are embodied in the spatial structures of place—illuminates these interactions between Berlin's industrial infrastructure and its commercial and residential spaces in the context of redevelopment. One can clearly observe in Berlin how space has been produced by industrial capitalism, and the ways in which these spaces are in turn reproducing the industrial character of the community. Yet in focusing on a local context it becomes evident that there is a certain specificity to the production of space in Berlin. Space there did not take a generically industrial form; the relations between industry and space were mediated by historically-specific forms of technology particular to the pulp and paper industry, such as the chlor-alkali mercury production process and the chemical recovery boiler. In a broader sense, space is produced everywhere, but local effects on change and redevelopment are contingent on the specific forms of technology into which capital is fixed over time. Specific technologies of past production create specific sets of contemporary issues that shape redevelopment in different ways from place to place.

Yet, space does not determine social relations, it constrains them (Soja 1980), and an externally-dominated, industrial, productivist Berlin of the near future is not a foregone conclusion. A young businesswoman touched on issues of blight and pollution as she spoke about the seeds of economic revitalization she sees in and around downtown Berlin:

*For the longest time nobody wanted to invest here because nothing was happening. You know, they didn't see the change. And when you drive through a downtown and it's starting to look like the slums in New York, people are like, 'well, I'm not gonna put a building here.' But now you drive downtown and you're like, 'wow, this is coming along, this looks good, look at that building.' And it's kind of just trickling down the*
roadway. Even further up now there's development. You leave downtown, you go up towards the Brown School and that river, and it's gorgeous. I mean how many people go to school and look across and have a beautiful river coming down with them? And that's not polluted there, you know, that's still prime.

These comments about improvements in Berlin's built environment point to the increased significance of scenic amenities in development and an important component of change in the community: the small business community. Just as Lefebvre contends, space is indeed a "principal stake of goal-directed actions and struggles" in post-mill Berlin, and public discussions about the city's future have been primarily driven by small business interests. After examining the ecological impacts of the region's historical political economy on the forest resource in Chapter 6, I focus on the nature of social class, civic culture, and the small business community as they relate to patterns of redevelopment.
Elements of Berlin’s industrial infrastructure—the mill site and a highly regulated river prominent among them—are not the only set of elements pushing development along in ways consistent with its history in the pulp and paper industry. For more than a century, the economic vitality of the community depended on taking wood, reducing it to its constituent parts, and exporting the product. Today, virtually all discussion of new forest-based industry in the community revolves around finding uses for “low-grade fiber,” a term suggestive of the condition and structure of Berlin’s forest resource base. Since the demise of the pulp mill, woody biomass energy production has emerged as the dominant new forest-based industry in Berlin, both in terms of proposed projects and how people talk about the city’s economic future. But why haven’t other, higher value-added forest-based industries such as specialty lumber or furniture manufacturing come to occupy a space in the local discourse of redevelopment? The absence of such discussion is glaring in light of the historically forest-dependent community’s need—and opportunity—to redefine itself economically. How might the state of the forest resource determine the feasibility of these other industries, and how is the condition of the forest resource a legacy of the pulp and paper industry in the region?
Political Ecology

Such questions lead my analysis into the realm of political ecology, an interdisciplinary field combining approaches from geography, sociology, anthropology, political science, and ecology. Blaikie and Brookfield (1987) defined the term as a marriage of traditional political economy with ecological concerns:

The phrase 'political ecology' combines the concerns of ecology and a broadly defined political economy. Together this encompasses the constantly shifting dialectic between society and land-based resources, and also within classes and groups within society itself (p. 17).

This definition has since been by cited by political ecologists writing on an eclectic mix of topics united by an underlying focus on the relationship between power and environmental change (Davis 2009). In the foreword to the 1994 debut of the Journal of Political Ecology, Greenberg and Park situated the field as “a historical outgrowth of the central questions asked by the social sciences about the relations between human society, viewed in its bio-cultural-political complexity, and a significantly humanized nature” (1994, p. 1). Drawing on the definitions laid out above, Byrne, Kendrick and Sroaf (2007) articulated political ecology as an approach “premised upon the recognition that nature and society are deeply interrelated” that can “illuminate the extent to which human induced environmental change (re)configures social and economic disadvantage” (p. 156–157). While the field has been critiqued for being both too theoretical and atheoretical (Davis 2009), too political and not ecological enough (see Walker 2005), and in certain cases not political enough (Rangan and Kull 2009), it has nonetheless thrived in the past few decades.

The majority of work in the field has focused on rural areas of developing countries and has tended to concentrate on themes related to (post)colonialism, the world-
system, and informal modes of controlling access to resources (McCarthy 2005). More recently the field has expanded to the “second world,” featuring examinations of issues such as industrial development in the context of protected lands in the Czech Republic (Muller 2004) and oil development in post-communist Georgia (Gachechiladze and Staddon 2007). Further, the central tenets of political ecology have recently been applied to environmental issues in first-world contexts such as park development in Los Angeles (Byrne, Kendrick, and Sroaf 2007), conservation movements in Quebec’s boreal forest (Nobert 2008), conflicts over dogsledding in Norway (Benjaminsen and Svarstad 2008), and water conflicts on the US-Mexico border (Walsh 2004). The American West has emerged as a particularly frequent study site for first-world political ecology; there, scholars have examined the Wise Use movement (McCarthy 2002), patterns of exurbanization and gentrification (Walker 2003), conflicting landscape ideologies (Walker and Fortmann 2003), bison management (Bidwell 2010), and the facilitation of residential development in high fire hazard areas (Collins 2008). While commonly employed to study environmental conflicts per se, applying a political ecology perspective to the connections between processes of redevelopment and forest conditions around Berlin sets the issue in the larger context of historical and contemporary control and use of the resource base.

Forest Management and the Pulp and Paper Industry

Prior to the development of the pulp and paper industry in the region, lumber barons extracted huge profits from the woods of northern New Hampshire via harvesting methods in which principles of forest management did not play a part. As the oldest,
largest, and highest-value trees disappeared the sawmill industry in New Hampshire adapted to a second-growth forest, using wood relatively conservatively to produce an array of products. However, the arrival of the pulp and paper industry in the 1880s brought about a wholesale change in wood utilization and harvesting. Before the era of pulp and paper, only pine and spruce were cut widely, and usually only down to a diameter large enough to produce lumber. Paper companies, however, took softwoods down to a much smaller size, and when technology made it possible to produce paper from hardwood species they too were harvested down to a few inches in diameter. To the amazement of local people in the late 19th century, pulp grinders could use wood down to about four inches in diameter, and all such merchantable timber was often removed from woodlots during harvesting (Judd 1997; Pike 1967). Thus, the era of the industrially-managed forest was ushered into the North Country.

Since the production of wood pulp involves taking trees, chipping them up, and extracting the cellulose used to make paper, the size of logs arriving at the mill is not of particular importance so long as it is relatively straight and at least several inches in diameter, such that the ratio of bark to wood is acceptable. Hence, a forest full of young, low-diameter trees can serve the pulp and paper industry quite well. Paper companies, perhaps understandably given these modest requirements for input quality, have traditionally managed their timberlands as sources of pulpwood for their mills with very little application of silvicultural techniques, and have harvested them on short rotations.

While economically rational from the companies' perspective, this comes with considerable economic and environmental costs to regions and communities. As Osborn (1974) wrote:
Pulpwood is one of the lowest quality and least valuable products a forest can produce. Sawlogs are considerably more valuable. The production of low-value pulpwood makes the paper companies less inclined to put money into managing their lands than if a higher value item were being produced (p. 185).

In Maine, according to Osborn, pulp mills put very little money into forest management. The relationship between pulp mills and forests in the region has been characterized by Muir (2000) thusly: Paper companies are not in the business of growing forests; they are in the business of taking profit out of the woods.

Despite this basic orientation to the resource base, the pulp and paper industry has not been completely bereft of concern for forest management and conservation. For example, around 1900 some paper companies, including the Berlin Mills Company, hired foresters and implemented minimum stump diameters for twenty-year harvesting cycles. Berlin Mills was one of the more progressive companies in the region, with its woods manager Orton B. Brown a key figure in the founding of the Society for the Protection of New Hampshire Forests. However, companies’ concerns about conservation were narrowly focused on a sustainable fiber supply, rather than broader traditional agrarian-republican questions about a symbiotic, balanced relationship between humans and nature. The industry countered the public’s apprehension by articulating an argument that centered on their need to manage forests sustainably to see continued return on investment in mills, dams, and timberland—emphasizing the importance of “sustained yield,” but not directly addressing other aesthetic or moral concerns (Judd 1997).

Timber yield and value are maximized by growing timber on long rotations, as opposed to the 20 to 40 year rotations that produce low-grade fiber and narrow boards. At least 100 years is needed to produce wide boards useful in very high value-added
processing like cabinet-making (Muir 2000); in northern New Hampshire it takes roughly 100 years for a tree to reach sawlog diameter.\textsuperscript{38} Timber harvests in Coos County are dominated by low-grade wood, with pulpwood being the dominant product by weight; the annual harvest of low-grade products is roughly three times that of sawlogs (Innovative Natural Resource Solutions 2008). How much more valuable are sawlogs than pulpwood? According to the New Hampshire Department of Revenue Administration (2009), average stumpage values (per MBF)\textsuperscript{39} for high-grade sawlogs in the northern part of the state were $120 for white birch, $130 for white pine, spruce, and fir, $250 for oak, and $300 for hard maple. By contrast, stumpage values for an equivalent volume of pulpwood were a maximum of $38 for hardwood species and $45 for spruce/fir,\textsuperscript{40} while fuel chips for biomass electricity production fetched the landowner a maximum of $2.50 per ton. Additionally, related to the fact that mature trees add more wood annually than young ones, the relationship between tree value and diameter is non-linear; value increases at a greater rate as tree diameter increases. For example, in 1987 a northern New Hampshire high-grade double-log hard maple tree 20 inches in diameter was worth roughly $24. A 26-inch tree was worth almost $60, and a 32-inch tree worth about $100 (Leak, Solomon, and DeBald 1987). It behooves landowners, then, to manage their timberlands for the production of large, straight, mature trees. However, paper companies, \textit{whose profits depended not on the production of timber but the processing of fiber}, were the dominant landowners in the region for a century.

\textsuperscript{38} Personal communication with US Forest Service forester working in northern New Hampshire.
\textsuperscript{39} Stumpage is the price paid to owners of timberland for a given volume of standing wood. MBF=thousand board-feet. A board-foot is a plank of wood one inch thick by twelve inches long by twelve inches wide.
\textsuperscript{40} Here, I use a generous conversion factor of 1 MBF=3 cords to calculate stumpage value comparisons. In many cases the actual value for pulpwood would be much lower.
The Structure and Economic Value of the Forest in the North Country

The forest of Coos County, like that across much of the Northern Forest, is dominated by mixed northern hardwood species like beech, birch, maple, and oak, along with softwood species such as white pine, spruce and fir. In the county, and across the Northern Forest, many areas have been completely cut-over at least once, and after such harvesting has taken place the trees are smaller, younger, and denser than the original old growth (Trombulak 1994). Irland (1999), though not focused specifically on the pulp and paper industry, offers a rather lukewarm assessment of forest management and forest quality in the Northeast. He argues that poor tree quality is a serious problem across the region, and that thoughtful, long-term forest management has not been practiced widely. Further, he points out that the region’s hardwood stands suffer from past and continued high-grading, a practice in which the biggest, highest-quality, and highest-value trees are harvested, leaving behind less desirable and often genetically weaker trees to reproduce.

These practices, combined with the pulp and paper industry’s priorities of managing timberland for sustained yield of fiber rather than growing high-quality timber, have resulted in a regional resource base of diminished quality—the forest today is not what it could have been given other historical regimes of resource use. Additionally, the momentum of a regional forest-based economy long dominated by the pulp and paper industry is considerable—a low-value forest means relatively low returns on investment, barring liquidation harvesting or substantial increases in land values. Growing high-value trees on long rotations requires considerable investment on the part of landowners. Swan (1994) argues that much of the Northern Forest’s timberland does not have the stock of high-quality timber necessary to provide an acceptable return on owners’
investments due to high-grading and overcutting, resulting in a situation in which the forest industry investment needed to build a higher value-added economy cannot be attracted or kept in the region. But are forest conditions universally poor across the Northern Forest? What is the forest like around a community like Berlin, so long dependent on an industry which required only a steady supply of low-grade wood? Are these conditions different than those in nearby regions not historically reliant on pulp and paper?

Figure 6-1: Percentage of net volume growing stock low diameter for Berlin and comparator regions, 2006.  

Figure 6-1: Percentage of net volume growing stock low diameter for Berlin and comparator regions, 2006. 

41 "Low diameter" here is under 9 inches diameter at breast height (d.b.h.); trees 9 inches d.b.h. or greater are generally considered sawtimber/sawlogs. FIA data on volume of growing stock by diameter is only available for trees greater than 5 inches in diameter, so total tree volume here is the volume of all trees larger than 5 inches d.b.h. Percentages for Berlin and Rumford are calculated on the basis of FIA data for a 25-mile radius circle around the center of each community. All data shown reflect conditions on timberland; using data for forestland does not change results appreciably.
Here, I begin to examine these questions using data from the US Forest Service's Forest Inventory Analysis. Figure 6-1 provides a first look at how forest conditions vary from place to place in the middle of the Northern Forest, showing the percentage of growing stock volume comprised of low-diameter trees across a number of regions, each with a different history of forest-based industry. Perhaps unsurprisingly, by this measure the forest around Berlin is the smallest of all regions, followed very closely by Essex County, VT and Coos County as a whole. In these regions, all historically dependent on pulp and paper, over a third of growing stock volume is in low-diameter trees. Grafton County, Oxford County, ME and the area around Rumford, ME had slightly lower figures, despite the latter two also having been very closely tied to pulp and paper. Carroll County, which has a number of sawmills but no pulp mills, had the lowest percentage of tree volume comprised of low-diameter trees. Carroll County's low figure might at first be interpreted as a result of the presence of the White Mountain National Forest—and associated restrictions on harvesting—in the area, but such an interpretation is not directly supported by the data. The WMNF occupies 24 percent of Carroll County’s land area, 19 percent of Coos County’s, 31 percent of Grafton County’s, and very little of Oxford County’s (3 percent). If the presence of federal lands were the most important factor, we would expect Grafton County to have the lowest percentage of growing stock volume in low-diameter trees. Further, a considerable portion of the forest within a 25-mile radius of Berlin lies within the boundaries of the WMNF.

Another way to examine forest size is by using the USFS stand size classification scheme, which can be used to determine forest size in terms of timberland area rather than volume of wood. Figure 6-2 shows the percentage of total regional timberland area
in each of three stand size classes. Again, the forest around Berlin is the smallest of all comparator regions, followed closely by Coos County as a whole. Essex County, Rumford, and Oxford County have similar percentages in the small size class. Each of these areas features a forest dominated by small-to medium-sized timber stands. Carroll County, by contrast, has the lowest percentage of timberland area in the small size class, and the highest percentage in the large stand size class. Grafton and Carroll Counties are the only two comparator regions where over half of timberland acreage is in the large stand size class.

Figure 6-2: Percentage timberland acreage in stand size class for Berlin and comparator regions, 2006.\footnote{In the USFS methodology, plot stands are “small” if more than 50% of trees are under 5 inches d.b.h. (seedlings/saplings), “medium” if over 50% of trees are between 5 and 8.9 inches d.b.h. (poletimber), and “large” if over 50% of trees are 9 inches or greater d.b.h. (sawtimber). Data do not add up to 100% for Carroll as 1.2% of timberland acreage there was classified as “nonstocked.”}
Given these regional differences in the extent to which timberland area is occupied by sawlog-sized stands, how might regional conditions vary within this higher-value portion of the forest resource? Switching back to wood volume rather than timberland area, Figure 6-3 displays the percentage of regional sawlog volume comprised by large-diameter trees. Again, sawlogs around Berlin and in Essex and Coos Counties tend to be smaller than those in other nearby regions. Not only does Carroll County appear to have more of its wood in sawlogs than Berlin, but Carroll County has roughly three times more of its sawlog volume in very high-value wood. Just as the structure of the forest around Berlin as a whole is skewed toward lower-diameter and lower-value trees, so is the structure of the region's sawlog volume. Put another way, Berlin has a

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43 Large diameter refers to trees greater than 21 inches d.b.h.; this is the largest size class in the FIA data tables.
smaller supply of sawlogs compared to several nearby regions, and those sawlogs it does have also tend to be smaller than those found in other parts of the Northern Forest.

Two important conclusions can be drawn from the data presented in the previous three graphs. First, forest conditions vary widely from place to place in the Northern Forest, even across a few contiguous comparator regions. And second, these graphs suggest that trees in places with a historical reliance on pulp and paper tend to be smaller—and the forest generally worth less from a forest products industry-centered economic perspective. However, given the fact that forest structure around Rumford and in Oxford County compares relatively favorably, the presence of pulp and paper is not the be-all end-all of forest structure. To begin get a better understanding of the relationship between the pulp and paper industry and forest structure it is necessary to take a wider geographical view, and to include a measure of the degree to which the pulp and paper industry is important to the regional economy. The next set of figures attempt to do this by combining FIA data with employment data from the 2000 Census.
Figure 6-4: Percent of county timberland acreage in small stand size class by employment in pulp and paper manufacturing for Northern Forest region; predicted values from OLS regression shown ($r=.39$).

Figure 6-4 depicts the relationship between county employment in pulp and paper and forest size for the Northern Forest region. The number of county residents working in the industry provides one indication of the presence of pulp mills, albeit an imperfect one (as addressed below). Though a neat pattern is not readily apparent in this figure, a moderate positive correlation is present in the data. Percentage of timberland in the small size class increases with the number of residents who reported working in pulp and paper manufacturing.

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44 Grand Isle (VT) county, though officially a part of the 34-county Northern Forest region as defined by the Northern Forest Center, is excluded from these analyses due to extremely high standard errors (over 100%) in the FIA estimates. Removing Penobscot County from the analyses shown in Figure XXX reduces the correlation coefficient to .28; removing Saratoga County increases it to .48.

45 This is the number of county residents who reported working in the industry, as opposed to the number of pulp and paper jobs in the county.
manufacturing in 2000. This is consistent with what could be expected based on the geographically narrower analysis presented in the earlier set of graphs.

Figure 6-5: County residuals from OLS regression of percent timberland acreage in small size class on number employed in pulp and paper manufacturing for Northern Forest region.

The previous graph suggests that counties with a large percentage of the population employed in pulp and paper mills tend to have more of their land area comprised of small timber stands. Figure 6-5 graphs residuals from a regression of percent timberland acreage in small size class on employment in pulp and paper; these represent each county’s vertical distance above or below the regression line in Figure 6-5. Maine counties have the highest mean residual (roughly 10) of any state, suggesting that on average counties in Maine have much smaller forests than would be expected for a

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46 I show only two analyses here; many combinations of pulp and paper employment (based on both total numbers and percentage of total employment) and various measures of forest size produce results that suggest the relationship outlined here is a robust one.
given level of pulp and paper employment. By contrast, counties in New Hampshire have the lowest mean residual (-4.3), followed by Vermont (-3) and New York (-3.7). While an investigation of the other myriad factors important for determining forest structure—such as species mix, state policy, and the presence of protected lands—is beyond the scope of this work, these figures suggest a pattern of a smaller forest in a state where the industry has been historically more dominant.

Figure 6-6: Percent of county timberland acreage in large stand size class by percent of total employment in pulp and paper manufacturing for Northern Forest region (r = .50.).

Figure 6-6 takes a slightly different tack, this time graphing the percentage of county residents working in pulp and paper against the percentage of county timberland in the FIA’s large stand size class.\textsuperscript{47} While total employment in pulp and paper provides an indication of the extent of the industry’s presence in a given county, the percentage of

\textsuperscript{47} Using the percentage of total employment in pulp and paper instead of number employed may provide a more realistic indication of the industry’s presence in counties with small populations such as Essex, VT.
residents working in pulp and paper provides a measure of the industry's importance relative to the regional employment base. Here, a much clearer graphical pattern emerges. These data suggest conclusions similar to those drawn from the first scatterplot; places where the pulp and paper industry is a relatively large part of the local economy tend to have less timberland area comprised of large-sized stands. However, this time the correlation coefficient is -.5, suggesting a medium to strong negative relationship between relative pulp and paper employment and forest stand size.

Figure 6-7 graphs residuals from the regression model depicted in the previous scatterplot (percent timberland acreage in the large size class on the percentage of total county employment in pulp and paper). Here, Maine counties have the lowest mean residual (-9.8), again indicating a smaller forest than predicted by the regression model. Vermont counties also have a negative mean residual (-3.3), while New York (1.8) and New Hampshire (7.2) have positive mean residuals. Interestingly, Coos County actually has more acreage in the large size class than expected based on the regression, though it has a relatively smaller-sized forest by regional standards.
These analyses are obviously relatively unsophisticated, and do not take many factors into account such as the potential historical presence of pulp mills not captured in 2000 employment figures. It is quite possible that some mills in the region may have been either temporarily or permanently shut down during the 2000 Census, thereby masking the historical presence of the industry. Also, the Census data combine employment in pulp and paper mills together; while pulp mills tend to be located near paper mills, there may be some counties with high industry employment levels but no pulp mills present. Further, these analyses do not address questions of tree grade, another important factor in the economic value of forest resources.

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**Figure 6-7**: County residuals from OLS regression of percent timberland acreage in large size class on percentage of total employment in pulp and paper manufacturing for Northern Forest region.

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48 BEA REIS data provide more resolution in distinguishing pulp from paper mills in a given county, but these establishment-level data are suppressed for several counties due to disclosure issues. However, paper
However, despite these limitations they do suggest a relationship between the presence of the pulp and paper industry, and a younger, smaller, and thus lower-value forest resource. Such a finding makes sense given the forest management principles—based on the industry’s input needs—outlined at the beginning of this chapter. And while I have done only simple bivariate analyses here, it appears that the relative size of the industry is more important than its absolute size when it comes to forest structure. Table 6-1 displays a correlation matrix of several measures of forest structure with both measures of pulp and paper employment. While number employed in pulp and paper is moderately correlated with the timberland area-based measures of forest size, percent employed in pulp and paper is correlated not only with both area-based measures of forest size, but also two of the tree volume-based measures. Further, the magnitudes of these correlations are larger than those produced by number employed in pulp and paper.

<table>
<thead>
<tr>
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<th>P&amp;P (#)</th>
<th>P&amp;P (%)</th>
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<tr>
<td>P&amp;P Employment (%)</td>
<td>0.62*</td>
<td>1.00</td>
</tr>
<tr>
<td>% Area in Small SSC</td>
<td>0.39*</td>
<td>0.47*</td>
</tr>
<tr>
<td>% Area in Large SSC</td>
<td>-0.31</td>
<td>-0.51*</td>
</tr>
<tr>
<td>% Growing Stock Small</td>
<td>0.21</td>
<td>0.49*</td>
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<tr>
<td>% Growing Stock Large</td>
<td>-0.06</td>
<td>-0.27</td>
</tr>
<tr>
<td>% Sawlog Volume Small</td>
<td>0.19</td>
<td>0.45*</td>
</tr>
<tr>
<td>% Sawlog Volume Large</td>
<td>-0.05</td>
<td>0.22</td>
</tr>
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Table 6-1: Correlation matrix of pulp and paper employment and forest structure variables for Northern Forest region (* indicates significance at .05 level)

49 Mills tend to be integrated with or located near pulp mills, so using Census employment data should provide a decent measure of the extent to which pulp mills are present in a given county.

50 FIA tree grade data are imprecise to the point of uselessness for the types of analyses done here.

50 “Growing Stock Small” is percent total volume under 11 inches; “Growing Stock Large” is percent total volume over 21 inches; “Sawlog Volume Small” is percent under 13 inches; “Sawlog Volume Large” is percent over 21 inches.
The scene shown above in Figure 6-8 is illustrative of one of the key findings from my analysis of FIA data as it relates to redevelopment patterns in Berlin—a relatively young forest surrounding the city. This woodlot, up on a low ridge on the northwestern outskirts of the city, is densely stocked, occupied by a stand of very young mixed hardwoods all under about six inches in diameter. Scattered across the lot are the larger-diameter stumps leftover from harvests past. This picture is not meant to imply that there is anything inherently wrong with such harvesting and regrowth patterns, nor is it meant to be representative of all timberland in the region. However, it is broadly indicative of a common scene and a common theme around the region—heavy cutting and a relatively young forest.
Ownership Changes and Harvesting Patterns

Another issue shaping the future of resource use around Berlin is a fundamental shift in forestland ownership, and related issues of heavy cutting. For a century, Berlin’s wood basket was owned primarily by large pulp and paper corporations, and managed in accordance with the principles of sustained yield outlined in the previous section which, even if they diminished the economic value of the forest over time, left the forest itself largely intact. However, in the 1980s these companies began to divest themselves of landholdings around Berlin, a trend which unfolded across the Northern Forest. Since that time many tracts of land, some quite vast, have cycled through a series of non-industrial corporate owners such as Timberland Investment Management Organizations (TIMOs) and Real Estate Investment Trusts (REITs), logging contractors, and conservation groups. Together, these entities represent a set of forest management priorities that are sometimes dramatically different from those of the past. Often, their management priorities are based on relatively short-term investment horizons.

According to analyses by the Open Space Institute, in 1980 50 percent of the Mahoosuc region—a 600,000-acre swath of land running from Gorham north to Errol and east across the Maine line to Grafton Notch and Bethel—was owned by just three paper companies. By 2000, TIMOs and REITs were the dominant landowners in the region, and ownership patterns had become much more fragmented. Today, forestland in the Mahoosuc region is controlled by a mix of TIMOs and REITs (34 percent), conservation groups and government (25 percent), long-term family ownerships (9 percent), developers (6 percent), logging contractors (5 percent), with the remaining 20
percent in uncertain ownership, likely consisting of small lots under 100 acres in size (Weinberg and Larson 2008).

While ownership change is a trend affecting lands and communities across the Northern Forest, its effects are particularly visible in the unincorporated and virtually unpopulated territory of Success which lies immediately east of the city, beginning about a mile east of downtown. Success comprised a substantial component of the Berlin mill’s wood basket; timberland there has been heavily harvested since the forest products industry began. In 1980, virtually the entire township was owned by Brown Company, which also controlled much of the land in the central portion of Berlin, running west to the White Mountain National Forest. However, by 2007 the majority of the former Brown Company lands had come under the control of T.R. Dillon Logging, Inc., a Maine-based logging contractor. The company’s harvesting practices—Dillon has been called a “liquidation harvester” in Maine, and a “butcher” by some in the New Hampshire forestry community51—have been cause for concern around Berlin (Anderton 2005; Sundquist and Birnie 2008), particularly as they have taken place on a 22,500-acre tract owned by Dillon in Success.

According to Sundquist and Birnie (2008), from 1999 to 2005, annual rates of cutting in Success and Berlin were much higher than those for any of 39 other municipalities in the North Country region. Figure 6-9 provides some visual evidence of these trends as they have unfolded on Dillon lands. Looking west from Berlin across a clearing, over the site of the state and federal prisons and out toward Success and the Mahoosuc Range, a very heavily harvested forest is visible. The rolling hills leading out

51 Personal communication, 2007.
to the Mahoosucs are covered in strip cuts, with a sparsely forested landscape left behind.\textsuperscript{52}

![Image of forested landscape](image)

Figure 6-9: Looking west from Berlin to Success and Mahoosuc Range, November 2008. Federal prison sites just visible behind treetops; evidence of heavy cutting (strip cuts) visible just beyond prison sites.

Figure 6-10 provides more visual evidence of heavy cutting in Success, this time at higher elevation. The ridge visible just above the trailer loaded with plywood has been almost completely cleared of all large trees. This photo also embodies an important element of the structure of northern New Hampshire’s forest products industry. A considerable portion of the region’s highest-value timber—hardwood sawlogs—is exported to Canada for processing, and then brought back into the US as higher value-added products such as plywood. While data are not readily available for the North

\textsuperscript{52} Because they involve narrow alternating strips of cleared and non-cleared forestland, such strip cuts are not counted as cut land in the satellite imagery-based methodology used to calculate cutting rates by Sundquist and Birnie.
Country itself, in 2002 New Hampshire as a whole exported almost half of its hardwood sawlogs for processing elsewhere (NEFA 2004), and Canada is the primary destination for exported sawlogs across the Northern Forest (Wooster 2008). Coos County has modest hardwood lumber production capacity and no veneer mills (University of New Hampshire Cooperative Extension); combined with the region’s proximity to the border it is likely that the proportion of the region’s hardwood sawlogs exported to Canada is substantially greater than that for the state as a whole. Symbolizing the flow of high-value wood across the Canadian border, a log trailer sits facing north, while a trailer loaded with plywood sits facing south.

Figure 6-10: Looking southeast to Success from Route 16 in Milan, April 2008. Logging truck visible on right, trailer carrying plywood in center of frame; evidence of heavy cutting visible on ridge in background.
The heavy cutting in Success is a direct result of forest management premised on the short-term investment horizons of many new owners in the region. Just a few years after acquiring the Success lands, Dillon is currently poised to sell them off. In 2008 the New Hampshire National Guard announced that it was interested in purchasing a 15,000-acre tract of land from Dillon’s holdings in Success for use as a weapons training range (Tetrault 2008b). However, prior to that announcement The Conservation Fund agreed to purchase just under 5,000 high-elevation acres along the Appalachian Trail from Dillon by March 2010 (to then be transferred to the National Park Service), while putting a conservation easement on an additional 1,200 acres. Contingent on that transaction, The Conservation Fund has plans to then purchase and put a conservation easement on the remaining 15,000 acres of Dillon land, on which logging would continue to be permitted under the oversight of the NH Department of Resources and Economic Development. As of late 2009, The Conservation Fund had secured $2.75 million of federal money via the 2010 Interior Appropriations Bill to cover the first purchase, and had applied to the Forest Legacy Fund for $3 million of the $5 million necessary to complete the second (Tetrault 2009p).

Given its history as an industrially controlled and intensively harvested area, the recent concern over harvesting intensity in Success is notable. While the pulp and paper industry did not manage the forest for anything other than a sustained supply of fiber, in comparison to recent cutting patterns it can appear as a forward-thinking steward of the land. The Mayor of Berlin touched on the subject during an October 2009 public debate leading up to the November election, invoking the notion of sustainability in discussing the recent heavy cutting as it might affect the city’s industrial future:
We've gotta look at wood products, either manufacturing or exporting or whatever, that can be sustainable. That's really a no-brainer, but you've gotta be able to keep that within a sustainable forest. Unfortunately, with some of the clear-cutting that's gone on around the local area here, we might be 10 or 15 years away from really being able to have sustainable forests to any great degree right within our local area. Clear-cutting is a big concern of mine.

While not a dominant theme in my interviews, four respondents talked about the heavy cutting in Success. A young business owner described her reaction to a recent hunting trip into the woods of Success:

I went hunting yesterday, drove up Success road—haven't been up there in a very long time. Went with a friend of mine. And there was more roads and more clear-cutting than I've ever seen up there in my life. I'm not opposed to logging—I'm not against it. I just think that, when I go out into the woods and I see all these clear-cuttings, I'm like, 'oh my god.' I'm seeing more clear-cuttings and more openings. We need to have more selective cutting, to keep some of these big trees. But we've been doing this for years, and I see new growth all the time.

Her comments illustrate the territory's history as a multiple-use landscape, and the recent dramatic shift in harvesting intensity and the appearance of the landscape. At the same time, based on her experience living in and recreating around Berlin she contextualizes this recent change in area's industrial history; she has seen the forest regenerate after harvests in the past, as they have done for generations. Another respondent, a former Gorham resident, more directly contrasted the recent heavy cutting with the historical practices of the pulp and paper industry, both in terms of its aesthetic and timber supply effects:

The thing about that is it's very sensational because it's so close to where you can drive. I mean, if you were to count the forest only as where you could see from the road, you don't see a lot of forest. It's in there—they gotta drive to get in there. They clear cutted an entire area right near the road, and people see that and go, 'oh, this is what using our wood does.' But you had a huge paper mill, pulp and paper industry for a century. You never had that problem, because people did it right. They were
educated about what they were doing. So I'm not sure if maybe the landowner needed money and said just, you know, 'here take this and get rid of it.' I don't know what it was.

While not specifically using language of sustainability, his emphasis on the ostensibly thoughtful nature of the pulp and paper industry’s approach to forest management illustrates the extent to which the recent heavy cutting in Success is viewed locally as a break with the 20th-century industrial forest management regime.

The Emergence of Biomass Energy as the New Wood-Based Industry in Berlin

Biomass energy production is an industry just as dependent on a sustained supply of fiber (or in this case, fuel) as pulp and paper, though it is not immediately clear that the relationship between this new industry and the forest will follow that of pulp and paper in the North Country. While I have focused on Laidlaw’s proposal to adapt the pulp mill’s recovery boiler to biomass energy production, it is not the only pending woody biomass energy project in the city. In the years since the pulp mill’s closure, biomass energy production—either in the form of electricity or wood pellets—has become squarely established as the primary emerging wood-based industry in Berlin. In addition to Laidlaw’s project, which would consume 750,000 tons of low-grade wood to produce 65–70 megawatts of power (Tetrault 2009j), at least two other biomass projects are slated to be constructed in the city. In 2008 Concord-based Clean Power Development announced plans to build a completely new 29-megawatt biomass power plant at the southern end of the city on the east bank of the Androscoggin near the Gorham line. In contrast to Laidlaw’s proposed design, which depends on the reuse of an existing boiler and is thus bound to pre-existing constraints on size and appearance, Clean Power’s plant
would be built from the ground up and designed to look like a barn and silo from Route 16. At present, Clean Power has purchased an option on the 11-acre site, has received approval for the necessary local permits, and has either applied or received the necessary permits from the NH Department of Environmental Services. According to the company, the plant would consume roughly 340,000 tons of low-grade wood chips annually. The project has an anticipated start date of 2012–13 (Clean Power Development 2009), though as of late 2009 it is not clear if the company has secured the necessary financing to begin construction.

Further, in 2007 Greenova, LLC announced plans to develop a wood pellet production facility in Berlin’s industrial park to take advantage of the growing wood pellet heating market. The company is a subsidiary of Massachusetts-based Woodstone USA which operates one pellet mill in Michigan and has plans to develop another in New York (Tucker 2009a). In 2007 it was announced that the facility would use 350,000–400,000 tons of whole-log, low-grade wood annually to produce roughly 200,000 tons of wood pellets for the export market, with an expected startup date of October 2008 (Dube and Scott 2007). However, in summer 2008 the company revised its design, lowering the facility’s initial planned production to 100,000 tons per year with an anticipated startup date in 2009 (Tetrault 2008c). The project received the necessary state permits to begin construction and operation, but as of late 2009 construction had not yet begun on the facility.
Transmission Issues

Complicating issues of biomass power production is the carrying capacity of the so-called “Coos Loop,” the existing regional power transmission infrastructure. The Laidlaw and Clean Power projects would produce a combined 99 megawatts of electricity, and it has been estimated by PSNH that the Loop can handle roughly 100 megawatts of additional production (Sletten 2009). But two wind power facilities proposed for the county would generate an additional 280 megawatts, thereby greatly exceeding whatever surplus capacity the Loop might currently have (Tetrault 2009n). Granite Renewable Power has applied to the state Site Evaluation Committee to build a 100-megawatt wind farm near the town of Stark, and Wagner Forest Management has proposed a 180-megawatt wind farm near Dixville. The Loop will not be able to handle much additional power production without upgrades which range up to $200 million in estimated cost (Lyons 2009b). The existing surplus capacity of the Coos Loop has been the subject of much debate, but in late 2009 Laidlaw reported that ISO N.E., the organization which manages New England’s power transmission infrastructure, determined that the Loop could at least accommodate the Laidlaw project’s output with minimal improvements (Tetrault 2009l). Substantial upgrades to the Loop would put the county in a position to become a major exporter of electricity, though it is not yet clear who will pay for such improvements, or what the local benefits of biomass development in the region might be.
Wood Supply Issues

However, perhaps the most fundamental issue related to biomass power production is not the ability to export it from the region, but the ability of the forest resource to supply the industry’s input needs on a sustainable basis. The pulp mill in Berlin consumed roughly 1,000,000 green tons of low-grade wood each year (Shi, Taggart, and Bradbury 2008). One study of the annual available low-grade wood supply produced estimates ranging from 280,000 to 1,000,000 tons in the regional wood basket (defined as including much of northern Vermont, central and northern New Hampshire, and Oxford County, Maine), with 640,000 tons available per year under normal conditions (Shi, Taggart, and Bradbury 2008). However, another study which used a smaller geographical area to define Berlin’s wood basket (a 30-mile radius around the city) produced estimates on the order of 400,000 tons of low-grade wood available annually, or enough to support only about 30 megawatts of additional biomass power generation (Innovative Natural Resource Solutions 2008).53 In either case, it would appear that there is not enough low-grade wood to supply all the existing and proposed wood energy projects in the city and region (Ingerson 2009). Further, as a forester who manages a large private tract of land in Coos County remarked when asked to assess the condition of the North Country’s forest, “It’s thinner than you’d think.”54

While my conversations about change in Berlin were primarily oriented around local issues such as blight and the redevelopment of the mill site, four respondents were explicitly concerned with the future condition of the forest resource. Three respondents expressed concern about the recent heavy cutting in Success as outlined above, but one

53 There are two existing biomass power plants within a 60 minute drive of Berlin: a 16 megawatt facility in Whitefield and a 17 megawatt facility in Bethlehem.
54 Personal communication, 2009.
expressed concern based on the potential impacts of biomass energy production. Echoing the mayor's concerns about the sustainability of the regional wood supply, a professional working for the city identified the future of the wood basket as among the most important issues facing Berlin today:

*I'm very, very worried about the wood basket. You can see the city feeds off the wood basket. You know, this mill took 1.2 million tons, 900 thousand to 1.2 million tons. There's a capacity right now that we know for sure of 1.6 million that's ongoing. The question is that three pellet plants could just eat it all up, and they don't need to go through the whole site review and all that stuff. I'm afraid of a boom-bust environment, that's what I'm afraid of.*

This respondent was particularly concerned about the entrance of the wood pellet industry into the community because such facilities are only subject to local permitting procedures, and thus lie outside the purview of any state-level entity (such as New Hampshire's Site Evaluation Committee) that comprehensively evaluates biomass projects in terms of wood supply issues.

**The Absence of Non-Biomass Wood-Based Alternatives**

Given Berlin's history as community dependent on wood-based industry, the dearth of talk about higher value-added wood processing is striking. The idea that the community needs to, or even could, diversify its economy into higher value-added wood-based manufacturing surfaced hardly at all during the two-plus years I studied redevelopment in Berlin. In January 2008, during a meeting near the beginning of the Chlor-Alkali Site reuse planning process, the consulting firm hired to guide the process offered value-added forest products manufacturing, such as custom cabinet- or furniture-making, as an option for communities with a history of wood-based industry. However,
the final reuse planning report did not include value-added forest products manufacturing as even a potential form of land use on the site (E2 Inc. 2008). The possibility of new, high value-added forest products manufacturing in Berlin came up on one other occasion, in one other public forum. In the October 2009 mayoral debate the sitting mayor expressed concern that the low prices paid to loggers for the types of wood used in biomass electricity production would mean a continued decline in forest-based industry in the region:

We have to be careful that we attract businesses that will allow us to maintain our sustainable resources. And you can talk about how many tons of wood are available, but you also have to look at the economics of the fact that it doesn't make a whole lot of sense right now for someone to open up a logging operation if all they're gonna sell is low-grade wood at 32 or 30 dollars a ton. It just doesn't make sense for the capital investment. So we've gotta look at also developing some wood-based projects, wood-based businesses that will use sawlogs. And maybe there's not that much of a demand for pulpwood, but there's gotta be something out there that will allow these loggers to go into the woods and have a viable entity.

The mayor's comments bring questions of redevelopment back to issues of the types of wood the forest might be capable of providing sustainably to local and regional markets, rather than a concern with the raw amount of wood it can produce. Hence, questions about wood-based redevelopment are not fundamentally about how much wood there is, but rather about how much of the right quality wood there is.

**Conclusion**

Given the structure and condition of the forest around Berlin as outlined in the first half of this chapter, perhaps the fact that biomass has emerged above all other wood-based industries should not be surprising. As Weinberg and Larson (2008) put it, and
consistent with what my analyses of forest structure would suggest, quality hardwood is
in short supply in the Mahoosuc region. Hence, investment in high value-added wood
processing is unlikely given these supply issues. And without the expansion of markets
for high-value wood, it is unlikely that high-value wood production will expand as a
forest management priority. Berlin would not appear to be alone dealing with the
difficulties of expanding into new value-added wood-based industry in light of the
historical dominance of pulp and paper in the region. Pannozzo and Colman (2008)
argue that further expansion of Nova Scotia’s poorly developed value-added forest sector
is inhibited by two main factors: the dominance of the wood market by pulp and paper
companies, and the degraded condition of the region’s forests, which is itself linked back
to the industry’s forest management principles. Irland (1999), though not focused on the
effects of pulp and paper specifically, sees the a forest resource dominated by low-grade
wood as an issue affecting communities across the Northeast:

    Poor tree quality exacts heavy economic costs. Low-grade trees are useful
    for fuel, but provide poor material to support industry...Poor tree quality,
    and widespread cutting that is degrading stand quality further, are major
    reasons why foresters, landowners, and citizens concerned with wood
    supply cannot be complacent about the future of the Northeast’s forest (p.
    257).

    So, given the fact that the region has primarily produced and depended on a low-
grade wood supply, it is not surprising that an industry predicated on low-grade wood
would emerge there. To the extent that the structure of the regional wood supply is a
determining factor in the emergence of biomass energy, understanding the nature of the
wood basket helps to shed light on what is happening in Berlin at present. Perhaps the
most important questions about biomass’ emergence, however, are what it means for
Berlin’s economic future. As Swan (1994) points out, sound forest-based economic
development starts with primary processing of timber into paper and lumber, and includes secondary conversion into high-value products such as furniture, milled lumber, and specialized paper products—as opposed to an economy primarily oriented around the cutting and use of low-grade fiber or fuel wood. The emergence of biomass in the wake of pulp and paper would appear to move Berlin even further away from Swan’s ideal vision of a wood-based economy. Further, wood-based companies that rely on selective cutting and value-added processing (such as flooring production) employ far more people per unit of biomass harvested—as much as seven times more—than pulp and paper (Pannozzo and Colman 2008). The type of large-scale biomass energy production that has emerged in Berlin promises to employ even fewer. The two proposed biomass power plants would employ roughly 90 full time workers between them, as opposed to the 250 to 2,000 that once worked at the pulp mill—processing roughly the same amount of wood.

But questions about the future of the forest itself would appear to be at least as vital as those of the future of economic opportunity in Berlin. If a century of the pulp and paper industry produced a forest dominated by smaller-diameter and lower-value trees, it stands to reason that biomass energy may, over time, produce an even younger and even lower-value forest. As Ingerson (2009) points out in her analysis of the emergence of biomass in the Mahoosuc region:

A forest that grows more like an agricultural crop would be easiest to manage for biomass harvest, eliminating the need to work around residual crop trees or dead wood during harvest. At the most intensive level, conversion of native forest to short-rotation fast-growing plantation crops would have the greatest impact on wildlife, recreation, water filtration, and other forest values (p. 14).
Further, it is important to note that discussions of the sustainability of the forest resource around Berlin are largely consistent with those seen in other industrially-dominated forest-based economies: focused narrowly on fiber supply. In Nova Scotia, for example, discussions of sustainability are almost completely oriented around the ability of the forest to provide industry's required fiber supply, rather than questions about its ability to provide non-timber functions such as ecosystem services and biodiversity (Pannozzo and Colman 2008).

Time will tell whether or not the emergence of biomass as the new dominant wood-based industry in Berlin is a positive or negative phase in the city's development. However, while markets for low-grade wood are necessary for the improvement of timber stands (by making thinning operations economically viable), there is reason to be guarded about the ability of the industry as the new game in town to improve economic and ecological conditions around the community. Smith et al. (1997) question the wisdom of timber production for such a specialized purpose:

> It is unwise to be content with growing trees that are, regardless of species, of such poor quality or small size that their use is limited to some very specialized purpose. It is logical to ponder whether hard pines should be grown in ways that make them suitable only for pulp for making cardboard boxes, or similarly, if potentially high-quality hardwoods should be grown in ways that limit their use to burning for industrial biomass energy production.

According to a US Forest Service forester working in northern New Hampshire, it would take roughly 50 years for the quality of the region's wood supply to be dramatically improved by moving away from the historically dominant mode of resource utilization and toward more thoughtful management.\(^5\) Wood-based redevelopment in Berlin, however, appears to be unfolding neatly in line with the historical and present condition

\(^5\) Personal communication, 2008.
of the community’s resource base. As I have shown in this chapter, the analysis and understanding of change in and around Berlin is deepened by focusing on the connections between ecological and political-economic conditions there.
CHAPTER 7
CIVIC CULTURE, THE LOCAL MIDDLE CLASS, SMALL BUSINESS,
AND COMMUNITY CHANGE

As the previous three chapters show, symbolic elements of Berlin’s place character have interacted with its built and natural environments to shape redevelopment in the wake of the mill closure. Negative aspects of its image and identity have inhibited a real turn toward a consumption-oriented tourism economy, though an effort to cultivate motorized recreation has emerged. Combined with the city’s identity as a mill town, elements of the built environment—the mill site and former recover boiler in particular—have formed a material base for the continuation of industry in the heart of the community. The built environment in turn has interacted with the structure of surrounding forest resources—the product of a century of forest management oriented primarily around the production of pulpwood—to produce a new wood-based economy dependent on the growth and harvest of low-grade wood. In these symbolic and physical ways, the city’s history as a pulp mill town is today shaping patterns of redevelopment and change. However, three interrelated elements of Berlin’s place character, also rooted in this industrial past, have been relegated to the background of my analysis thus far: civic culture, the local middle class, and the small business community. In this chapter I focus on the social context of change in Berlin and show that the course of redevelopment there has not merely grown out of symbolic or physical constraints, but is
also the product of intra-community negotiation and contestation within a relatively open civic and political structure.

**Civic Culture in Berlin**

In *Worlds Apart*, Duncan (1999) argues that the rich civic culture of a northern New England mill town is the key factor explaining the relative lack of persistent poverty there compared to that found in communities in the Mississippi Delta and central Appalachia. The civic culture of her northern New England community—"Gray Mountain"—consists of a set of behaviors, norms, and values in which openness, inclusivity, collaboration, involvement, and investment in community predominate. The Delta and Appalachia, by contrast, are marked by exclusive local institutions, patronage politics and corruption, and deep social divisions between the few "haves" and the many "have-nots." While Duncan’s analysis focuses on explaining the extent of opportunities for upward mobility and the persistence of poverty in each place, a strong civic culture also represents a potentially important set of resources for communities grappling with fundamental questions of economic reinvention. For example, Crowe (see Crowe 2006) found that social infrastructure (active local organizations, public discussions, civicly-minded businesses, etc.) had positive effects on the level of locally-oriented economic development in a sample of Washington communities, while levels of natural capital (developable land, proximity to transportation infrastructure, etc.) had positive effects on traditional industrial recruitment.
Underpinning the rich civic culture of Gray Mountain, Duncan argues, is the historical political economy and class structure of the place in which most residents belonged to a large middle class supported by the paper industry. Figure 7-1 displays the household income distribution in four *Community and Environment in Rural America* Survey regions, including the Northern Forest.\(^{56}\)

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**Figure 7-1:** Annual household income distribution by region, 2007 CERA Survey.\(^{57}\)

As this graph shows, the middle class in Coos and Oxford counties—at least when measured in terms of household income—is much larger than that found in many

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\(^{56}\) Here, I present regional comparisons due to a lack of communities analogous in size to Berlin in other study regions; the communities in each region closest in size to Berlin are either substantially larger or smaller. “Northern Forest” is Coos and Oxford counties; “Appalachia” is Harlan and Letcher counties in KY; “Delta” is Coahoma, Tunica, and Quitman counties in MS; “Black Belt” is Clarke, Choctaw, Marengo, and Wilcox counties in AL.

\(^{57}\) Annual household income ranges correspond to 2005 household income quintiles for the US (per the US Census Bureau). “Lower” = under $20,000; “Lower middle” = $20–40,000; “Middle” = $40–60,000; “Upper middle” = $60–90,000; “Upper” = $90–160,000; “Top 5%” = over $160,000.
persistently poor rural areas. While the size of the lower-middle income ($20–40,000) and affluent groups (over $90,000) were roughly consistent from place to place, the Northern Forest compares favorably to the other regions in two important respects. First, the number of people with household incomes under $20,000 per year is much greater in Appalachia, the Delta, and the Black Belt. But just as importantly, almost half of respondents in the Northern Forest indicated annual household incomes between $40,000 and $90,000, compared to just 31–34 percent in the other regions; the middle income group, or middle class, was thus almost 1.5 times larger in the Northern Forest. Regional differences in the distribution of income resources are not just about one place having more or fewer poor people than another, but about how places differ in terms of more or fewer of the middle-income residents who have the resources to invest in strong local institutions and participate fully in civic life.

**Urban Neighborhood Effects and Collective Efficacy.** Focused on a different context but closely related to Duncan’s findings about the relationship between the local distribution of resources and civic culture, a number of scholars have investigated how the characteristics of poor urban places affect those who live there (e.g., Ainsworth 2002; Brooks-Gunn, Duncan, Klebanov, and Sealand 1993; Leventhal and Brooks-Gunn 2003; Ross, Mirowsky, and Pribesh 2002; Stoll 2001; Vartanian and Buck 2005). These “neighborhood effects” studies have shown that the socioeconomic composition of places has real effects, over and above individual or family characteristics, on local patterns of socialization, the willingness of residents to take action for the good of the community, and the institutional resources to which residents have access. Together, these studies
point to the key role that middle income residents play in determining the quality and character of their communities.

An important contribution to the neighborhood effects literature writ large is the concept of *collective efficacy*, developed by Robert Sampson and his colleagues, who look especially at its role in mediating the effects of neighborhood disadvantage on crime (e.g., Browning and Cagney 2003; e.g., Browning, Feinberg, and Dietz 2004; Morenoff, Sampson, and Raudenbush 2001; Sampson, Morenoff, and Earls 1999). First introduced by Sampson, Raudenbush, and Earls (1997), the term refers to “the linkage of mutual trust and a shared willingness to intervene on behalf of the public good” (Sampson, Morenoff, and Gannon-Rowley 2002 p. 457), two dynamics closely related to civic culture. The concept has been operationalized by combining various measures of social trust and cohesion and expectations of social control. Neighborhoods with higher levels of collective efficacy, all else being equal, experience lower levels of violent crime. Importantly, and consistent with the larger neighborhood effects literature, it is not merely the presence of poor people that lowers the level of collective efficacy, but the presence of affluent neighbors which raises it (Sampson, Morenoff, and Earls 1999). Likewise, a number of investigations into the effects of neighborhood context on educational and other adolescent developmental outcomes have found that the absence of relatively affluent neighbors is more important than the presence of low-income ones (e.g., Brooks-Gunn et al. 1993; see Brooks-Gunn, Duncan, and Aber 1997 for a thorough review of this literature). The concept of collective efficacy has most commonly been investigated with respect to crime and the maintenance of social order, but Browning and Cagney (2003) note that the capacity to secure extra-community resources such as local
medical facilities or infrastructure improvements may mediate the positive relationship between perceived collective efficacy and levels of neighborhood health. From the research outlined above it is clear that the absence of middle-class neighbors has a variety of negative community-level outcomes, generally inhibiting the ability of communities to achieve shared goals. While the concept has not been explored in rural communities with only limited exceptions (see Fagen 2005), it may be useful to expand the concept to include other types of shared goals such as those related to addressing community issues.

Figure 7-2: Trust, social cohesion, and civic engagement by region, 2007 CERA Survey.

Figure 7-2 displays CERA Survey data from the four regions shown in the previous graph, this time showing data on three measures of community trust and cohesion adapted from Sampson’s work on collective efficacy. Also included in this
graph is a measure of civic engagement, another important element of civic culture. For each measure related to civic culture, the Northern Forest compares favorably to the other study regions. The contrasts are not stark in all cases, perhaps reflecting the generally close-knit nature of these rural places. However, the Delta emerges as a region with a particularly weak civic culture.

In the Northern Forest, 93 percent of respondents said that their neighbors are willing to help one another out, compared to 88 percent in Appalachia, 87 percent in the Black Belt, and only 78 percent in the Delta. Eighty nine percent of Northern Forest residents said that people in their communities generally trust each other and get along, compared to 85 percent in the Black Belt, 82 percent in Appalachia, and 67 percent in the Delta. Perceptions of the ability of community members to work together present a slightly different pattern, however. Similar percentages in the Northern Forest (84 percent) and Black Belt (80 percent) said that residents could work together effectively to address local issues. These figures were significantly lower in both Appalachia (72 percent) and the Delta (67 percent). Levels of civic engagement present another slightly different pattern in which the Northern Forest compares favorably to all three persistently poor regions. In the Northern Forest, 56 percent of respondents indicated membership in

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58 The top three bars for each region display the percent of respondents who agreed with the following statements: “People around here are willing to help their neighbors”; “People in this community generally trust each other and get along”; “If this community were faced with a local issue such as the pollution of a river or the possible closure of a school, people here could be counted on to work together to address it.” The bottom bar shows the percent reporting membership in at least one of the following types of local organizations: business, civic, government, or other.
59 Differences between Northern Forest and other regions are significant at .05 level as indicated by chi-square test.
60 Difference not significant at .05 level as indicated by chi-square test.
at least one type of local organization. This figure was 47 percent in the Delta and 44 percent in both the Black Belt and Appalachia.\footnote{Difference significant at .05 level as indicated by chi-square test.}

While the magnitude of these differences is not huge and there is not a neat correspondence between the size of the regional middle class and all indicators of civic culture, together they are suggest a stronger civic culture in northern New England. By virtue of its location in the region, and to the extent that these civic resources matter for ability of communities to effectively address change, Berlin appears to be relatively well-equipped. But as I show below, Berlin’s civic culture is not generally perceived to be a particularly remarkable characteristic of the community, or one that is consciously invoked as the community responds to change. Rather, positive and negative aspects of civic culture form part of the underlying social fabric of the place—the stage on which patterns of community change play out.

**Local Perceptions of Civic Culture.**

As I headed into Berlin, I thought questions and issues of civic culture, collective efficacy, and power would be very important for understanding change there. As it turned out, interview questions based on these themes in most cases did not resonate strongly with my respondents. Rather, my respondents thought that people’s willingness to act on behalf of the community was about the same as anywhere else. Of the ten interviews in which issues of civic culture came up, eight respondents offered mixed assessments of citizen commitment to community, one was generally positive, and one respondent saw a real deficiency in civic culture. As my interviews progressed and I
became more interested in other elements of the community, I eventually stopped asking these questions.

However, these interviews were still informative for understanding the social fabric of the place. When asked about the willingness of people to act on behalf of the common good, a professional working for the city emphasized Berlin’s nondescript character, and likened the self-interest of Berlin citizens to those in other places:

_We’re probably pretty average. You know, we certainly could be better... Yeah, I don’t think we’re all that different than... I think most people put themselves first, and if it happens to help you, fine._

Another respondent, a downtown merchant, talked about the willingness of Berlin residents to help family out rather than to work for the more diffuse benefit of the community at large, and also likened Berlin to almost anywhere else:

_Well... I don’t know. You know, people are more apt to work on their house, and go volunteer and help their brother on their house, and I think they’re more... um... for family. And that’s a big thing. They do more for family than seeing the direct benefit from helping you paint downtown. I say that, but then I have a group of volunteers that are always committed to helping me out, so there’s two sides of that... I think it’s like that anywhere, I mean it’s the same as anywhere. There’s that one side of the group that wants to help, and you got another side that’s just like, ‘I gotta go to camp.’_

While not painting a picture of thriving volunteerism and civic altruism in Berlin, these passages certainly do not point to a deficient civic culture. While likening Berlin to almost anywhere else, respondents sometimes mentioned examples of involvement or community investment such as that noted in the previous passage. More commonly, respondents talked about the willingness of neighbors to help each other out, and the generally tight-knit nature of the community. A professional emphasized these themes:

_Well, I think that there’s a real volunteerism. There’s a group of people who are really, my hat’s off to them, they’re always—now there could be_
more, you hear that saying 'it's always the same ones'—but, there is. And it's not just in big ways, but in little ways that you see. If you've ever lost a family member...I swear when my brother died, my folks didn't cook for weeks after, 'cause people would bring beans over to their house. You know, stuff like that. And, you know, I don't have a car, my roommate gives me a drive, or I borrow a car from my coworker. You know, my father moved the neighbor's grass. I was out shoveling one day, and the neighbor came out to give me a hand because I was behind. I think there's a lot of things like that that happen, you know, that don't translate onto a balance sheet or something. But I think that there's a self-reliance, and a sort of community reliance.

However, when asked specifically about the ability of the community to work together, respondents' assessments of citizens' commitment to community were generally more positive:

"Oh yeah, I definitely do. When there's an issue, they come together quite well. It's part of that network. There's an inner network that's like—I mean, to be an outsider and come into Berlin, it's not easy. 'Cause there is a large network of people that know each other. And we're very social, we're French. And, I try to explain that we like to be social, we like to talk, we like to go out. When something happens that one of those people in that network feel strongly about, it goes around until there's a group that will go and present it to the council.

In fact, roughly half of respondents saw the community changing for the better in this regard. A downtown merchant talked about change this way:

"I think we can and people are really wanting to do that now. I know there's a lot of apathy but there are some core people that are working very hard to make the right things happen. It's a core, it's a small core. It's not the whole community. They'll say, 'yeah, great, great, great' when you ask them to help you, 'yeah, yeah, yeah—oh I forgot,' or whatever. Some people just aren't community oriented and some people do other things, and that's fine.

At the same time, these passages touch on another common theme: a core group of citizens who are highly involved with community affairs. Another professional saw a similar structure of civic involvement in which a relatively small group of volunteers and leaders accounts for much of the work which takes place on behalf of the community:
There is a group that understands what is going on. I would suggest that there are many that have not, or really don't care to pay attention to what's going on. Things will happen to them, and that's their perspective. And therefore it sometimes gets lumpy when people find out when all this conversation and activity and decision-making has been occurring.

This respondent’s comments about decision-making bring up questions of the distribution of power in Berlin. However, when I asked questions about where power resides in the community or who “runs things around here,” interviewees never pointed to any particular group or entity beyond those individuals occupying positions in local government.

“Pluralism of a Particular Sort”

Issues of local power and politics came up in seven interviews before I stopped asking about it, and all respondents described a relatively open power structure in which those in power are identified through their positions within city government, as opposed to their representation of a particular set of interests. A young professional and local transplant saw those in positions of power as a mix of individuals committed to the pursuit of power, and those genuinely committed to the good of the community:

There’s not a great deal of public civic participation that I’ve noticed. And if there is I definitely haven’t noticed it. I think it’s definitely a few people that like to be the big rollers, that like to have the power and the influence. Or, there are just some people that earnestly want to do the best that they can in their community. So I think it’s a split of people that really, really, earnestly want to help, or there are some people that want to have the power.

While leadership and decision-making tend to be dominated by a relatively small group of people, the political structure of the community was not seen as corrupt or abused to the benefit of any particular group. Further, when I asked respondents if they or most
people in town feel comfortable publicly expressing their views on local issues, I received answers that overwhelmingly indicated a norm of openness. When asked if people in Berlin feel free to express their opinions on local issues in public, the young professional quoted above responded this way:

Oh, I think so. I think if you ask anybody on the street a position on anything they'll gladly talk to you for at least the next ten minutes about it, if not more. I think there's definitely, there's no qualms about hiding their opinion on things.

A local businessperson opposed to the redevelopment of the pulp mill site as a biomass facility stressed there are no bad consequences when one expresses disagreement with the mayor and council:

Oh yeah, I do. I don't back down just because they tell us to be quiet. What can they do?

In these ways, the power structure in Berlin is a mostly pluralistic one in which a group of individuals representing a mix of interests assume power by virtue of their election into office, rather than on the basis of economic power or patronage politics as Duncan found in Appalachia and the Delta.

However, a pluralistic power structure does not necessarily equate to a vibrant local civic or political culture. In his study of community power structure in Rumford—a community similar to Berlin in many respects—Beckley (1994) concluded that the community was initially dominated by the pulp and paper industry in a configuration of power in which local elites firmly held the reins of decision-making and control. This gave way in the 1920s to a hegemonic configuration in which mill executives were legitimated as community leaders, and an ideology of shared interest and mutual benefit between industry and community prevailed. Then, in the 1960s a pluralist configuration
of power emerged as mill management withdrew from local politics in order to more effectively confront adversaries at the national level, such as environmental and labor groups. The withdrawal of industry from local politics left a vacuum in local leadership, in a context where local institutions were ineffective and limited by incompetent membership. For Beckley, the contemporary absence and inactivity of mill managers in local politics was the defining characteristic of early-1990s power structure in Rumford. He wrote:

It is critical to understand that the power structure in Rumford/Mexico is pluralism of a particular sort. It does not resemble the lively, democratic, active political system described by pluralist theorists. It is not characterized by a constant flow of new participants, forming new coalitions on a variety of community issues. Rather, the pluralism of Rumford/Mexico is an anemic, apathetic, and lethargic pluralism. It is pluralism by default. It is pluralism that has come about in large part because mill workers, mill managers and other citizens have become less interested in local politics...After decades of following the company's lead, and being “taken care of”, the community has lost the ability to effectively lead itself (p. 276–285).

While Beckley’s conclusions about power Rumford cannot be directly generalized to Berlin, his more general points about the effects of dependence on a single industry on civic culture do apply. Despite the openness of the political structure in Berlin noted above, six respondents mentioned negative civic effects of the community’s historical dependence on the pulp mill. A local businessperson specifically traced a lack of wider involvement in community affairs to the nature of work at the mill:

*It’s a very small core group of people that are involved in most every board in the city. I mean, if you worked in the mill, you typically didn’t get involved in things. I think that’s because of the shift work. That mentality’s still with these people, that other people take care of that, I don’t have to.*
A local professional and son of a mill worker traced the lack of vision and aversion to risk at the community level to the mill’s dominance:

You know, the mill dominated the landscape for almost a hundred years. Well, there are some serious consequences to that. Not only is it conducive for kids to leave high school, and go to work, and not get a proper education, it also sends the message that education is really not that important. It also removes the...what the hell would you call it? Not necessarily the incentive—but, yeah, maybe it’s the incentive. The incentive for people to be visionaries, to be entrepreneurs, and all that, because of the mill. And the other thing that it did to people, that we’re paying a price for today, it makes them risk averse. So you do the same things. I use the metaphor, it’s the ‘big tit’ mentality that we developed. You cozied up to it, and we depended on that for everything. I mean it was the taxes to the community, and it was the paycheck to the individual. And we closed the rest of the world off. You didn’t have to have an education, you didn’t have to have any skills—well manual skills to keep employed. But something even like that, if you had a strong union and you were making twenty bucks an hour, and you had full benefits, what did you care if you pushed a broom, right? So, it puts us now in a horrible, horrible position to pick ourselves up and reinvent ourselves because we don’t have the skill set to do it. Not only do we not have the skill set to do it, there’s a whole emotional piece to it because we’re risk averse, and we want to do what’s safe.

Another local professional expressed a similar view on the community’s lack of a distinct vision for the future:

I just think that people have not been necessarily challenged to have vision and have a plan. You know, the mill just always took care of that. And so for a long time people tended to look for the replacement for the mill. Even though, logically, we knew the best thing we could do was diversify, and it’s much better to have ten different industries with 50 employees than to have one. Nonetheless, you always hear people talking about, kind of that one big horse that would come in and replace the mill. So I think that contributed to it, that shortsightedness.

Related to Beckley’s point about poor-quality leadership in Rumford, four respondents indicated a general deficiency in the quality of local leadership. As one local professional put it:
The other thing that deteriorated with time was the quality of the people that ran for office. I mean, at one time the mayor was a lawyer or a prominent businessperson, something like that. We have had, over the last ten to fifteen years, people who certainly did not merit those positions. Nobody else wanted it, they just saw all the problems—didn’t know how to deal with them. So the quality of representation went down the toilet. I mean, a couple of them...I mean borderline mentally challenged individuals on the council.

Together, these passages paint a picture of political culture in Berlin similar to what Beckley (1994) found in Rumford.

However, many respondents saw the quality of local leadership, and interest in decision-making, increasing in recent years. A city official traced the “mill mentality” back to the historical strength of labor unions in Berlin, but saw substantial change in the last decade:

*When I first came here there was a lot of negativity. Everything was doom and gloom. If you dig down deep, there was a lot of old social behaviors left from the mill of ‘I’m only gonna do this much.’ It’s an old union mentality. And I’m not bashing unions because I’m apart of a union, but the type of unions that were here had strongholds. There was, ‘I’m only gonna do as much as I can, and that’s it. I’m gonna work in my realm, and no further.’ And just the old social behaviors from that realm bled through the whole city...But, and that’s one of the biggest changes that I see, that attitude is not there as much. Certain people have it, but there’s not a lot of that any more. If I say anything, that’s probably one of the biggest changes, that old social behavior is starting to fade away.*

In sum, Berlin’s civic culture can be seen as a generally strong one in which trust, cooperation, and openness predominate, especially when the community is placed into comparative context. While it is perceived that relatively few individuals dominate local politics and decision-making arenas, power is seen as the province of local government, rather than a set of interests represented by those individuals. But at the same time, the place is not characterized by a vigorous, widespread ethic of involvement and engagement. Respondents generally saw Berlin as about average with respect to the
commitment of citizens to the greater good. In this sense, the civic culture of Berlin seemed basically normal to most respondents; it primarily forms an open arena in which patterns of change play out.

However, some problematic aspects of local civic culture did emerge in my interviews. The mill supported a stable middle class for over a century, and was in many ways responsible for the comparatively rich civic culture seen in Berlin today. Yet the mill also produced a set of community characteristics that make adapting to a post-mill community life difficult, such as aversion to risk and a lack of a cohesive vision for the future. Something of a paradox can be found in this set of forces: a relatively rich civic culture premised on a large middle class supported by the mill, but one that largely precluded the innovation and vision necessary to effectively reinvent the community in ways that will support a robust middle class in the future. A local businessperson traced the complacency of the community to the wealth created by the mill, and the insulation of more-fortunate mill workers from the economic issues facing the community today:

To some extent it's comfortable, and that's part of the problem. I think I'm starting to see that it's done so well. The mill brought so much wealth, and so much money to the people—there's a lot of money in this community. I mean... a lot. And to some extent they're... I don't know... they're not, they're affected, but they don't... there's no big... motivation to do, or change anything, because they're fine. They're set.

However, he went on to explain that not everyone in Berlin is in the same boat, having made high wages with generous benefits and retirement packages. His words point out the crucial moment of transition Berlin finds itself at today, and questions about the future of the middle class:

Then, on the other end of the spectrum, are the people that don't have the money. They're working day to day, just to try and keep their house, and
keep what they’ve got. And that leaves a big chunk in the middle which says, ‘We don’t have the money to sit back and wait, and we’re not willing to work day to day, no matter how much we love it here, and would love to stay here. We need to go.’

The Local Middle Class

As Duncan (1999) argues, the comparatively rich civic culture of northern New England communities has been underpinned by a historically strong and largely blue-collar middle class. As her work and others’ research suggest, when middle income residents are present, local power structures are more likely to be open and conducive to change (Duncan 2001; Lopez and Stack 2001; Stack 1996). Further, societies in which there is a relatively egalitarian distribution of resources and a correspondingly strong middle class tend to develop democratic and open political systems as their economies grow (Easterly 2001). However, as she foreshadowed in Worlds Apart, globalization and the demise of manufacturing presents a fundamental challenge to the social fabric of these communities. In this section I examine Berlin’s contemporary class structure, recent shifts in socioeconomic composition, and conceptions of social class divisions in the community, focusing particularly on the nature and composition of the local middle class.

Who are the Middle Class?

The American middle class is notoriously difficult to define, which is a somewhat paradoxical condition considering its pervasiveness, in numerical or cultural terms, in American society (McDonald 2008). Many scholars have viewed the middle class as a residual social category (Ryan 1981), and have not afforded middle-class groups a
significant role in processes of social change (Archer and Blau 1993). Some surmise that social scientists ignored the middle class through the middle and late part of the 20th century because its members were doing so well economically, or because they were boring from an intellectual perspective (Blau 1995). Johnston (2003) sees a Marxian, polar focus on capitalists and workers at the core of this inattention to those in the middle as they relate to the course of history. Related to these perspectives stressing the middle class as a basically taken-for-granted, unmarked "non-class," a stratum devoid of meaningful social action, some see processes of middle-class social reproduction as the crude product of social structure, devoid of any human agency (Kaufman 2005).

Historical analyses of the development and formation of the American middle class generally focus on overlapping processes of industrialization and urbanization; Archer and Blau (1993) note that the development of the middle class occurred as a result of the growth of industrial capitalism and the accompanying processes of urbanization, immigration, and geographic mobility. Drawing on the work of Blumin (1989), Archer and Blau see shifts in occupational structure (i.e., the rise of salaried nonmanual work) and the expansion of small capitalism (i.e., entrepreneurship in the retail sector) during the mid-19th century as the fundamental changes in American work that laid the structural foundation for the emergence of the middle class (see also Carter 1985). However, they see the coherence of the middle class as simultaneously dependent on the diffusion of middle-class values and lifestyles afforded by the geographical proximity and institutions of urban life.62

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62 Archer and Blau do pay some attention to rural communities, noting that the emergence of a middle-class culture was facilitated by churches and schools in these places.
Since the middle part of the 20th century, scholars, intellectuals, and other cultural figures have often cast the middle class as indifferent and apathetic. Indeed, Jack Kerouac (1958) wrote in *The Dharma Bums* of "the middle-class non-identity which finds its perfect expression...in rows of well-to-do houses with lawns and television sets in each living room with everybody looking at the same thing and thinking the same thing at the same time" (p. 39). In another time and medium, the Canadian rock band Rush presented a similar skewering of middle-class conformity and anonymity in their 1982 song "Subdivisions" (McDonald 2008). For C. Wright Mills, the mid-20th century "new middle class" of white-collar workers grew out of the bureaucratic structures of service, distribution, and coordination intrinsic to an established capitalist order. Mills (1951) wrote of the middle class:

They are strangers to politics. They are not radical, not liberal, not conservative, not reactionary; they are inactionary; they are out of it. If we accept the Greek's definition of the idiot as the privatized man, then we must conclude that the U.S. citizenry is now largely composed of idiots (quoted in Murray 2003, p. 1).

Marcuse (1964) and Mills (1956) both argued that most Americans were fully integrated into the capitalist system and fundamentally represented barriers to social change. But others have viewed the middle class as the primary medium through which large-scale social change, albeit change of a capitalist variety, occurs through such phenomena as shifts in consumption patterns. Barron (1997) saw the transformation of rural communities from 1870 to 1930 as the result of the rise of big business and led by a new corporate middle class "heeding bureaucratic imperatives and criteria of efficiency" (p. 243). In a similar vein, Hazlett (1994) saw the late 19th century middle class' acceptance
of leisure activities in New Hampshire’s White Mountains as contingent on these trips’ characteristics of moral respectability, convenience, and punctuality.

Ironically enough, many intellectuals’ characterization of the American middle class as indifferent led for a period to an intellectual indifference and lack of sensitivity to the role of the middle class in processes of social change. However, some researchers have paid attention to the role of the middle class in progressive reform movements in which they have sometimes acted on behalf of disadvantaged groups—even their own workers. Johnston’s (2003) research points out that middle class residents can and sometimes do effect real social change in their communities, even acting as a radical element in local society. Johnston places the petit bourgeois squarely at the center of anticapitalist, feminist, populist-democratic and other radical reform movements in progressive-era Portland, Oregon (Bledstein and Johnston 2001; Kann 1986). Blau (1995) argues that the middle class has considerable political ability in social movements such as environmentalism and civil rights. Historian J. Leonard Bates (1957) saw the birth of the American conservation movement rooted in a new middle-class “concept of democracy based on social justice, national welfare, and a broader sharing of the nation’s natural wealth” (Judd 1997 p. 3). In his analysis of community response to industrial pollution in mid-20th century Gary, Indiana, Hurley (1995) emphasized the degree to which environmental reform there was dependent on the involvement of middle-class environmentalists intent on preserving their quality of residential life. Murdoch (1995) found collective action in rural England to be increasingly dominated by the middle class to the point that the success of action based on race, ethnicity, or gender depended on whether or not the action in question was consistent with the dominant middle class
milieu. However, others like Cleveland (2003) see social movements after 1960 as not led by a middle class liberalizing elite, nor by any specific class per se (due to all classes' integration into the capitalist system), but by members of oppressed groups and “intellectual radicals” that may or may not come from a middle class background.

In any case, self-perceived middle-class membership is widespread across various strata of society, and by virtue of its “in-between” location the middle class is an essentially fuzzy, ambiguous entity (Walkowitz 1999). However, Wolfe (1998) argues that while economic measures of middle class status are continually changing, the moral and cultural meanings of middle class life are relatively consistent (see also Stearns 1979). According to Wolfe, in America one is middle class if one says so, and this fundamentally means having choice about where and how to live, and the belief that the achievement of this standing is due to one’s own hard work. Wolfe sees middle class status as “a cluster of attitudes, beliefs, practices, and lifestyles that defines what it means to live in a way not too poor to be considered dependent on others and not too rich to be so luxuriously ostentatious that one loses touch with common sense” (p. 3). Wolfe identifies a degree of perceived obligation on the part of middle class citizens to contribute to the well-being of their own communities; a self-awareness that citizens are situated in and have a commitment to something larger than themselves. In his analysis of the emergence of a middle class in northeastern cities between the late 18th and early 20th centuries, Stuart Blumin (1989) identified “five substantive areas of personal and social experience—work, consumption, residential location, formal and informal voluntary association, and family organization and strategy—that would seem to encompass nearly all relevant aspects of an emerging middle-class ‘way of life’” (p. 11).
In a similar vein, Murray (2003) defines suburban middle-class citizenship as the combination of residential location, perception of deservingness of particular social and economic rights provided for by their government, and a "clear understanding of their obligations as citizens to participate in the collective life of their communities" (p. 3).

Getting back to the fundamental issue of the future of the middle class in Berlin, some—writing from a Marxian perspective—have characterized the middle class as an exceptional entity, a "brief historical phenomena...in the larger sweep of history, an exception" that is being eroded as capitalism advances in the post-industrial age (Dassbach 2001 p. 131). Regardless of theoretical orientation, many see the middle class as in jeopardy, a condition posing threats to political stability (Blau 1995). Archer and Blau (1993) argue that, since the 1970s, the contraction of an open economic opportunity structure responsible for the development and growth of the middle class may carry with it a decline in the middle-class values of tolerance and egalitarianism, and the expansion of individualism and moral self-righteousness. These ideas would suggest that not only is the middle class itself threatened in Berlin, but the functional civic culture which it supports.

The Size of the Middle Class in Berlin

Based on the work outlined above, the size and character of the local middle class provides one point through which to examine processes of change in Berlin. In the next few pages I examine the contemporary class structure of Berlin using income-and occupation-based measures. Here, I follow convenience and several conventions in using these quantitative approaches, defining the middle class in several ways vis-à-vis the
available secondary and survey data. In using income data from the US Census to measure the size of the local middle class, I follow Duncan’s (1999) in providing a straightforward, broad view of the local distribution of economic resources, and providing a glimpse into the relative “class situations” (Mills 1951) of Berlin residents. In defining social classes in terms of occupational groups, I follow the work of Beller (2009) and use a variation of the most up-to-date and relevant occupational class schema available, originally developed by Erikson and Goldthorpe (1992) and updated by Ganzeboom and Treiman (1996). As Beller elaborates, an occupation-based approach is most firmly grounded in the Weberian view that classes exist and differ on the basis of market resources and consequent life chances, rather than the Marxian perspective in which relationship to the means of production is the dominant criterion for class membership. My quantitative analysis is guided by the insights into social class in Berlin that grow out of my semi-structured interview data, discussed in detail below.

Figure 7-3 provides a rough view of the distribution of income at the family level in 1990, when the mill in Berlin was still going relatively strong. Here, I compare the family income distribution in Berlin to that of Rumford, Coos and Oxford counties, and New Hampshire and Maine. Regions are ranked from top to bottom according to the percentage of families with incomes between 100 and 200 percent of the US median.
In 1990, 41 percent of Berlin families fell into this solidly middle-class range, making it the single-largest income group in the city; only the state of New Hampshire as a whole had a larger middle-class contingent. By contrast, only 31 percent of families in Rumford had incomes between 100 and 200 percent of the US median, surprising for a town so similar to Berlin. This may reflect the outcome of a prolonged and intense labor conflict and strike at the Rumford mill in the mid-1980s, in the resolution of which management gained substantial concessions from the union. At the same time, Berlin and Coos County had roughly identical percentages (23 percent) of families under 50 percent of the US median—about double the state level—indicating the community’s and region’s disadvantaged status compared to the state as a whole.

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**Figure 7-3**: Family income distribution based on US median family income, 1990.63

63 US median family income in 1990 was $35,225. 1990 cutoffs are as follows: 50% = $17,500; 100% = $35,000; 200% = $70,000. US MFI in 2000 was $50,046. 2000 cutoffs are: 50% = $25,000; 100% = $50,000; 200% = $100,000.
While in 1990 Berlin compared quite favorably to other areas and regions in terms of its income-based middle class, things changed considerably in a decade as shown in Figure 7-4. As the mill entered its turbulent final few years, in 2000 the percentage of Berlin families with middle-class incomes was down to 29, a pronounced 12 percentage point drop. Instead of having the second-largest middle class as measured by income, Berlin now had the second-smallest, with only Rumford having fewer middle-class families. The largest income group in Berlin was now families between 50 and 100 percent of the US median, comprising 41 percent of all families in the city.

![Figure 7-4: Family income distribution based on US median family income, 2000.](source)

**A Changing Occupational Mix**

Table 7-1 displays data on one element of the fundamental economic transformation underlying this erosion of the local middle class—a shift in Berlin’s
occupational mix between 1990 and 2000. In 1990 just over a quarter of workers living in the city were employed in production, transportation, or material moving occupations, making this set of blue-collar jobs the most dominant form of work in the community.

By 2000, this was down to just under 22 percent, and production work was surpassed by management and professional as well as sales and office occupations. However, these figures do not capture the magnitude of the actual decline in production employment in Berlin because the city’s labor force itself declined by 11.3 percent.

<table>
<thead>
<tr>
<th>Census 2000 Occupational Category</th>
<th># of Workers</th>
<th>% of Total Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management, professional, &amp; related</td>
<td>989</td>
<td>1036</td>
</tr>
<tr>
<td>Service</td>
<td>989</td>
<td>874</td>
</tr>
<tr>
<td>Sales &amp; office</td>
<td>1141</td>
<td>1055</td>
</tr>
<tr>
<td>Farming, fishing, &amp; forestry</td>
<td>42</td>
<td>34</td>
</tr>
<tr>
<td>Construction, extraction, &amp; maintenance</td>
<td>609</td>
<td>515</td>
</tr>
<tr>
<td>Production, transportation, &amp; material moving</td>
<td>1285</td>
<td>978</td>
</tr>
<tr>
<td>Total employed</td>
<td>5055</td>
<td>4492</td>
</tr>
<tr>
<td>Total labor force</td>
<td>9474</td>
<td>8407</td>
</tr>
</tbody>
</table>

Table 7-1: Percent Berlin labor force employed in Census 2000 occupational categories, 1990 and 2000.64

The actual number of production workers declined by almost 24 percent from 1990 to 2000. Jobs were lost in all occupational categories except management, professional, and related, which saw very modest growth. So, while the overall occupational structure of the community experienced little in the way of change, the numbers of Berlin residents working in each set of jobs changed dramatically. Driving the erosion of production work—jobs at the center of the traditional middle class in Berlin as discussed below—was the decline of the manufacturing sector in Berlin. According to data from the New

64 Year 2000 percentages add up to 100.2 despite coming directly from Census Quicktables. 1990 and 2000 occupational classes are not directly comparable, so 1990 occupational groupings were transformed to the 2000 scheme using a template available at census.gov/hhes/www/ioindex/occross_menu.html.
Hampshire Economic and Labor Market Information Bureau, between 1990 and 2000 the number of manufacturing jobs in the city fell by 39 percent, from 1,942 to 1,183. By 2006, there were only 308 manufacturing jobs left in Berlin, under a sixth of what was there in 1990.

**Occupation-Based Social Classes in Berlin.**

Where does that leave Berlin today? Census data on Berlin residents’ employment are not available beyond the year 2000, but the CERA survey provides data on respondents’ occupations, allowing a glimpse into the city’s occupational structure in 2007. And while the Census occupational categories are useful for examining the prominence of different types of work, they are fairly crude groupings that include several dissimilar occupations, and do not necessarily represent meaningful differences in the resources available to workers in each group. Here, I use survey data on occupation to group respondents into social classes, differentiated on the basis not only of type of work, but on the sets of resources—income, autonomy, security, etc.—expected to be available through jobs of different types.65 The categories here thus represent a hierarchical ordering of occupations, organized into a five-class scheme, and do not neatly correspond to the Census occupational categories shown above.

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65 Data on respondents’ occupations were coded according to the Standard Occupation Classification-derived Census 2000 occupational codes, and then transformed into International Standard Classification of Occupation 1988 (ISCO88) codes. ISCO88 codes were then combined with data on self-employment and assigned to an 11-category occupation-based class scheme (as outlined in Ganzeboom and Treiman 1996). The original 11 categories were then collapsed to create the five class categories used here. The categories here correspond to those outlined by Ganzeboom and Treiman as follows: “Higher service” consists of Group 1; “Lower service” consists of Group 2; “Routine clerical/self” consists of Groups 3, 11, and all self-employed workers regardless of occupation; “Skilled manual” consists of Groups 7 and 8; “Unskilled manual” consists of Groups 9 and 10.
Figure 7-5 provides a look at the occupation-based class structure of Berlin, Rumford, and Coos and Oxford counties, based on employed respondents' descriptions of their primary job. Immediately evident is the generally similar class structure of all four communities and areas; service work predominates, with routine clerical and self-employed workers the largest group in all four places.

![5-category EGP-based occupational class (percent)](image)

**Figure 7-5**: Occupation-based class structure by region, 2007 CERA Survey.

However, skilled and unskilled manual work—representing the vast majority of jobs at pulp and paper mills, and the foundation of the traditional blue-collar middle class—was more common in Rumford where an integrated mill still employs roughly 1,000 workers. In Berlin, despite the closure of the pulp mill almost a third of respondents indicated manual occupations, indicating the remaining blue-collar jobs at the machine shops, metal fabricators, and small manufacturing plants located in the city, as well as at the paper mill down the road in Gorham. But in many ways these residents are the remnants
of a once-dominant blue-collar middle class; Berlin’s middle class is now comprised primarily of mid-and lower-level service work combined with self-employment.

Figure 7-6: Income classes by occupational classes, Coos and Oxford counties, 2007 CERA Survey.

Figure 7-6 combines the survey data on income presented at the beginning of this chapter with the occupation-based measures of social class shown in the previous graph. This graph displays the household income distribution of each occupation-based class group for Coos and Oxford counties together, essentially crossing income-based and occupation-based definitions of social classes. Perhaps unsurprisingly, higher-class workers tended to have higher household incomes, but this relationship was not a straightforward one. Just as great a percentage of skilled manual workers reported

\[\text{Pearson correlation coefficient for the social class variable and the six-category income variable is .23.}\]
household incomes in the $60–90,000 range as did higher-and lower-level service workers, providing evidence of the high manufacturing wages that underpinned Berlin’s large middle class for a century.

Conceptions of Social Class in Berlin: “Pretty Gray”

When I asked respondents to describe Berlin they overwhelmingly pointed to the city’s fundamental blue-collar identity as discussed in Chapter 4. To get a sense of class lines in the community, I asked respondents how they thought about the community in terms of social class, asking specifically about any class divisions that they perceived. Respondents almost unanimously indicated a lack of deep class divisions in Berlin, and all of them perceived no general distinction between the working class and the local middle class. Related to the themes of power discussed above, questions about the presence of a local elite did not resonate with respondents. A small businessperson and son of a business owner talked about class in Berlin this way, emphasizing what he thought to be the regionally unique context of a mill town:

I think it all just kind of bleeds together and I think that maybe the class distinctions here are a little different than they are in other communities that haven’t faced the same challenges, or don’t have the same history. I guess. I think that the working class very much is the middle class here. I do believe that—that the working class is the middle class. So many of the people that I know have built up their middle-class living with the three bedrooms and the two bathrooms, and the pool in the backyard, and the two cars in the garage, and everything else... working, laboring, you know? And it’s just sort of the identity of this area. It seems like the middle class is really defined by the people that drive the trucks, and cut the wood, and do that kind of thing.

A local businessperson and daughter of a lumberjack saw papermakers as squarely middle class on account of their generally high wages:
See they used to pull in some good money, so I don’t see a big distinction. I mean, I see people that were working at the mill, they drive around in Corvettes. And then you have the businessman who lives in a very mediocre house. He’s the owner, if you saw him you’d think he was just a regular person. So, I think you really can’t distinguish a person between the working class and the middle class here.

The daughter of a mill worker recalled her time growing up the city:

There was never a distinction. That’s one thing is there wasn’t. There was not...cliques. It didn’t matter if it was in an apartment or in a house. I didn’t feel that you were looked at as different classes. I don’t think that existed. I always felt rich, just because it didn’t matter how much money, and I could live in an apartment and be fine.

It was only when she left Berlin to attend college in the southern part of the state that she became aware of real class distinctions.

When I went to college I realized, I’m like, ‘oh my god, you drive a Lexus?’ I mean they had just a different thing. But I don’t think that there ever was a division. Like a friend’s of mine father would be the janitor at the high school, I mean it never was frowned upon. I didn’t feel that growing up. I don’t think that there really was a class division.

Two respondents not from Berlin originally, but from nearby mill towns, did not see the working class and middle class as separate entities, either in Berlin or their hometowns.

A small business owner, when asked what the term “middle class” meant to him, replied this way:

In my mind, middle class means the working class that make a good living, but not overly...I don’t know. I guess in my mind the working class is middle class, and they’re not necessarily poor, but they’re not necessarily rich. I consider myself middle class-working class, I guess.

When respondents did indicate class distinctions in the community, they tended to be subtle and nuanced. The son of a mill worker saw class distinctions among mill workers, with skilled labor alongside mid-level service workers in his idea of the local middle class, but unskilled labor excluded:
The teachers were middle class, the police were middle class. I'd say half the mill workers were middle class—the ones that had jobs that couldn't be replaced. I don't know about laborers. The ones with the skills. Skilled labor. Some people were laborers where they did just, you know, odd jobs—'here take this oil truck and unload it.' Unskilled job, anyone can do that. People like my father in his shop, they knew electronics inside and out. You couldn't just go to the employment office and pick any old Joe and do the job. It takes a little bit of experience. And as you get more experience and get more skills you get more money.

Another respondent drew a distinction between entrepreneurs and mill workers, but still regarded them as both fundamentally middle-class:

_I think, ah, retail versus manufacturing. You know, income-wise, they may be the same. The people who are entrepreneurs and may make fifty thousand dollars a year...it's just that they control and own their own business compared to a laborer in the mills that made fifty, sixty thousand a year but worked for somebody else. I see a shift more toward the entrepreneurs, just because the manufacturing is shrinking. But I don't really see them as upper-class versus middle-class._

The occupational data presented above are consistent with his perception of a shift in the composition of the local class structure.

A professional working for the city, when asked if there was a difference between the working and middle classes in Berlin, pointed to a slightly more noticeable distinction in town:

_No, I think those bleed. I think what is more noticeable to people, whether they're working or middle, is those who are what they would consider upper. I mean the people who own the companies, the people who are out there, like their company is able to give the check to charity kind of thing. And you know, you could just hear it in people's tone of how sometimes they react to that, like, 'oh, must be nice. Oh, they couldn't give us all a raise, but they could give the hospital five thousand dollars for whatever.' It's just those kinds of things. But that can't be unique to Berlin. Nevertheless, I think because there's a lot more working, middle, low and moderate incomes, and a lot less of those who are well off, I think those who are more well off stick out more in the sense that people are aware of who's got the nicer home and has the better job, better car kind of thing._
When asked about socioeconomic divisions in town, a professional stressed that socioeconomic status tends to cross family lines, resulting in a mixture of class statuses within extended families:

*The families are too interconnected, everybody's got one.*

In sum, the interview data presented here suggest that Berlin is generally marked by a real lack of class divisions. In the parlance of E.P. Thompson (1966), class identity and interests in the community are generally not seen as divergent between groups. Instead, they are seen as shared between the working and middle classes, for they are in large measure one and the same there—the working class has been part of the larger middle class which includes mid- and high-level service sector work. Further, respondents did not generally perceive there to be a real local elite in opposition to the interests of the local working-middle class.

While my respondents are primarily professionals and small businesspeople, ten respondents originally from Berlin had fathers who worked in the mill or as loggers, several had siblings who worked there, and three had themselves worked in the pulp mill or another mill in the region.\(^{67}\) When asked about their own class status, virtually all respondents identified themselves as middle class, consistent with Wolfe's (1998) findings noted above. The one respondent who identified himself as upper-middle class, a local businessperson, did so on the basis of being financially comfortable enough for his wife to stay home and raise their children.

However, respondents generally talked much more freely and definitively about the class structure of the community than they did their own class standing. Many

\(^{67}\) Another two respondents not from Berlin originally had fathers who worked in paper mills in their home communities.
respondents’ answers to my questions about how they thought of themselves class-wise were full of long pauses during which they searched for the right words, sometimes even checking with me to see if they were on the right track before ultimately reaffirming their middle-class status. This passage from a small businessperson exemplifies this lack of clear, concise language for dealing with the subject of his own class identity:

*I think...I, I...and I’d only...because, I guess, because maybe I get my definition of what it is from the news or from the media, or whatever, and that...in my mind, you know, I don’t...um...I don’t consider myself...financially not...rich, or nothin’ like that. So I’m just, I’m a working class, middle class...ah...I’m, I’m not poor, and yet I’m not rich. I’m...somewhere in the middle, and...I work, you know, my wife and I work every week, or every day, to...to...survive, and, um...if we can...put a little bit away, or whatever...you know, then that doesn’t necessarily make us...wealthy or nothin’. Just...just survivin’.*

The lack of certainty in language can perhaps be attributed to the middle class’ essentially fuzzy nature as an in-between group, neither very poor nor very affluent.

**A New Low-Income Class?** However as noted in Chapter 5, there is a general perception that the community has seen an influx of low-income residents drawn to the area by the depressed local housing market. When asked to talk about social class, five respondents explicitly linked the phenomenon of low-income newcomers to a shifting local class structure, and identified a division between these new residents and the rest of the community. A professional talked about it this way:

*I would have said probably a few years ago it was more inclusive than I do now. One of the things that has happened is Berlin’s population has dwindled down. And there’s a whole comm-, sort of, class of people that have moved in to take those jobs, take those apartments because they’re way, far less expensive than anything across the state. I mean, you can get an apartment here for probably half of what you can get it in Manchester. Um...and if you’re on...some kind of limited income...I think there’s been a lot of publicity about the fact that you can go to Berlin and*
get a cheap apartment. And there’s a lot of absentee landlords, some of whom have actively recruited people to come here. So there’s a lot of people that have moved in, and the area’s sort of struggling to figure out what to do with them. They, they tend to, ah, be lower class, um...some of ‘em are on disability, some of ‘em are...for various reasons, on welfare, and ah...may be on welfare because they’ve had some substance abuse issues, and, ah...there’s...a real...concern about how that’s impacting stuff like school budgets, special ed. costs. But I think there’s also a sense that, um...there’s more, um...drug use that’s coming in. So I think that’s become sort of a subclass that...is separate, hasn’t...really, ah... integrated.

Yet, these new low-income residents are not necessarily shunned by the community. A professional noted her involvement in a program to move low-income residents out of poverty through job training:

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\text{I mean, you have somebody that’s on welfare that’s living downstate, and sees the light at the end of the tunnel by moving to Berlin and getting their housing paid for. We do have a surplus of individuals that don’t work, but I do work with a program with some of these individuals that aren’t as skilled as...as we are, because they have kids at young age. And the state pays for their gas, pays for their daycare. They come in, they work with me, and I give ‘em the skills, like doing an Excel format, or using the computer. A lot of the people have never been on a computer, they don’t have a computer at their household. The hope is that these people don’t stay with me for more than three months. They have three months with me, they go three months with someone else, but then hopefully they don’t continue to do that, they get into a position. I’ve already had two girls now that I’ve placed into jobs, they got computer knowledge and now they’re doing well. So two of them are off the system. So they are trying to work with that a little more. But they have every right to come here, and to do that. There’s no real way to stop ‘em unless we start fixing and improving and raising some of the rent rates. But you’re gonna have ‘em either which way.}
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She immediately went on to trace the influx of low-income residents in large part to the opening of the state prison in 2001:

\[
\text{Do I think it’s happened since the prison? I definitely think that that’s opened up some...I don’t think the prison was the best decision that the city has made. Because if you think about it, if you have somebody that’s in prison, and they come up to visit—‘oh, wow, look at Berlin,’ you know? And it’s much easier to live in an area where your significant other}
\]
is...and with the affordable rates, and the cost of living being less it is an attractive place to be.

At the same time, a small business owner expected the opening of the new federal prison to curb the influx of low-income residents by improving housing conditions as new federal workers move into the community:

*Oh yeah, we’re sick of it. We’re telling them to go home, which is not very nice. So, what’s happening with those people that are coming for the prison they’re gonna take over these rentals, or fixing the rentals. If you’re fixing it, it’s gonna cost you more, you have to charge more, and those people aren’t gonna be able to afford it as much. And we’re gonna get those smarter people into those rents so they’re gonna be nicer. So, it’s gonna go up, it is a downward spiral now but it’s slowly gonna turn it the other way. But, it was one of our biggest problems in town.*

**Economic Anchor Institutions.** These themes point to the roles played by prominent local institutions such as a large local business, White Mountains Community College, the state and federal prisons, and Androscoggin Valley Hospital. Together, these institutions have functioned to buffer the effects of the mill closure, and have supported the city’s increasingly services-based middle class through the creation of at least 550 jobs since 2000. Isaacson Structural Steel is a local steel fabrication facility that employs roughly 150 workers filling orders for construction work across New England. The company was founded by a Berlin native in 1962, and is today run by a Berlin resident and Androscoggin Valley native. The company expanded operations in 2006 after the pulp mill closed, adding roughly 30 workers, many of whom had been laid off from the mill (Bartlett, Nielsen, and Josten 2006).

White Mountains Community College, though not one of the community’s larger employers, also plays an important role in the local economy. Founded in 1966, one of the college’s central missions is workforce development, and to that end it developed
several programs to train and retrain local workers for new job opportunities, particularly as they existed in the construction phase of the federal prison. The college also has provided space for hearings on the future of the mill site, master plan visioning sessions, and other public meetings related to development. However, as I learned through conversations with administrators there, the primary role of the college is workforce development vis-à-vis the industries that are extant or emerging in the region, regardless of what those specific industries may be. Thus, the institution does not itself act as a qualitative force shaping the course of redevelopment, but strengthens the connections between the local workforce and whatever new sets of jobs are emerging in the area.

When the state of New Hampshire was looking to build another medium-security correctional facility in the mid-1990s, the city administration actively recruited the facility to Berlin after several other communities expressed unwillingness to host the facility (Bartlett, Nielsen, and Josten 2006). The prison opened in April of 2000, and today employs just over 200 (New Hampshire Department of Corrections). After the first mill closure in 2001, the city began to think about further expanding the local prison economy, and in the mid-2000s the administration approached the Bureau of Prisons (BOP) about constructing a federal correctional facility near the existing state prison. In spring 2007 the BOP purchased the land on which to build the 1,230-bed facility, and construction began in late 2007; the construction contract was awarded to a firm based in Rochester, New York. The construction phase was expected to take 30 months, employing an average of 300 workers throughout (Nielsen 2007). When the facility is operational in 2010, it is expected to employ roughly 325, 40 percent of whom would be federal workers who transfer in from other facilities (Bartlett, Nielsen, and Josten 2006).
Androscoggin Valley Hospital, a community-based not-for-profit corporation established in 1971, is today the city’s largest employer, with just over 400 employees. The hospital was active in the recruitment of the prisons to Berlin, as its leadership saw the need to attract workers with adequate health insurance coverage to the region.

The Small Business Community

While Berlin’s middle class is increasingly comprised of service and public sector workers, especially those employed by the hospital and prison, the role of the city’s small businesses has also become more visible since the pulp mill closed. In late 2007 a professional and former mill worker saw a change in the city, and a new recognition of the importance of small business:

*I see for the most part people acknowledging that back in the day, one industry—the pulp and paper mill—that supplied everything. That sun set—that’s gone. Let’s move on, let’s do other things. And I see that passion, that attitude of let’s not hang on to the past, because we’ve got to determine a bigger and brighter future. And I see a lot of people accepting that, where in 2001, and I was unfortunately but fortunately part of the mills going down, people definitely wanted things back up in full force, like it was back in the day. I don’t see that right now, I see them saying bring more businesses, diversify, we’ve moved on from that. That’s a definite mindset change.*

But as I discuss below, small business is important in processes of community change beyond the responsibility and ability to take on a larger role in the local employment base. Here I analyze and discuss the roles that the small business community has played in actually shaping the course of redevelopment in Berlin, focusing on its involvement in public debates and discourse about the redefinition of the downtown spaces so important to past and future economic life.
The "Independent" Middle Class.

In keeping with the overview of research on the middle class presented in the last section, Tolbert (2005) argues that historically sociologists have dismissed the importance of the middle class as a catalyst for community change. But social scientists have identified some of the ways in which an economically independent middle class can work for community resilience, change, and strong local institutions. In calling attention to a group paradoxically relegated to the margins of sociological analysis by virtue of its central position in the American stratification scheme, Tolbert (2005) identifies the independent middle class thusly:

This group consists of business owners or those who are closely tied to local small businesses (i.e., family members, unpaid family workers, other employees, or customers). They have a substantial vested interest in the place where their businesses are located. In rural development parlance, they are "stakeholders." They are also deeply embedded in local professional, business, religious, social, and civic organizations and institutions (p. 1314).

Sixty years ago, Mills and Ulmer (1946) identified the economically independent middle class, rooted in small, locally-oriented businesses, as the driving force behind high levels of civic engagement manifested as leadership in voluntary civic associations. While Mills and Ulmer were focused on cities, Goldschmidt (1978) reached similar conclusions in a different context, finding that communities dominated by small, family-owned farms had healthier local economies than places dominated by industrial, absentee-owned farms. Scholars have since built upon the tradition started by Mills and Ulmer and Goldschmidt, and the results of these studies have generally supported hypotheses centered on the positive relationship between small, locally-oriented business, widespread civic engagement, and community well-being (Irwin, Tolbert, and Lyson...
1999; Irwin and Tolbert 1997; Lyson and Tolbert 1996; Tolbert, Irwin, Lyson, and Nucci 2002; Tolbert, Lyson, and Irwin 1998; Winders 1997). This new literature outlining the connection between small business and community well-being focuses on the fact that small businesses tend to be controlled by local actors who are enmeshed in social relationships, highly civically engaged, and committed to the future of their communities. While it does not outline the radicalism shown in Johnston’s (2003) analysis, this literature calls attention to what Tolbert (2005) sees as less-than-rational economic behavior on the part of local businesspeople—that business strategy is not solely premised on maximization of profit, but on a suite of non-economic, community-oriented concerns as well. While the “civic community” literature outlined above has focused largely on rural places, its findings reflect those of the neighborhood effects literature, which has shown a positive relationship between neighborhood affluence and various beneficial outcomes. In either context, it is the local middle class that appears to matter a great deal for community well-being.

Five of my respondents owned small businesses, while another (a professional) had previously owned and sold a local business. Three were downtown merchants, and two were in the manufacturing sector. I attempted to set up interviews with several more businesspeople, but was unsuccessful. However, I was able to have informal conversations with several other business owners, even though they did not have time for a formal interview and are not included in my sample of respondents. In any case, the interview and other ethnographic data generally support the central tenets of the civic

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68 In the course of recruiting respondents for this study I learned how difficult it can be to compete with the demands of running a business. Several businesspeople said they simply didn't have time to speak with me and declined to participate outright. I followed up with several other businesspeople who did not refuse participation outright, but in every case my calls or emails were either unreturned or the person declined my request for an interview.
community literature. A local business owner expressed a sense of increased responsibility on the part of the small business community in the wake of the mill closure:

*It probably has. It probably goes back to what I just said about feeling like I’ve gotta create more jobs and stuff. You know, there’s a pressure on you to be a...you certainly feel like you’re a bigger part of the community than you did before when there was this great big employer, the mill, and everybody worked for the mill, and everybody wanted to get in at the mill, and it was a union job. You kind of felt like you were, you know, a second class citizen as a business owner, and nowadays you feel a little bit like...maybe people are relying on you a little bit more to succeed.*

Four of the five business owners in my sample (three retail, one manufacturing) were highly involved in a number of local organizations. CERA survey data indicate that business owners in Coos and Oxford counties had higher levels of civic engagement than non-business owners; 69 percent of business owners reported membership in a local organization, compared to 55 percent of non-business owners. However, this difference was driven primarily by membership in business-oriented organizations, as opposed to civic, government, or other local organizations. A common theme among the business people I talked to was the perception that there is positive feedback loop between their businesses and the community; that what’s good for one is good for the other. A small business owner in the manufacturing sector who was not highly engaged thought of good business the primary way he could contribute to the common good:

*I guess I feel like the best thing I can do for the community is be successful here and grow this company, and maybe employ another four or five people every five years, rather than spread myself thin and put this place on cruise control. That’s my way of thinking. I feel like what I can do

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69 Business owners were identified on the basis of their responses to questions about their primary job and the industry in which they work. 56 out of 1,720 respondents in Coos and Oxford counties were identified as business owners this way.
70 Chi-square test significant at .10 level.
71 39 percent of business owners belonged to business organizations, compared to 9 percent of non-business owners.
most for the community is create more jobs. I’ve talked to a lot of different business owners about it, and some agree and some disagree...I would do anything for the town, you know, anything they’d ask. And I think that’s another way I can give back is when the city’s economic development director brings in business owners that are potentially looking at coming to Berlin, I feel like my way of giving back is to just put on the show, and then tell ‘em how good it is, you know what I mean? And maybe I do more good doing that than I would sitting at the Chamber of Commerce meeting figuring out how to get more people on Main Street because I don’t have any idea when it comes to that, you know?

A downtown merchant stressed that the decision to locate his business in a lower-traffic, less visible, and more run-down section of downtown Berlin was his way of bringing additional benefit to the community:

*I think me being right here with this business, is a statement in itself in that I could have been on Main Street over there. There’s plenty of places for rent, and I’m here. I chose to be here on a side of the street that is not considered Main Street, even by its Main Street director. My being here with this business, and my interest in being involved with what’s going on locally and stuff...I think it’s just a way of being involved at more than one level.*

On the other side of the spectrum, when asked why she was so highly involved with local organizations, another downtown merchant stressed that visibly working for change in the community was good for her business:

*Mostly I do it to transform it, and also business-wise it’s a smart thing to do. I did community work before I bought the store, so that was not new to me. But I do it because, number one, it’s good for the business—for them to see me out there, to see that I’m trying to make the community better. But I do want the community to get better. I just care, you know, I just care. I just want it to be, like I said, a better place for my grandchildren and for my kids.*

However, the passage above also expresses the sincere desire to see the community improve for its own sake, and emphasizes the embeddedness of small businesspeople in social networks. Related to this point, CERA Survey data also indicated that business owners in Coos and Oxford counties were more likely than non-business owners to be
from the region originally, were more optimistic about the future of their communities, weighed employment and job concerns more heavily in their decisions to stay in the area, and were more likely to say that people in their communities trusted one another and can work together effectively.\(^72\)

This sense of mutual benefit between business and community, combined with a real desire on the part of businesspeople to see the community become a better place in which to live, was also revealed in the actions of several groups of local businesspeople. For example, in 2007 a group of eight local businesspeople and professionals, most of whom were closely affiliated with the city’s Main Street Program and seven of them Berlin natives, formed a limited liability corporation with the goal of stimulating private investment in the downtown area. The group purchased a mixed-used building and renovated it, the work being done by several local businesses and completed in mid-2009. The group planned to then sell the building and renovate another property in the downtown area (Tetrault 2009i). Helping to facilitate this activity was the passage of the city’s Community Revitalization Tax Relief Incentive in April 2007, which provides a seven-year tax break on any increases in valuation brought about by improvements to buildings in downtown Berlin. Of course, this investment did not happen out of pure altruism; it was also designed to be a profitable venture. However, the revitalization of downtown retail and residential spaces was sorely needed, and the investors expressed their sincere goals of improving the downtown area.

\(^{72}\) However, these differences were not statistically significant.

But perhaps the most visible ways in which the small business community has shaped the course of redevelopment since the mill closure revolve around the two local elections that have taken place since 2007. These two events represent occasions on which competing discourses about the economic future of the community, and divergent visions of redevelopment of the mill site, became highly visible.

The 2007 Election and Citizens for a New Vision. In mid-2007, a local group called Citizens for a New Vision (CNV) was formed in opposition to Laidlaw’s proposal to adapt the recovery boiler to biomass electricity production. According to an October 2007 press release from the group announcing that they had obtained 176 signatures on a petition against Laidlaw’s project:

Citizens for a New Vision is a group of Berlin residents and business owners who want to ensure a bright, clean and prosperous future for Berlin, NH. The group includes local merchants, residents, and civic leaders who see the appropriate use of the mill site as key to their city’s success in the 21st century (citizensforanewvision.com). The group emphasized the need to find alternatives for “best-use, sustainable, redevelopment of the site after carefully considering the social, economic, and environmental impacts of the various alternatives” (Manikian 2009). According to the organization’s current website, the group was “established to provide a voice for appropriate alternative development of the former Burgess Mill site in downtown Berlin” (cfnav.com). Importantly, the group was not formed in opposition to biomass energy development itself, but to the industrial redevelopment of the mill site.

The rhetoric of the group centered on a new image and identity, and the need to be proactive and unconventional in finding developers with plans alternative to biomass.

73 This website no longer exists.
The group’s vision of the future of the city centered on shifting its image away from that of a mill town, toward something closer to a tourist destination. For the group, the removal of the last smoke stack and the recovery boiler would go a long way to changing the city’s negative self-image and its external image, and getting away from what they perceived to be an outdated, 19th-century model of development in which a heavy industry is located in the center of a community. In the middle of 2007, the vast majority of the city’s roughly 25 downtown merchants supported CNV in their opposition to a biomass facility on the mill site.

Five of my respondents, four of them small businesspeople, were either formally associated with CNV or were outwardly supportive of the group. A downtown merchant expressed his opposition to the location of Laidlaw’s project, and not biomass itself:

I’m not in opposition to the biomass plant, and I don’t think anybody that I’ve talked to is opposed to it. They’re just saying, ‘not there.’ Just... anywhere but not there. It doesn’t need to be there. And it strikes me as interesting that the people of this community see the potential in that site, that city hall doesn’t.

These comments point to a fundamental disconnect between the sitting mayor and council, who wholeheartedly supported Laidlaw’s proposal, and what these respondents perceived to be the wishes of the majority of businesses and residents in the community. The sitting mayor, a Berlin native who had been in office since 2000, was an employee of Public Service of New Hampshire, a subsidiary of the Fortune 500 energy company Northeast Utilities. A professional and supporter of CNV talked about his frustration with the sitting mayor and council’s approach, and the opportunities for alternative redevelopment that would be curtailed by a biomass plant on the mill site:

The demolition company was approached by the power company, Laidlaw Energy, and they made an offer on a big boiler and a three hundred foot...
stack, and the demolition company accepted it. Now, that is not in our best interest I don’t believe. But city government immediately muckled onto it, because it meant, there again, it’s the same mentality, ‘we’ve got to hang onto it, and it’s gonna be taxes.’ And it’s driving the thinking of mayor and council. And nobody wants to take the time to really study the issue of, how many other doors is that closing? And how can we reinvent ourselves? By keeping a hundred and twenty-foot boiler in the middle of town? That’s what’s there, a three hundred foot chimney. I mean, you’re not gonna build a hotel next to it, you’re not gonna build a shopping area next to it, a lot of things you’re not gonna do because it’s there. And it’s gonna have some environmental issues surrounded...but we can’t even have the conversation, mayor and council have decided that we don’t even want to have a public discussion about this. They think, and they haven’t even done the math, but they think they’re gonna do about a million to a million and a half in taxes. And that’s driving the thinking, or the lack of thinking. So it’s a frustrating...it’s very frustrating.

The 2007 election thus became the focal point of the group’s efforts; individuals affiliated with the group mounted campaigns for mayor and several city council seats. A local businessperson talked about the need for change in city government, and the opportunity to pursue a different economic base:

What I see is an obvious lack of leadership in city government. No one’s taking the bull by the horns, and no one’s coming forward to actually talk about these things. They’re just saying ‘yup, we’re gonna have this biomass plant, we’re gonna have it in the middle of town.’ Let’s do some homework, some research. Some of us are doing that. Local government is not taking any leadership roles at all. We should be trying to reinvent ourselves and instead we’re letting things happen instead of taking a proactive approach. So, unless we do take some sort of an organized effort to try to change what we’re doing, I see us with a biomass plant in the middle of town, and not much has changed. I would like to see the mill site redeveloped into something that, um...gives us a different economy. You know, something that, maybe...a five-star hotel, a resort area...um...there’s many reasons for people to be coming up to the North Country.

Leading up to the 2007 election, the sitting mayor stressed that the mill site was private property, and that if the city attempted to rezone it as non-industrial, it would set the city up for a possible lawsuit (Tetrault 2007c). But in addition to espousing an
opportunity for the community to become a different place, the city’s environmental past provided rhetorical fodder for CNV, which commonly invoked the negative aspects of community identity discussed in Chapter 4. For example, at a November 2007 public hearing on the future of the mill site, a representative of the group repeatedly referenced the negative external image of the city, quoting several news stories that depicted Berlin as a grim, polluted place.

The CNV-supported mayoral candidate, an engineer at a local manufacturing firm, won the early-November election in a landslide victory receiving 71 percent of the vote against the incumbent’s 23 percent (Tetrault 2007a). About 45 percent of voters turned out, a marked improvement over the 13 percent turnout in 2005’s uncontested race (Tetrault 2007b), but not as high as the 48 and 56 percent seen in 2001 and 2003, respectively (Lyons 2009c). Five new candidates won seats on the eight-member city council, four of them CNV supporters. In his inaugural address, the new mayor reiterated that the key to the future of economic development was the mill site:

Of course, the greatest potential lies in the future development of the former pulp mill property. We cannot take a wait and see attitude with this property. We must take the initiative to reach out to the current landowners and try to find mutually beneficial paths forward. The end goal of all this is to create an environment here locally that can encourage our children to stop joining the exodus of young people that has gone on here for generations (Berlin Daily Sun 2008).

In keeping with CNVs opposition only to the location of Laidlaw’s proposed project, and not biomass energy itself, the new mayor and council repeatedly expressed support for Clean Power Development proposal for a smaller biomass facility which would be located outside the downtown area, adjacent to the city’s wastewater treatment plant near the Gorham line.
However, just as the city’s environmental past provided a rhetorical base for arguments about the need to reinvent the community, it simultaneously made it difficult for CNV or the new administration to effectively articulate a precise new vision for the mill site. As noted in Chapter 5, the specter of ground pollution on the mill site colored many of my interviews, and respondents often qualified their visions of future development by referring to the unknown amounts of contamination buried there. For example, a downtown merchant expressed her thoughts on Laidlaw’s proposal:

*I'm totally against it. I would like to see, I don't know if it's feasible to do homes there because of what could be in the soil. However, you could have a college, you're paving over them, you could have an arts center, you could have a hotel, you could have a walking path. I mean, you know, nothing where people would be digging in the dirt, 'cause I'm sure there's stuff in there. I'm not gonna say there's nothing in there after all those years, but there are some things that, you know, would have a top ground that whatever's in the soil would not be a problem. Um, the college would be willing to come down to that site.*

Another downtown merchant stressed the need for long-term thinking with respect to the mill site, and the long time horizon of alternative redevelopment:

*There's two sides of the spectrum. You have the side that knows that probably the only option for us is biomass because the site is so hazardous. So they think that if we don't jump on this, what happens when that site's empty for ten more years? And I see a different side. I see the side that, if you get rid of that, you can work on cleaning it up and making it ready for anybody, whether it takes 10 or 20 years. You need to be willing to withstand the long term. And they speak on behalf of tax dollars, which is what we need, I know we lost a lot of tax dollars and the taxes in Berlin are high. But what they don't see is that the negative impact that such a facility could have. All of our property just went up in taxes. Why did they go up? They went up for the sense that there isn't an eyesore, there isn't a stinky mill in the middle of Berlin. And then what happens when that biomass comes in? You know, we don't know what that's gonna look like. Laidlaw draws a nice pretty picture, makes it look all nice. Well, their mountains were wrong; where's the house that sits right behind the building? Where's the Croteau Agency that's right there? You know, that's what you don't see. That's what I worry about.*
At the same time, while the threat of unknown quantities of buried contamination inhibited the development of alternative visions and plans for the space, the site’s environmental history combined with other powerful themes to provide a strong rhetorical base for arguments in favor of keeping the site industrial. For example, at a late-November 2007 public hearing on the future of the mill site, a local attorney representing then-owner North American Dismantling (NAD) repeatedly mentioned the polluted nature of the site, the extent to which the operation of Fraser’s paper mill in Gorham depended on clean water delivered via a water filtration plant still located on the site, and the fact that NAD had invested a large sum of money to take control of the site, which was entirely privately owned. At the same meeting, a local business owner with ties to the forest products industry, and a proponent of Laidlaw’s plan, talked about the difficulties Berlin would face in trying to redefine itself as a tourism destination, making specific reference to the Chlor-Alkali Superfund site:

They say superfund sites, these other cities have cleaned them up. Yes, they have. Number one, they’re a lot closer to interstates, and it’s easier for people to get there. We’re 40 miles from an interstate. It took Lincoln 20 years to convert from a mill town to a tourist attraction, and they had Loon Mountain and (Interstate) 93. We don’t have either one of those. The point I want to make is they’re saying 2012 to 2020 to clean up that site. And that’s just the only known site that has some serious contamination. There are at least 5 other sites on the existing 120 acres that have PCBs, and who knows what will happen when you start digging with an excavator, down 15 feet to clear out the base to put up a 4 or 5 floor building, and you run into a barrel that’s there? You don’t know what you’re gonna hit. The site is not pristine. There are problems that could arise that could change the whole course of any type of tourism development.

In these ways, it was quite easy for Laidlaw proponents to say what the mill site should become, but very difficult for opponents to say what the site could become. CNV or the new administration never articulated a definite vision for the mill site between
2007 and 2009. The administration’s opposition to the Laidlaw proposal consisted of writing letters to the state’s Site Evaluation Committee, and verbally reaffirming its opposition to that project while supporting Clean Power Development’s biomass proposal, even as Laidlaw purchased the property from NAD in January 2009. At no point did the administration take concrete steps such as trying to purchase the property from NAD, taking it by eminent domain, re-zoning the property as non-industrial, or pursuing legal action. However, when Laidlaw attempted to convert a natural gas-powered boiler in small-town Ellicottville, NY to woody biomass energy production, that community reacted with several official roadblocks, including denial of Laidlaw’s request to convert the facility to biomass. Laidlaw filed a $10 million lawsuit against the town, which spent hundreds of thousands of dollars in legal fees fighting the company, and was ultimately successful in doing so. Perhaps tellingly, Ellicottville is a town of 2,500 with a well-developed local tourism economy and is home to many relatively affluent in-migrants (Liebowitz 2008).

![City of Berlin Seal](image)

**Figure 7-7:** Original and new versions of the official city seal of Berlin.

Yet, the administration did pursue some official action, albeit of a symbolic nature, with regard to the mill site issue. In July 2009, one of the new city councilors brought up the idea of changing the city seal to move away from Berlin’s image as a mill town (Tetrault 2009e). After several discussions, in late 2009 the council voted to change
the official city seal, removing the smokestack and inserting mountains into the background as depicted in Figure 7-7. Councilors cited Berlin’s reputation as a smelly, smoky community and the need to portray the city in a different light in order to move forward economically (Tetrault 2009d). The move was a fairly controversial one. Between December 2009 and January 2010, four letters to the editor on the city seal issue appeared in the Berlin Daily Sun, all of which took exception to the council’s decision to remove the stack. Two of the letters objected to the expense required to switch over, and two objected to the change on the basis of the stack’s importance to the community’s identity.

The 2009 Election and Green Light Berlin. Roughly a year after the formation of Citizens for a New Vision, another local group, Green Light Berlin, was formed by a separate cadre of local businesspeople. While CNV was composed primarily of businesspeople with economic interests based in retail and real estate, this group was formed in support of Laidlaw’s biomass proposal, and the three founding members represented the forest products industry, manufacturing, and energy industries.

According to their website, the group was formed to represent:

A group of North Country citizens concerned about the economic future of our region. We believe that the City of Berlin should work closely with developers interested in converting the Fraser mill site into a biomass power plant that will create jobs, stimulate our economy, expand the tax base, and make the North Country a national leader in generating clean renewable energy (citythattreesbuilt.com).

The group stressed the need for the city to be realistic in its assessment of what is possible on the industrial site, framing the recovery boiler as an asset, and how a biomass facility would fit with the character of the region. The group circulated a petition in early 2009 in support of Laidlaw’s project, and focused on biomass energy as a renewable,
green industry. In April 2009 a prominent local businessman in the manufacturing sector who had been instrumental in the establishment of CNV withdrew his support for the organization, citing the need to work with Laidlaw, rather than against them, for the benefit of the community since the company had closed on its purchase of the recovery boiler, and stressing the fit of biomass with the character of the region. His primary goals were working to ensure the attractiveness of the facility, moderating trucking hours to minimize neighborhood disruptions, and finding suitable uses for the remainder of the property, since Laidlaw’s project would occupy only the northern half of the 120-acre site (Manikian 2009).

In October 2009, a former mill worker and city councilor, and current County Commissioner announced his candidacy for mayor, citing the council’s removal of the stack from the city seal as the turning point in his decision to enter the race, and characterizing the removal of the seal as disrespectful to the people of the proud, working-class community (Tetrault 2009f). During his earlier 16 years on the city council (from 1991 to 2007) the candidate had been involved in the efforts to bring the state and federal prisons to Berlin, as well as the creation of Jericho Mountain State Park. A staunch public supporter of Laidlaw’s proposed project, he stressed a personal record of fiscal discipline, and publicly opposed a $4.3 million capital improvement bonding project undertaken by the sitting mayor and council (Tetrault 2009o). He had also publicly voiced opposition to the Coos County Branding Project (outlined in Chapter 4) which was aimed at expanding the regional tourism economy (Tucker 2009b), and opposed the formation of a local group aimed at ensuring local benefits of renewable
energy development in the region (Tucker 2010). However, he publicly supported the city’s motorized recreation-oriented 21/21 initiative.

Along with the opposition candidate for mayor, three other residents entered city council races in an aligned campaign, on a shared platform based on rhetoric of job creation, the need for tax revenue, a commitment to fiscal discipline, and community pride and identity as a blue-collar town. This shared ticket was publicly endorsed by at least one of the founders of Green Light Berlin. The group invoked the city seal issue, as well as images of urban blight during the 2009 campaign (as shown in Chapter 4). The sitting mayor, who had entered office in 2007 with the support of CNV on an anti-downtown biomass platform, continued to publicly oppose Laidlaw’s proposal, citing the possibility of other, higher and better uses for the site, and the need to take time and evaluate other potential proposals before settling for the Laidlaw project. He expressed pride in having pushed through the capital improvement bonding effort, citing the need for investment in the city’s physical infrastructure, and he continued to publicly support Clean Power Development and the city’s 21/21 initiative (Tetrault 2009a). In a public debate leading up to the election, the sitting mayor reiterated the importance of the mill site to the city’s future:

*I just think that ultimately, that 120-acre parcel that’s in the center of this city, and that’s without a doubt, for generations to come, gonna determine the flavor of this city, we need to do what we can to have a say in it and to make sure in the long term that it’s gonna be right for the city of Berlin.*

In an apparent reversal of the community’s stance on the issue of biomass on the former mill site, the pro-Laidlaw candidate won the November 2009 election by a 60/40 margin in which 40 percent of voters turned out (Lyons 2009c). Two of three councilors who ran on the same ticket as the new mayor also won seats, among them the former
mayor and staunch Laidlaw supporter who had lost the mayoral election in 2007. The new mayor cited the election as "about the blue-collar people in this community speaking out" (Tetrault 2009h p. 1). In his inaugural address, he cited both the Laidlaw and Clean Power Development biomass projects as an opportunity for Berlin to become the "green capital of New Hampshire," and went on to talk at some length about the importance of the city's seal:

I will ask the city council collectively in the near future to reconsider its vote to change the City Seal. I'm not asking for the reinstatement because I want it, I ask for the hundreds of Berlin residents, who on a daily basis, want it back. The seal is not about the stack or the pollution, nor is it about ridding ourselves of the smell that once permeated our city. The stack represents why we are here. Who we are as a people. Who we once were as a valley of cutting edge technologies in many fields, not just paper. The Paper City as we are still known in some circles, represents the dozens of hockey championships, and a work ethic renown throughout the East Coast. Our resiliency to one economic body blow after another, and somehow, through it all, we’re still standing to fight another day. Berlin is a beautiful place to live, physically and spiritually, that we would not have had the luxury to experience if it were not for the stack...Berlin was and is a beautiful city, a community of many nationalities, backgrounds and aspirations. The one common thread? The stacks that once adorned our skyline (Berlin Daily Sun 2010 p. 11).

The new mayor immediately pledged to restore the stacks to the city seal, again characterizing their removal as a slap in the face to many second-or third-generation papermakers in the city, and indicated that his top priority was to assist the Laidlaw project in coming to fruition, followed by holding absentee landlords accountable for blighted properties (Tetrault 2009g). However, it is not clear that the new mayor has tools at his disposal for the facilitation of the Laidlaw project any more than the former mayor had for the project’s curtailment.
Conclusion

The 2009 election left the city with an ardent supporter of Laidlaw’s project as mayor, and a city council split roughly half-and-half between supporters and opponents of the proposed biomass plant on the former mill site. In December 2009 the company filed its application for a permit to construct and operate the facility with the state of New Hampshire’s Site Evaluation Committee, bringing the project one step closer to fruition. While in 2007 CNVs progressive language of opportunity for community reinvention and redefinition resonated broadly with the city’s electorate, in 2009 language of job creation, fiscal discipline, and an industrial blue-collar community identity brought yet another change in mayor and council. Importantly, just as the results of the 2007 and 2009 elections suggest a pattern of early progressivism and vigorous opposition to the industrial redevelopment of the mill site followed by a gradual acquiescence to the seeming inevitability of Laidlaw’s project, so did a temporal trend in my interview data. Five of my first eight interviews in Berlin, all done in 2007, were with adamant opponents of biomass on the mill site. But none of my final nine interviews, done in 2008 and 2009, were with individuals ardently opposed to the project. Some expressed misgivings, or were conflicted, but none viewed it as a fundamental misuse of the space. Of course, this may well be a product of my sampling method, in which early respondents provided me with the names of three others to talk to. But even so, this trend in respondents’ stances on the reuse of the mill site coincides with a general trend toward acceptance, and even endorsement, of downtown biomass at the community level.

But underpinning this public debate and apparent referendum on the economic future of the community is Berlin’s relatively strong civic culture, including a relatively
open power structure as revealed in the 2007 and 2009 elections. A historically strong yet currently endangered blue-collar middle class upheld this set of resources, and today the middle class in Berlin is largely composed of service-sector workers. The strength of civic culture in Berlin isn’t immediately visible in the words of my respondents, but when combined with other ethnographic work and placed into comparative context via survey data, the degree to which trust, cohesion, and openness predominate in Berlin is clear. At the same time, respondents perceived some problematic elements of civic culture such as an aversion to risk and a lack of vision, which they traced to the mill. The civic community literature’s emphasis on the beneficial effect of small business on civic culture suggests that places dominated by a single industry or employer tend to have less vibrant ethics of engagement, and to some extent this is what is found in Berlin. Nonetheless, while civic culture in and of itself has not shaped the course of redevelopment, it has formed an arena in which change can be shaped by competing groups within the community. Likewise, civic culture itself has not been (and perhaps cannot be) transformed into resources that address the fundamental need of new economic activity in Berlin. As Schulman (2000) asks, “what can civic ties possibly accomplish if residents of a community have declining incomes and no jobs?” (p. 36).

To these ends, in the wake of the mill closure small businesspeople with interests related to fostering a consumption-oriented economy in Berlin were able to mobilize in opposition to industrial redevelopment of the mill site, and shift the composition of mayor and council to reflect these interests. But in 2009, another group of businesspeople successfully mobilized on the basis of the need for jobs and tax revenue, and the opportunity to continue the city’s productivist, industrial identity. Both sets of
small business owners were equally committed to the present and future well-being of their community, and important in determining the course of change in Berlin. My findings from interviews and the ethnographic account of the 2007 to 2009 period presented above, then, are largely consistent with the civic community perspective. However, their actions were largely products of their particular sets of economic interests. This finding, while not exactly inconsistent with the civic community perspective, calls into question Tolbert’s (2005) assertion that the relationship between local capitalism and community well-being is premised on less-than-rational economic behavior. While the commitment of small businesspeople to their community appears to be a general phenomenon, the specific ways in which that commitment is exercised, particularly it relates to the active shaping of redevelopment, are not.
CHAPTER 8
CONCLUSION

Essentially, this year’s election is a referendum on the city’s future. Berlin voters will have a choice and a say on what may well determine the city’s economic destiny for years to come. Their choice, however, will bring no assurance that the city will have a clearly defined future (Walsh 2009b p. 4).

When I began my field work in Berlin during the summer of 2007, more than a year after the pulp mill closed, I thought that in relatively short order I would understand the course of redevelopment there. In hindsight, almost three years after my first interviews, this was a naïve outlook on the study of community change. Perhaps the most obvious finding of my analysis, but one I think worth calling attention to, is that the reinvention of Berlin is at present an ongoing process that will not be resolved for some time, regardless of the ultimate course it takes. The temporal scale of community reinvention does not lend itself to measurement in months or even years, and is perhaps best measured in decades. For example, in 1985 the Sprague Electric factory in North Adams, Massachusetts closed, marking an end to more than a century of industry at the city’s center. Twenty-five years later, despite the development of the world’s largest contemporary art museum and the presence of a four-year college, a new community identity—economic or social—has still not emerged.

Further, because of its long duration, the larger historical context of community redevelopment is in a state of constant flux. As perhaps the most obvious example, when I began studying change in Berlin the most recent economic recession was yet to unfold.
Disruptions in financial markets have likely slowed a number of projects there, most notably the three pending biomass projects. As it continues to play out in the coming years, Berlin’s reinvention will be influenced by unforeseen contextual shifts in a number of arenas such as macroeconomic dynamics and national and state-level policy. However, while the process of redevelopment is by no means complete in Berlin, some primary themes have indeed emerged in the immediate post-mill years. Also clear are the ways in which the course of redevelopment has been profoundly shaped by elements of Berlin’s place character—and how the decisions of the past have constrained the city’s options for the future.

In Chapter 1, drawing on work from sociology, geography, economics, and other disciplines, I outlined a general mode of change in high-amenity rural communities. The “post-productivist transition” thesis suggests that the economies of such places, as they transition away from traditional resource-based industries and move through a period of economic decline, become increasingly oriented toward recreation, tourism, leisure, and other consumption- or culture-based forms of economic activity. At the same time, emerging scholarship on the theme of sustainability in development suggests an alternative to this production—consumption trajectory in which the economic future of rural communities is increasingly based on industries like renewable energy, and not necessarily tied to consumption.

How then can Berlin’s recent experience be characterized? The city has certainly experienced a period of profound economic disruption and community decline in which issues of population decline, blight, and fiscal stress have been significant. And four years after the mill’s closure, the city has pursued opportunities based on the surrounding
forest resource’s worth as aesthetic and recreational amenities—but only to a degree.

Where once the city was known and defined as a paper mill town—a space of production—the place is today still very much in search of a new identity. In fall 2008, a local professional talked about the need for a new identity as the biggest issue the place is faced with:

_The community’s always struggled with—when it was a mill community that’s what its identity was. And as the mill industry began to subside the community really developed, I think, a negative image of itself. And we used to talk about this...in the effort of trying to develop a vision statement for the city it was just very apparent that there was kind of a...I’m trying to think of the right way to say this...it was a city wide—individual by individual it would be different—but there was a collective negative image. And I think to some degree now that the mill is gone the city recognizes that it’s got an opportunity to reinvent itself and change its image. But it’s still struggling with that because you’ve got the biomass project proposed for downtown, and there are those who would see that perpetuating the image of a mill because it’s a heavily industrial facility with a smokestack. Yet the city’s struggling economically, and that represents money to the city. So I guess we’re in a state of flux right now, trying to figure out what we want our identity to be._

As it stands today, the course of redevelopment in Berlin has not followed the post-productivist transition, despite efforts at the city level to cultivate a local tourism economy. Berlin is no longer fundamentally a space of production, but it is clearly not a space of consumption, either.

Table 8-1 lists the city’s largest employers in 2008. Only two of these firms, a steel fabrication facility and a factory which produces the “little tree” air fresheners seen dangling from rear-view mirrors across the nation, immediately tie the city back to its productivist roots. At the same time, none are consumption-oriented, at least in the conventional tourism or leisure sense of the word, and none represent the creative

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74 However, Markusen (2007) defines the local consumption base more broadly, as the portion of economic activity sold to local residents. By her definition, at least four of the city’s largest employers are squarely
economy as it is commonly conceived. What is immediately apparent is the extent to which the local economy is now heavily based on the non-profit and public sectors. In 2008 the hospital, various health care firms, school system, state prison, and city government accounted for roughly 1,300 of 3,900 jobs in the city. While no data are readily available today, these figures are likely the same in 2010. But by the end of the year, when the federal prison comes on line its 300-plus jobs will place it in the second position on the list.

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<th>Company/Business</th>
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<tr>
<td>Androscoggin Valley Hospital</td>
<td>Health care services</td>
<td>409</td>
</tr>
<tr>
<td>City of Berlin School System</td>
<td>Education</td>
<td>280</td>
</tr>
<tr>
<td>Northern NH Correctional Facility</td>
<td>Correctional facility</td>
<td>198</td>
</tr>
<tr>
<td>Isaacson Steel</td>
<td>Steel fabricators</td>
<td>151</td>
</tr>
<tr>
<td>City of Berlin</td>
<td>Municipal services</td>
<td>125</td>
</tr>
<tr>
<td>Northern Human Services</td>
<td>Behavioral health services</td>
<td>100</td>
</tr>
<tr>
<td>Androscoggin Valley Home Care Services</td>
<td>Home care</td>
<td>80</td>
</tr>
<tr>
<td>Coos County Family Health Services</td>
<td>Health services</td>
<td>80</td>
</tr>
<tr>
<td>CarFreshener</td>
<td>Manufacturing</td>
<td>75</td>
</tr>
<tr>
<td>Northway Bank</td>
<td>Banking services</td>
<td>65</td>
</tr>
</tbody>
</table>

Source: NH Economic and Labor Market Information Bureau Community Profiles

Table 8-1: Largest employers in Berlin, 2008.

Table 8-2 depicts the primary redevelopment-oriented projects that have emerged in Berlin since the mill began to wane in the early 2000s, classified on five dimensions. *Type* indicates whether the project is primarily oriented around stimulating new economic activity (i.e., creating jobs) or addressing other community needs not fundamentally economic in nature. *Response to* indicates whether the project is primarily oriented toward taking advantage of new opportunities, or focused on addressing local problems. *Status* indicates whether the project has been proposed, exists, or is ongoing. *Drivers* indicates the elements of Berlin’s place character that are most salient in the project’s consumption-oriented. However, I follow the literature outlined in Chapter 1 and focus on recreation, tourism, and leisure in discussing the extent to which Berlin has followed the post-productivist transition.
genesis, regardless of whether this impetus is rooted in a problem or point of opportunity. Finally, *orientation* indicates whether the project has grown primarily out of local efforts, or primarily represents involvement, interest, and control on behalf of non-local entities. Together, these projects and their position on each dimension provide an overview of recent redevelopment activities in Berlin, and a basic look at how and why *place* matters in patterns of community change.

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>TYPE</th>
<th>RESPONSE TO</th>
<th>STATUS</th>
<th>DRIVERS</th>
<th>CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass Energy</td>
<td>Economic</td>
<td>Opportunity</td>
<td>Pending</td>
<td>Built &amp; Natural Environments</td>
<td>Non-Local</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Small Business Identity</td>
<td></td>
</tr>
<tr>
<td>Motorized Recreation</td>
<td>Economic</td>
<td>Opportunity</td>
<td>Existing</td>
<td>Natural Environment Identity</td>
<td>Mixed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Local Gov’t</td>
<td></td>
</tr>
<tr>
<td>Prisons</td>
<td>Economic</td>
<td>Opportunity</td>
<td>Existing</td>
<td>Local Gov’t Natural Environment</td>
<td>Non-Local</td>
</tr>
<tr>
<td>Housing</td>
<td>Community</td>
<td>Problem</td>
<td>Ongoing</td>
<td>Local Gov’t Built Environment</td>
<td>Local</td>
</tr>
<tr>
<td>Downtown Redevelopment</td>
<td>Community/Economic</td>
<td>Problem</td>
<td>Ongoing</td>
<td>Local Gov’t Small Business Built Environment</td>
<td>Local</td>
</tr>
</tbody>
</table>

Table 8-2: Summary table of main redevelopment projects in Berlin.

As I have emphasized throughout this thesis, biomass energy production has emerged as a dominant theme in Berlin’s near-term economic future, and is the immediate future of wood-based industry there. The fixed capital embodied in the recovery boiler, an abundant supply of low-grade wood, the blue-collar and industrial identity of the community, and an industrially-oriented small business contingent have
combined to bring biomass development, undertaken by non-local actors, to the front of new economic activity in Berlin. Motorized recreation has also emerged as a dominant theme in the city’s reinvention, driven primarily by the extensive networks of trails on either side of the city, an industrially-managed forest landscape compatible with motorized forms of recreation, the longstanding popularity and acceptance of motorized recreation around the city, and effort on the part of the city administration. While motorized recreation development involves the linking of existing trail networks via city streets and services provided by local businesses, it is also heavily dependent on non-local Jericho Mountain State Park, giving it a mixed orientation. The state and federal prisons, while not occupying a central space in discourse about reinventing the local economy, now underpin the local (and regional) economy to a fairly large degree. Prison development in Berlin has been driven primarily by the availability of land and the active recruitment efforts on the part of the city administration. For better or worse, these themes represent three new sets of economic opportunity for the community, and represent enterprises that are or will be primarily controlled by non-local entities.

On the problem-and more community development-oriented side, the city’s efforts to address blighted housing form a set of ongoing projects driven primarily by physical decline, and local government’s direction of resources to this issue. Also in response to issues related to physical decline, the redevelopment of downtown commercial and residential spaces has been primarily driven by the retail-and real estate-oriented small business community. Importantly, those redevelopment efforts that primarily embody the interests and involvement of local entities are those focused on addressing local problems. On the other hand, elements of place that represent
potentially profitable or advantageous arrangements are those that have attracted the interest of non-local entities. While this is not necessarily surprising, it suggests that the city will continue to be dominated by non-local economic interests, particularly with respect to industrial activity there. While the prisons do not represent industrial activity, they will be the city's second-and fourth-largest employers by the end of 2010, and are fundamentally non-local in terms of control. While the community was dominated by a single enterprise for more than a century, this new constellation of economically important non-local entities suggests that as much as things have changed in terms of non-local control, they have largely stayed the same.

Together, the elements of redevelopment depicted in Table 8-2 indicate that Berlin has not experienced, nor is it poised to experience, the post-productivist transition to any great extent. Redevelopment is not generally following that course, despite a strategy to cultivate a local tourism economy based on motorized recreation. Instead of a pronounced turn toward tourism and consumption, the city is instead seeing the emergence of new, largely blue-collar enterprises in the field of renewable energy production, and the expansion of prisons as a key component of the local economy.

While the state and federal prisons are large employers and have blunted the effects of the mill's demise, they are less visible in a physical sense, and do not form a substantial component of the city's new identity, to the extent that it even has one today. At present, then, Berlin has entered a mixed phase of rural development that combines rhetoric of sustainability and "green" industry—biomass energy in particular—with forms of tourism closely related to the city's industrial past and identity, traditional vehicles of rural economic development (prisons), and a number of locally-based initiatives that are...
aimed at improving the city's built environment to make it a more attractive place to live and work.

As I emphasized in Chapter 1, change in Berlin is the product of *negotiation* and *contingency*. The analysis laid out in Chapters 4 through 7 details the precise nature of this negotiation and contingency, and shows that options for redevelopment in Berlin—ideas and possibilities of what the community could or should be—are shaped in powerful ways by the character of the place it has become.

![Figure 8-1: Overlay of development types and primary elements of place character.](image-url)
Figure 8-1 depicts five primary forms of redevelopment in Berlin—biomass energy, motorized recreation, prisons, and housing and downtown redevelopment—arranged in terms of how they have grown out of the four fundamental elements of Berlin's place character on which I have focused.

Chapter 4 shows that on the basis of historical, industrially-produced environmental harm Berlin became defined—to both outsiders and within the community itself—as an undesirable place. The community’s stigma inheres in an historical set of negative images and representations of the city that centered on the environmental effects of the pulp mill—the smell in particular. Since the 1990s, past and present environmental conditions have combined with its image and identity as a mill town to constrain tourism-based development, and have facilitated the development of biomass energy there. Some real efforts at cultivating a new consumption-based economy do exist in Berlin, though they are symbolically and practically tied to the city’s identity as an industrial community. The city’s negative image and identity created a local context in which the construction of prisons was not particularly controversial, as it could not have represented a threat to the city’s image. At the same time, the community has focused much energy and resources on addressing the substantial blight it has experienced, a set of issues that have compounded its negative image. Here, by extending the environmental stigma framework to consider the symbolic and developmental manifestations of the long-term and real environmental harm extant in Berlin for more than a century, I situate my analysis squarely within environmental sociology.

Chapter 5 shows how the city’s built environment embodies both its industrial past and its deindustrialized present. As the mill and community declined, the downtown
and surrounding residential areas became blighted. These issues of physical decline exacerbated a sense of urgency in terms of new industrial development in the community; not only does the city need to replace the jobs lost when the pulp mill closed, but to restore the industrial tax base as well. The traction of Laidlaw’s plan for biomass energy production on the former mill site is in part a product of the interaction between several elements related to the city’s built environment: the recovery boiler itself; the issues of blight and fiscal stress outlined above; and the substantial soil contamination on the mill site which shapes ideas and discourse about what is or is not possible there. Next to a heavily industrialized Androscoggin River corridor almost antithetical to recreation-oriented development, redevelopment in the heart of Berlin is currently unfolding along industrial lines.

I give attention to the role of the natural environment in the course of redevelopment in several chapters, though I focus most heavily on the structure of the city’s biophysical environs in Chapter 6. The emergence of biomass as the primary new wood-based industry in the community is linked to the structure and condition of the forest around Berlin—a relatively young, low-grade, and low-value forest. Given the historical dependence of the community and mill on low-grade wood, it is not surprising that an industry predicated on a supply of low-grade wood has emerged there. Wood-based economic development appears to be unfolding neatly in line with the historical and present condition of the community’s resource base. Historical control and management of the forest has also created an intensively-harvested forest environment highly compatible with motorized recreational activity. The natural environment has also contributed to the course of redevelopment in a more straightforward way: the
availability of suitable land made the location of the state and federal prisons in Berlin possible.

While biomass energy development is predicated on rhetoric of sustainability in the context of historical patterns of resource use, its proposed scale represents a real threat to the integrity and sustainability of the city's surrounding forest resources. My overall conceptual approach to change, a focus on the relations between the community and its physical surroundings contribute to the new "Critical Human Ecology," particularly with respect to the relationship between the community and the forest resource. As York and Mancus argue, both natural systems and forms of social organization matter in understanding ecological and social change (York and Mancus 2009). This chapter also demonstrates the utility of a political ecology approach for understanding change in first-world resource-based communities.

As is the case with attention to the natural environment, civic culture, government, and the small business community are present throughout my analysis. However, Chapter 7 shows how the 2007 and 2009 municipal elections represent a pattern of early progressivism and vigorous opposition to the industrial redevelopment of the mill site followed by a gradual acquiescence to the seeming inevitability of Laidlaw's project. Underpinning this public debate and apparent referendum on the economic future of the community is Berlin's relatively strong civic culture, including a demonstrably open power structure. In the immediate wake of the mill closure, small businesspeople with interests related to fostering a consumption-oriented economy in Berlin were able to mobilize in opposition to industrial redevelopment of the mill site, and shift the composition of mayor and council to reflect these interests. Citizens for a
New Vision’s progressive language of opportunity for community reinvention and redefinition resonated broadly with the city’s electorate in 2007. But in 2009, another group of businesspeople successfully mobilized on the basis of the need for jobs and tax revenue, and the opportunity to continue the city’s productivist, industrial identity. This time, language of job creation, fiscal discipline, and an industrial, blue-collar community identity—combined with the unknown extent of ground contamination on the mill site—brought yet another change in mayor and council. Here, I have hoped to make a contribution to the civic community literature by focusing on the differentiation extant within a local small business community. While the 2007 and 2009 elections were largely about the suitability of biomass as the economic future of the community, civic elements of Berlin’s place character have also been instrumental in motorized recreation development, the recruitment of prisons, and addressing issues related to blighted residential and commercial spaces.

**Bringing a Focus on Place into the Study of Community Change**

In the ways summarized above, the course of redevelopment and change in Berlin has been profoundly shaped by the community’s particular combination of, in Paulsen’s (2004) terms: geography, history, economy, demography, politics, organizations, culture, and aesthetics. For Paulsen, the ability of place character to direct the course of development in a given locale is precisely why it must be incorporated into analyses of community change. As she argues, the issue of (re)development is especially suited to a place-centered approach because it generates public discourse—talk embodying character and articulating identity—on what a given place is and should be. Importantly, the ways
elements of place combine with one another deserve as much attention as any single local force, event, or entity:

We can see first how understandings of place orient locals toward these events and forces in distinct ways, as places will differ in terms of what locals view as problems and opportunities. Second, we can learn how power works to affect locally specific responses, including who is included in decisions, how resources are mobilized, the role of organizations in social action, and the like. Finally, we can learn the distinct ways that this force connects to other elements within a place, for example, the way that a new industry links to government, culture, immigration, or community organizations (Paulsen 2004 p. 258).

Through my field work, analysis of secondary data, and other methods, I have tried to emphasize how redevelopment has been shaped by community identity, the built and natural environments, and civic elements of community, as well as the interactions between these elements of place.

Change has long been a core interest of sociology, but sociologists have tended not to focus specifically on how change can be as rooted in where it unfolds as it is in what precisely is under transformation. A decade ago, Gieryn (2000) called for sociologists to pay more attention to how places—particular arrangements of location, material form, and meaning—matter for processes of historical change.

If place matters for social life and historical change—how? Scattered literatures suggest that place: stabilizes and gives durability to social structural categories, differences and hierarchies; arranges patterns of face-to-face interaction that constitute network-formation and collective action; embodies and secures otherwise intangible cultural norms, identities, memories—and values (p. 473).

As he argued, and as my analysis shows, place deserves an ontological status alongside change, institutions, beliefs, behavior, and other categories of sociological inquiry, and can profoundly inform their interrogation. Here, I have built on Gieryn’s assertion that
“place is not merely a setting or backdrop, but an agentic player in the game—a force with detectable and independent effects on social life” (p. 466).

A focus on place can also bring together three fundamental sociological foci as they relate to continuity and change: culture, structure, and action. In my analysis, community identity and stigma can be viewed as aspects of local culture; symbolic aspects of place are central in the course of redevelopment in Berlin, from the pejorative “Stinktown,” to discussions surrounding the city seal. The city’s built and natural environments can be seen as two fundamental elements of structure on which much of the contingency stressed in my analysis hinges. Likewise, civic aspects of place and the small business community represent a particular form of action at the community level—the basis for negotiation of change. I have tried to explicate the particular forms of change and redevelopment unfolding in Berlin as products of the interaction between these three place-bound strata of social life.

**Redevelopment as Spatial Practice**

Just as the course of redevelopment has been shaped by place, my analysis shows redevelopment in Berlin to be a phenomenon fundamentally spatial in nature, oriented around positive and normative questions of the material world. The interactions between Berlin’s industrial infrastructure and its commercial and residential spaces in the context of redevelopment is illuminated by Lefebvre’s (1991) notion of the production of space—that modes of social organization fixate themselves in the material world, and are embodied in the spatial structures of place which then underpin the endurance of these modes of organization. In Berlin space has been produced by industrial capitalism, and
these spaces are in turn reproducing the historical industrial character and mode of 
organization of the community. This is revealed in the proposals and discussions 
involving the mill site, but is also evident in other residential, commercial, and tourism-
oriented forms of redevelopment. As Lefebvre contended, space is a “principal stake of 
goal-directed actions and struggles” in post-mill Berlin.

Yet, space does not determine social relations, it constrains them (Soja 1980), and an 
externally-dominated, industrial or near-industrial, productivist Berlin of the future is not 
a foregone conclusion. In Berlin, as-yet unresolved questions of economic reinvention— 
the establishment of a new local economy unlike that which has historically existed 
there—are essentially about the remaking of place, in and through space. Hence, if the 
city is to further the turn toward a consumption-oriented economy, questions of and 
conflicts over its spatial structure will necessarily arise and be resolved only through new 
spatial arrangements. To this point, while Berlin remains an industrial community, 
especially in terms of the spatial arrangements emphasized in Chapter 5, its current built 
environment is certainly not incompatible with reinvention and a new consumption-
oriented turn. Because of the industrial pattern of development and spatial organization 
centered on the mill, much of the city is walkable and comprised of densely spaced 
single-and multi-family homes, and reflects in large measure the qualities of “new 
urbanism.” At the same time, the White Mountain National Forest, which occupies 
almost half the land in the community and has at times been a source of local resentment 
due to limitations on resource use, has also protected half the city from development and 
left it with new opportunities vis-à-vis the attractiveness of the place to potential in-
migrants. Perhaps most importantly, the city has largely escaped the dominant
homogenizing forces of sprawl and big-box development, paradoxically, because of the pulp mill and its negative environmental effects. This is immediately evident on the six-mile ride from Gorham to Berlin; the town of Gorham has many national franchises and big-box stores along Routes 2 and 16, while Berlin has almost none. Perhaps, in an ironic twist, places that escaped these homogenizing forces due to their historical isolation and unattractiveness might be better poised than others to take advantage of a development climate emphasizing the attractiveness of place.

The Future of the Local Economy

But whatever the future of Berlin’s economy is, be it based on biomass and other forms of renewable energy, or on a more fundamental transition into recreation-oriented development, it represents a new relationship between the community and the surrounding environment. In one dimension, after a century of concern about environmental harm being directed at the city from outside—the Appalachian Mountain Club and Environmental Protection Agency had focused on air and water emissions from the mill—concern about local environmental issues have become more prominent from internal sources such as Citizens for a New Vision, the city administration, and the voices represented in letters to the editor in local newspapers. But this new relationship is also evident in another way more directly tied to the future of local industry. On one hand, biomass energy represents a point of environmental continuity with the city’s industrial past—taking wood from the forest and transforming it into a product for export. At the same time, on the output side it represents a completely new era in Berlin. While
biomass is by no means a non-polluting industry, it differs dramatically from the pulp mill in terms of observable and objectionable byproducts.

But maybe more importantly, to the extent that it will continue Berlin’s productivist orientation, it simultaneously represents the dematerialization of economic production there. In the realm of ecological modernization theory, this term has been used to refer to the idea that economic growth can be increasingly decoupled from material inputs (resources) and outputs (waste) via continual improvements in efficiency (Mol 1997). It has also been used to express the related idea that consumption patterns in affluent societies are becoming increasingly geared toward services and experiences rather than material goods (see Roberts and Parks 2007). But dematerialization can be used in a different way in Berlin. For more than a century, the city was defined by the industry which it was built around, and a majority of its industrial workforce identified as “papermakers.” Further, the mill required work not only in the woods, but in the pulpmaking process, and in the physical movement of its material output. Electricity, while not exactly immaterial, is less tangible, less fixed, less immediately observable than pulp or paper. Its usual mode of transportation—power lines—is simultaneously more fixed than that of commodities like pulp, and therefore more capital intensive, requiring far fewer workers on the output side. In these ways, the city’s identity is no longer tied to a material base—but it is not yet tied to an immaterial one either.

It would appear that the future economic base of the community will be based more on a constellation of various types of work and jobs, as opposed to a particular type

75 Environmental sociologists have questioned the dematerialization thesis on both the production and consumption sides. For example, York et al. (2005) find increased environmental impact in modernizing economies despite increased production efficiencies, and that the most efficient nations have the greatest impacts on the environment. From the other side, Carolan (2004) stresses the intensely material underpinnings of even consumption-based economies.
of products. The basic, though sometimes subtle, distinction between industrial mix and occupational composition is at the center of work aimed at understanding the ramifications of an increasingly services-and knowledge-dependent US economy. Twenty-five years ago, Thompson and Thompson (1985) stated the importance of focusing on activities as well as products in regional development efforts. Feser (2003) likewise views the omission of occupational measures, and labor force and human capital concerns more broadly, in research on the vitality of regional economies as a serious shortcoming. Even while the mill was in full swing there existed a wide variety of occupations in Berlin, but this occupational mix was underpinned by the pulp and paper industry—and community and individual identity were tied in large measure to the city’s primary material output. However, that has all changed in the past decade. While public sector and nonprofit organizations now comprise the biggest employers in the city, they do not form the basis of local identity.

Why is this so important? As I have argued, the symbolic and identity-oriented aspects of industrial change are interesting as an object of study, and represent a real and sometimes painful experience for a community and its residents. But questions of occupational composition—about forms of work—are as much about money as they are about meaning. I have tried to present a turn toward a consumption-based economy as one potential, hypothetical turn for Berlin, and it has not been my intention to cast such a development as a desirable outcome. While a more robust turn toward tourism and/or consumption may be seen as desirable for any number of reasons, Berlin’s mixed trajectory, which also involves prisons and biomass energy, may in fact be more immediately beneficial from a purely economic perspective. Given the very different sets
of occupation-based pay scales in energy/prisons versus consumption-oriented
development, such a mixed turn may be, at least for the immediate future, better for the
community in terms of the local occupational mix and opportunity structure. For
example, corrections officers in New Hampshire made an average of $18.61/hr in 2009,
boiler operators made $21.60/hr, and power plant operators $24.94/hr. By contrast, tour
guides in New Hampshire made an average of $10.79/hr, recreation workers $12.33/hr,
and retail salespersons $12.16/hr.76 Recalling the fundamental questions posed in
Chapter 1, such a mixed turn may be vital for the preservation of the local middle class.

Regardless of the normative or monetary implications of the current shape of
redevelopment in Berlin, the closure of the mill has presented the community with a
number of new opportunities and challenges. As I emphasized at the beginning of this
chapter, despite the nearly four years that have passed since the mill ceased operating,
redevelopment is still at a formative stage. In the past few years the community has
pursued, to one degree or another, opportunities for economic diversification and the
promotion of entrepreneurialism. And with the mill gone, the fortunes of the city are no
longer tied almost exclusively to one enterprise. The end of the mill has meant a
fundamental reorganization of economic life in Berlin, and in the coming years the place
will be less acutely structured by a single economic activity than it has been in the past.
At the same time, economic life in Berlin has become more complex, with a larger
constellation of actors—corporate ones in particular—shaping what happens there. For
better or worse, fundamental change no longer emanates from a single node. Such severe

New Hampshire Occupational Employment and Wages 2009. Of course, these figures do not account for
differences in the number of each kind of jobs, and the discussion here doesn’t consider the potential long-
term drawbacks of having prisons and biomass energy facilities located in the city.
disruptions as the closing of a mill may be less likely, but social and economic life is more complex than it has been in the past. As the community struggles to chart its future, its considerations will necessarily be more multifaceted than they ever were before. Compared to the ordering of social and economic life provided by the mill, the experience of the city since 2006 shows how “all that is solid melts into air” via deindustrialization.

![Figure 8-2: View of Berlin from hillside east of downtown as pictured on front page of Berlin Daily Sun, 12/31/2009.](image)

Throughout my analysis, I have emphasized how redevelopment is the product of contingency and negotiation, and I have tried to thoroughly consider the role of place in shaping that contingency and those negotiations. I now realize that what I have attempted to explicate, based on data collected and events that unfolded between 2007 and 2010, represents the beginning of a much longer process of redevelopment. In the coming years, and perhaps even decades, there will be new points of contingency that I did not uncover in my analysis, and new conflicts and events that will represent new instances of negotiation. And just as Berlin itself is continuing to change, so is the
broader national and global context. New technologies, shifting demographics, emerging societal values, and new policies may yet provide the city with altogether new options for development. It is not yet clear what the social, economic, and environmental effects of the emergent pattern of redevelopment I have outlined will be. Berlin will have to come to grips with not only these effects, but those of new exigencies that loom just over the horizon. It took decades for the city to be defined as an industrial community, and in 10, 20, or perhaps even 30 years, we will know how Berlin reinvented itself after a century of being defined by the mill.

Nonetheless, my analysis calls into question the ubiquity of the post-productivist transition in high-amenity rural communities. Even though Berlin is situated in a high-amenity and historically recreation-dependent region, the community has not turned squarely toward tourism and consumption as its new economic base. Instead, elements of place—particularly its embodied industrial history—have led the community into a mixed turn in which elements of both production- and consumption-oriented activity are emerging alongside a broadly public sector-dependent local economy. In employing a case study approach to rural redevelopment I have shown how the specificity and distinctiveness of particular arrangements of geographical location, material form, and meaning—place—matter in great ways for how patterns of social and economic transformation play out across space.
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APPENDIX A

INFORMED CONSENT LETTER

The goal of this study is to better understand change in remote forest-dependent communities by focusing on how patterns of community change involve local residents.

By agreeing to participate in the study, you are agreeing to participate in an approximately 60-minute interview during which our conversation will be recorded for the purposes of data collection. Where direct quotes are used, you will not be identified by name, but by general background information, such as a “retired mill worker.” You may refuse to be recorded and still participate in the study; in such cases, notes will be taken by hand only.

Possible risks of participation include emotional stress when you are asked about your individual and family history, or the main issues that your community is faced with. While you will not receive any compensation for participation in this study, possible benefits include reconsideration of what is happening in your community, as well as gaining knowledge about your community through the papers and reports written on the basis of this study.

Participation is strictly voluntary; refusal to participate will involve no prejudice, penalty, or loss of benefits to which you would otherwise be entitled. If you agree to participate and then change your mind, you may withdraw at any time during the interview without penalty.

The investigator seeks to maintain the confidentiality of all data and records associated with your participation in this research. You should understand, however, there are rare instances when the investigator is required to share personally-identifiable information (e.g., according to policy, contract, regulation). For example, in response to a complaint about the research, officials at the University of New Hampshire, designees of the sponsor(s), and/or regulatory and oversight government agencies may access research data. You also should understand that the investigator is required by law to report certain information to government and/or law enforcement officials, such as child abuse, threatened violence against self or others, or communicable diseases. Interview notes will be accessible to the researcher only, and voice recordings will be kept on a laptop computer accessible only to the researcher and his faculty advisor. At the end of the study, interview recordings and transcripts will be retained and used for future research.

The work will be conducted by Chris Colocousis, a graduate student in the Department of Sociology at UNH, and will be supervised by Department of Sociology Professor Cynthia M. Duncan.
If you have any questions about this research project or would like more information before, during, or after the study, you may contact Chris Colocousis (603-862-2821). If you have questions about your rights as a research subject, you may contact the UNH Office of Sponsored Research (603-862-2003) to discuss them.

I, ______________________ CONSENT/AGREE to participate in this study

_________________________  ______________________
Signature of Subject  Date

I, ______________________ CONSENT/AGREE to be recorded during
_________________________  ______________________
interview.

Signature of Subject  Date
APPENDIX B

IRB APPROVAL

University of New Hampshire
Research Conduct and Compliance Services, Office of Sponsored Research
Service Building, 51 College Road, Durham, NH 03824-3585
Fax: 603-862-3564

18-Jul-2007

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IRB #: 4036
Study: Community Change in the Northern Forest: A Focus on the Local Middle Class
Approval Date: 18-Jul-2007

The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has
reviewed and approved the protocol for your study as Exempt as described in Title 45, Code
of Federal Regulations (CFR), Part 46, Subsection 101(b). Approval is granted to conduct
your study as described in your protocol.

Researchers who conduct studies involving human subjects have responsibilities as outlined
in the attached document, Responsibilities of Directors of Research Studies Involving
Human Subjects. (This document is also available at http://www.unh.edu/osr/compliance/irb.html.) Please read this document carefully before commencing your work involving human subjects.

Upon completion of your study, please complete the enclosed pink Exempt Study Final
Report form and return it to this office along with a report of your findings.

If you have questions or concerns about your study or this approval, please feel free to
contact me at 603-862-2003 or julie.simpson@unh.edu. Please refer to the IRB # above in
all correspondence related to this study. The IRB wishes you success with your research.

For the IRB,

Julie F. Simpson
Manager

cc: File
    Duncan, Cynthia
APPENDIX C

INTERVIEW GUIDE

A. Individuals and Families

1. Individual and Family Background

a. Migration history
   i. Where did you grow up?
   ii. How long have you lived here?
   iii. How old are you?
   iv. How long has your family lived in this area?
      1. Where are your parents from?
   v. Have members of your family moved away? Where?
   vi. Have you lived somewhere else? Where and when?
      1. Why did you come back?

b. Current living situation
   i. With whom do you live?
   ii. Do you have any family living nearby?
      1. How often do you see them?
   iii. Do you have children? How old are they? Do they live around here?

c. Family education and work history
   i. What kind of work did or do your parents do?
   ii. How far did your parents go in school?

d. Individual education experience
i. How far did you go in school?

ii. What stands out about your time in high school or college?

iii. Did you play any sports or were you in any clubs at school?

1. What did you do?

2. How important are these things for who you are today?

iv. Have you had any other formal educational or job training?

2. Work Experience

a. Are you working now?

b. What do you do?

c. How did you end up in this job?

3. Class Identity

a. How do you think of yourself and your family in terms of where you stand in the community, class-wise?

   i. Would you say you're in the working class, middle class, upper-middle class, etc.?

b. Why do you say that particular group as opposed to another?

c. What does being a member of that particular group mean to you?

d. How would you classify most people in this town?

   i. How many classes or social groups do you see in this community?

B. The Community

4. General

a. What do you consider to be your community?

   i. Is it the city, the county, the region?

b. How would you describe it?
i. What kind of place would you say it is?

5. Community Attachment
   a. What do you like about your community?
      i. If you moved away would you miss it?
      ii. What would you miss most about it?

6. Community Change
   a. How is the place changing?
      i. What are the biggest changes that are currently affecting your community?
      ii. In what ways are these changes affecting the place?
   b. What would you say are the biggest issues your community is faced with?
   c. In 5 years, where do you see your community heading as far as becoming a better or worse place to live?
      i. Why do you think this is the case?
   d. How do you see the community responding to these changes and issues?
      i. What are people doing around here as the place changes?

7. Local Economic Structure
   a. What do most people with “good jobs” do for work around here?
   b. How do you think the paper mill has shaped your community?
      i. If you had to say, has the mill been good or bad for the community?
   c. What other businesses are important around here?

8. Collective Efficacy
   a. How willing are people around here to act on behalf of the common good...to do something because it benefits the place as a whole, and not necessarily themselves?
i. Why do you think this is the case?

b. Do you think your community can work together well to deal with local issues?

   i. Can you think of a specific example where this has or has not happened?

9. Civic Engagement

   a. How involved would you say you are with what goes on in this community?

   b. In what ways are you involved with the community?

      i. Are you a member of any local organizations?

      ii. Do you volunteer your time for the community in any way?

   c. Why do you choose to be involved or not to be involved in these things?

      i. Is it for personal reasons, or is it something about the community?

10. Politics and Civic Culture

   a. Who would you say “runs things” around here?

   b. Do you feel like you can freely express your opinions about what goes on here?

      i. Why or why not?

11. Natural Resources and Environmental Stewardship

   a. What do you think are the biggest environmental issues your town is faced with?

   b. Do you consider yourself an “environmentalist?”

      i. Why?

   c. What do you think the forest resources in the region should be used for? Should it be more for conservation, or more for jobs, or both?

      i. Why?
APPENDIX D

2007 COMMUNITY AND ENVIRONMENT IN RURAL AMERICA SURVEY

Q: INTRO T: "Hello, this the University of New Hampshire. My name is and I'm calling for the Carsey Institute at the University of New Hampshire. We are conducting a short, confidential study of people and communities in rural America. We are trying to learn more about how rural places are changing, and how those changes affect people living there, in order to help them plan for the future. Your community is one of eight in the US that have been chosen for this study. Would you be willing to talk with us for a few minutes, to help us understand what is going on here and how it affects you and your family?"

Q: BIR1 T: "In order to determine who to interview, could you tell me, of the adults aged 18 or older who currently live in your household -- including yourself -- who had the most recent birthday? I don't mean who is the youngest, but rather, who had the most recent birthday?"

Q: BIR2 T: "Of the ones that you do know, who had the most recent birthday?"

1 INFORMANT
2 SOMEONE ELSE -- ASK TO SPEAK TO THAT PERSON
3 PERSON NOT AVAILABLE
99 REFUSED

Q: INT2 T: "Hello, this the University of New Hampshire. My name is and I'm calling for the Carsey Institute at the University of New Hampshire. This month, we are conducting a short, confidential study of people, communities and the environment in rural America. The area where you live is one of eight chosen for our study, and we would really appreciate your help and cooperation. You have been identified as the adult in your household who had the most recent birthday. Is this correct?"

1 YES
2 APPOINTMENT
99 REFUSAL

Q: THANKS1 T: "Thank you very much, we are only interviewing year round residents."

Q: SEX T: "Thank you very much for helping us with this important study. We really appreciate your help. Before we begin I want to assure you that all of your answers are strictly confidential. They will be combined with answers from other people from across the region. Your telephone number was randomly selected from all families in [BLANK]. This call may be monitored for quality assurance. Participation is voluntary. If you decide to participate, you may decline to answer any question or end the interview at any time. This survey will take about 20 minutes to complete."
RECORD SEX OF RESPONDENT

0 MALE
1 FEMALE
99 NA

Q: AGE T: "To start off, what is your current age?"
(RECORD EXACT NUMBER OF YEARS OLD -- E.G., 45)
96 NINETY-SIX YEARS OF AGE OR OLDER
97 REFUSED
98 DK
99 NA

Q: TOWN T: "And in what town do you live?"

Q: THANKS T: "Thank you very much for your time, but we are not interviewing people in your town at this time."

Q: RESID T: "Is this community now your year-round place of residence, or do you usually live part of the year somewhere else?"
0 LIVE IN THIS COMMUNITY YEAR-ROUND
1 USUALLY LIVE PART OF THE YEAR SOMEWHERE ELSE
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: WHERE T: "Can you tell me how long it takes to drive there by car, or whether you prefer to travel there by airplane or other means?"
1 LESS THAN TWO HOURS BY CAR
2 TWO TO FIVE HOURS BY CAR
3 MORE THAN FIVE HOURS BY CAR
4 TRAVEL THERE BY PLANE, BUS OR TRAIN
5 LIVE IN AREA YEAR ROUND
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: WHEN T: "When do you usually live somewhere else -- in the summertime, in winter, on weekends, or what?"
1 LIVE ELSEWHERE IN SUMMER
2 LIVE ELSEWHERE IN WINTER
3 LIVE ELSEWHERE ON WEEKENDS
4 LIVE ELSEWHERE ON WEEKDAYS
5 OTHER
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: WHENO

ENTER OTHER LIVING ARRANGEMENT
Q: LIVED T: "How many years have you lived in this area?" IF "ALL MY LIFE" ASK -- "About how many years is that?"
RECORD EXACT NUMBER OF YEARS OF RESIDENCE
1 ONE YEAR OR LESS
96 96 YEARS OR MORE
97 REFUSED
98 DK
99 NA

Q: MVFROM T: "Have you always lived in this area, or did you move here from somewhere else?" IF MOVED HERE ASK: "What state did you move here from?"

Q: FAM1 T: "Were the following things not important, somewhat important, or very important among your reasons for moving here?"
"I moved here when I was young, because my family moved here."
0 NOT IMPORTANT / DOES NOT APPLY
1 SOMewhat IMPORTANT
2 VERY IMPORTANT
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: FAM2 T: "I moved here to be near other family members."

Q: NJOB1 T: "I moved here for job or employment reasons."

Q: EDU1 T: "I moved here to pursue education."

Q: HOU1 T: "I moved here for better or more affordable housing."

Q: REC1 T: "I moved here for outdoors or other recreational opportunities."

Q: BEAU1 T: "I moved here for the natural beauty of the area."

Q: QUAL1 T: "I moved here for a better quality of life"

Q: URBAN1 T: "I moved here to get away from city problems"

Q: LEAV T: "Looking ahead, do you expect to continue living in this area for the next 5 years, or move somewhere else?"
0 NO, EXPECT TO STAY HERE NEXT 5 YEARS
1 YES, EXPECT TO MOVE AWAY WITHIN 5 YEARS
98 DK - DO NOT PROBE
99 NA / REFUSED
Q: FAM3 T: "Do the following things seem ... not important ... somewhat important ... or ... very important to you, when you think about whether you will stay here or move away in the future?"

"Living near family"

- 0 NOT IMPORTANT REASON FOR ME TO STAY HERE OR MOVE / DOESN'T APPLY
- 1 SOMETHING IMPORTANT REASON FOR ME TO STAY HERE OR MOVE
- 2 VERY IMPORTANT REASON FOR ME TO STAY HERE OR MOVE
- 98 DK - DO NOT PROBE
- 99 NA / REFUSED

Q: NEWJ2 T: "Job or employment opportunities"

Q: EDU2 T: "Educational opportunities"

Q: HOUS2 T: "Housing opportunities"

Q: REC2 T: "Outdoors or other recreational opportunities."

Q: BEAU2 T: "Natural beauty of the area."

Q: QUAL2 T: "General quality of life"

Q: TEEN T: "If your own teenage child, or the child of a close friend, asked you for advice, would you recommend that they should plan to stay in this town as an adult, or move away for opportunities somewhere else?"

- 0 RECOMMEND THEY STAY HERE
- 1 RECOMMEND THEY MOVE AWAY
- 98 DK - DO NOT PROBE
- 99 NA / REFUSED

Q: FARMS T: "Let's change the subject for a moment ... I'm going to read a list of environmental issues that might be problems in some rural places. With regard to the place where YOU live, for each issue I'd like to know whether you think this has had no effect, had minor effects, or had major effects ON YOUR FAMILY OR COMMUNITY OVER THE PAST 5 YEARS?"

"Conversion of farmland to other uses"

- 0 HAD NO EFFECT ON YOUR FAMILY OR COMMUNITY
- 1 HAD MINOR EFFECTS ON YOUR FAMILY OR COMMUNITY
- 2 HAD MAJOR EFFECTS ON YOUR FAMILY OR COMMUNITY
- 98 DK - DO NOT PROBE
- 99 NA / REFUSED
Q: FOREST T: "Loss of forestry jobs or income"

Q: WATER T: "Water quality or supply problems"

Q: WARMING T: "Global warming or climate change"

Q: SPRAWL T: "Urban sprawl or rapid development of the countryside"

Q: ZONE T: "Have conservation or environmental rules that restrict development generally been a good thing for your community, a bad thing, or have they had no effect?"

1 CONSERVATION RULES HAVE BEEN A GOOD THING HERE
2 CONSERVATION RULES HAVE BEEN A BAD THING HERE
3 CONSERVATION RULES HAVE HAD NO EFFECT HERE
4 NO CONSERVATION RULES HERE - VOLUNTEERED
98 DK / NOT SURE
99 NA / REFUSED

Q: HUNT T: "During the past year, have you or other members of your household participated in the following recreational activities IN THIS AREA?"

"Hunting or fishing ..."

READ IF NECESSARY: "Have you participated in this in your area in the past year?"

0 NO
1 YES
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: CAMP T: "Camping or picnicking outdoors"

Q: HIKE T: "Nature walks, birdwatching, hiking or running on trails ..."

Q: SKI T: "Skiing, snowshoeing or ice skating outdoors ..."

Q: BOAT T: "Boating or watercraft ..."

Q: SWIM T: "Swimming at a river, lake or beach ..."

Q: BIKE T: "Bicycling ..."

Q: OHV T: "Off-highway riding in a Jeep, snowmobile, 4-wheeler or dirt bike ..."

Q: CRIME T: "Let's turn to the community where you live ... Which of the following do you consider to be IMPORTANT PROBLEMS facing your community today?"
"Violent or property crime"

IF NECESSARY: "Is this an important problem facing your community today?"
0 NO
1 YES
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: DRUGM T: "Manufacturing or sales of illegal drugs"

Q: AFFORD T: "Lack of affordable housing"

Q: SPRAWL2 T: "Too-rapid development, growth or sprawl"

Q: SCHOOL T: "Schools not as good as they should be"

Q: JOBOPP T: "Lack of job opportunities"

Q: RECOOP T: "Lack of recreational opportunities"

Q: POV T: "Poverty or homelessness"

Q: POPDEC T: "Population declining as people move away"

Q: SERVICE T: "Not enough health and social services"

Q: LOCGOV T: "Do you think that local government has the ability to deal effectively with important problems such as those just mentioned?"
0 NO
1 YES
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: POLLUTE T: "Do you agree or disagree with the following statements about your community?

"If this community were faced with a local issue such as the pollution of a river or the possible closure of a school, people here could be counted on to work together to address it."
0 DISAGREE
1 AGREE
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: NEIGH T: "People around here are willing to help their neighbors."
Q: GETA T: "People in this community generally trust one another and get along."

Q: BBUS T: "Now we'd like to ask you about your involvement in community affairs. Do you belong to or serve in any role in the following types of local organizations?"

"Business group such as Chambers of Commerce?"

0 NO
1 YES
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: BCIVIC T: "Civic, service or fraternal organizations such as Elks, Kiwanis, Rotary, women's clubs, 4H or Scouts?"

Q: BLOCGOV T: "Local government, including zoning, school or conservation boards?"

Q: BOTHER1 T: "Other local organizations that have regular meetings?"

Q: FUTURE T: "For the future of your community, do you think it is more important to us natural resources to create jobs, or to conserve natural resources for future generations?"

1 USE NATURAL RESOURCES TO CREATE JOBS
2 CONSERVE NATURAL RESOURCES FOR THE FUTURE
3 CREATING JOBS AND CONSERVING RESOURCES ARE BOTH EQUALLY IMPORTANT
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: PARTY T: "Now, let's talk for a moment about your political views ..."

"Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent or what?"

IF REPUBLICAN: "Would you call yourself a strong Republican or a not very strong Republican?"

IF DEMOCRAT: "Would you call yourself a strong DEMOCRAT or a not very strong DEMOCRAT?"

IF INDEPENDENT, NO PREFERENCE, OR OTHER: "Do you think of yourself as closer to the Republican or to the Democratic party?"

1 STRONG DEMOCRAT
2 NOT VERY STRONG DEMOCRAT
3 INDEPENDENT, BUT CLOSER TO DEMOCRATS
4 INDEPENDENT--CLOSER TO NEITHER
5 INDEPENDENT, BUT CLOSER TO REPUBLICANS
6 NOT VERY STRONG REPUBLICAN
7 STRONG REPUBLICAN
8 OTHER PARTY
99 NA / REFUSED

Q: MILIT T: "Do you know anyone from this area who is serving or has served in the military in Iraq or Afghanistan?"
0 NO, DON'T KNOW
1 YES
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: BETOFF T: "On another topic, we are interested in how people are getting along financially these days. Would you say that you and your family are WORSE OFF FINANCIALLY, ABOUT THE SAME, or BETTER OFF than you were 5 years ago?"
0 WORSE OFF
1 ABOUT THE SAME
2 BETTER OFF
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: RELPREF T: "On another topic ... What is your religious preference? Is it Protestant, Catholic, Jewish, another religion, or no religion?"
1 PROTESTANT (such as Baptist, Episcopalian, Lutheran, Methodist, Pentacostal, Presbeterian, etc.)
2 CATHOLIC
3 JEWISH
4 NONE, NO RELIGION
5 OTHER
97 REFUSED
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: REBORN T: "Would you say you have been 'born again' or have had a 'born again' experience -- that is, a turning point in your life when you committed yourself to Christ?"
0 NO
1 YES
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: RELATT T: "How often do you attend religious services apart from occasional weddings, baptisms, or funerals ... never ... a few times a year ... once or twice a month ... once a week ... or more than once a week?"
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Q: HOUSIZE T: "Including yourself, HOW MANY PEOPLE CURRENTLY LIVE in your household?"

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Q: D11 T: "Counting yourself as 1, how many adults age 18 and over currently live in your household?"

WRITE NUMBER OF ADULTS (1 = SELF ONLY)

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Q: HOUSKID T: "How many of the people living in your household are under 18 years of age, including babies and small children?"

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Q: HOUSE65 T: "Including yourself, how many of the people living in your household are 65 years old, or older?"

0  NONE
1  ONE
2  TWO
3  THREE
4  FOUR
5  FIVE
6  SIX
7  SEVEN OR MORE
98  DK / NOT SURE
99  NA / REFUSED

Q: RELATIVE T: "How many of the other people living in this household are your relatives, by blood or marriage?"

0  NONE
1  ONE
2  TWO
3  THREE
4  FOUR
5  FIVE
6  SIX
7  SEVEN OR MORE
98  DK / NOT SURE
99  NA / REFUSED

Q: GONEKID T: "Do you have any grown children, who lived in this area at one time, but have moved away either to a larger city or suburb, or to a different rural area?"

0  NO, STILL LIVE IN THE AREA
1  YES, MOVED TO LARGER CITY OR SUBURB
2  NO, HAVE NO ADULT CHILDREN (VOLUNTEERED)
98  DK / NOT SURE
99  NA / REFUSED

Q: HEREKID T: "Do you have any grown children who have moved out of your home, but still live in this area?"

0  NO
1  YES
98  DK - DO NOT PROBE
99  NA / REFUSED

Q: OWNRENT T: "Do you own or rent the place where you live?"

1  RENT
2  OWN
3  OTHER
98  DK - DO NOT PROBE
99 NA / REFUSED

Q: HOME3 T: "What is the approximate value of your home? Is it less than $100,000, between $100,000 and $300,000, or more than $300,000?"
   1 LESS THAN $100,000?
   2 $100,000 TO $300,000?
   3 MORE THAN $300,000?
   98 DK - DO NOT PROBE
   99 NA / REFUSED

Q: HOMelow T: "OK, would you say that the value of your home was more or less than $70,000?"
   1 LESS THAN $70,000?
   2 $70,000 TO $100,000?
   98 DK - DO NOT PROBE
   99 NA / REFUSED

Q: HOMEmed T: "OK, would you say that the value of your home was more or less than $200,000?"
   1 LESS THAN $200,000?
   2 $200,000 TO $300,000?
   98 DK - DO NOT PROBE
   99 NA / REFUSED

Q: HOMEh T: "OK, would you say that the value of your home was more or less than $500,000?"
   1 LESS THAN $500,000?
   2 MORE THAN $500,000?
   98 DK - DO NOT PROBE
   99 NA / REFUSED

Q: RENT T: "How much do you pay per month in rent?"
   RECORD MONTHLY RENTAL AMOUNT
   9997 $9997 OR MORE
   9998 DON'T KNOW/NOT SURE
   9999 NA/REFUSED

Q: OTHHOME T: "Apart from the place where you live now, do you own any other properties, where you also live for part of the year?"
   0 NO
   1 YES
   98 DK - DO NOT PROBE
   99 NA / REFUSED

Q: OTHWHER T: "Where is that property?"
   TYPE IN TOWN AND STATE
Q: EMPLOY T: "Which of the following best describes your employment status during the PAST YEAR?"
READ RESPONSES. IF R GIVES 2 RESPONSES, ENTER LOWER NUMBER
1 Employed full time
2 Employed part-time, or part of the year
3 Self-employed
4 Retired and not working
5 Unemployed and looking for work
6 Unemployed and not looking for work
7 Homemaker
8 Disabled
9 Student
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: JOB1 T: "What is your main job? That is, what is your title and employer? What type of work and specific activities do you do?"
PROBE FOR SPECIFIC JOB TITLE AND JOB FUNCTION

Q: INDUST1 T: "What type of industry or organization do you work for?"
PROBE FOR SPECIFIC INDUSTRY AND EMPLOYER

Q: JOB2 T: "In addition to the main job you just described, do you have another job or do other work to earn money?"
0 NO
1 YES
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: JOB3 T: "Could you describe your other job or work?"
PROBE FOR SPECIFIC JOB TITLE AND TYPE OF WORK

Q: JOBLOSS T: "During the last 7 calendar years, that is since 2000, did you lose a job or leave one because your plant or company closed or moved, your position or shift was abolished, insufficient work, or some other similar reason?"
0 NO
1 YES
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: REPAIR T: "I'm going to read a list of extra work some people do to help make ends meet. You or others in your household might be doing one or more of these things to save your family money, earn extra money, or in exchange for something else, not things you do for recreation or a hobby."
"Repairing a car, or other mechanical or household repair?"

READ IF NECESSARY
"In the past 12 months, have you or any member of your household participated in this in order to save money, earn extra money, or exchange for something else?"

0 NO
1 YES
98 DK - DO NOT PROBE
99 NA / REFUSED

Q: PERSERV T: "Babysitting, child care or taking care of a sick or elderly person?"

Q: ANIMALS T: "Raise animals or grow produce that you sell or trade?"

Q: TRADE T: "Trade or sell clothes, car parts, or other things, including at garage sales or flea markets?"

Q: SEWING T: "Sewing, crafts, bookkeeping or typing for others?"

Q: YARDWORK T: "Yard work, landscaping, gather or cut firewood, or snow removal?"

Q: FATHOC T: "Now I'm going to ask a few questions about your family and their history in this community."

"What was your FATHER'S main occupation?"

TYPE IN FATHER'S OCCUPATION AND TYPE OF WORK

Q: FATHED T: "What was your father's education, or the highest grade of school he completed?" (READ RESPONSES)

1 Eighth grade or less,
2 Some high school,
3 High school graduate, (INCLUDES G.E.D.)
4 Technical school,
5 Some college,
6 College graduate,
7 Or postgraduate work?"

98 DK (DO NOT PROBE)
99 NA / REFUSED

Q: FAREA T: "Did your father grow up in this area?"

0 NO
1 YES
98 DK (DO NOT PROBE)
99 NA / REFUSED
Q: FAWHER T: "In what town and state did your father grow up?"
ENTER TOWN AND STATE WHERE FATHER GREW UP

Q: MOTHOC T: "What was your MOTHER'S main occupation?"
TYPE IN MOTHER'S OCCUPATION AND TYPE OF WORK

Q: MOTHED T: "What was your mother's education, or the highest grade of school she completed?" (READ RESPONSES)
1 Eighth grade or less,
2 Some high school,
3 High school graduate, (INCLUDES G.E.D.)
4 Technical school,
5 Some college,
6 College graduate,
7 Or postgraduate work?"
98 DK (DO NOT PROBE)
99 NA / REFUSED

Q: MOTAH T: "Did your mother grow up in this area?"
0 NO
1 YES
98 DK (DO NOT PROBE)
99 NA / REFUSED

Q: MAWHER T: "In what town and state did your mother grow up?"
RECORD TOWN AND STATE WHERE MOTHER GREW UP

Q: RACE T: "Now, a few final questions ..."

"Would you describe yourself as White non-Hispanic, African American, Hispanic, Asian American, Native American, or what?"
1 WHITE, NON-HISPANIC
2 AFRICAN AMERICAN
3 HISPANIC
4 ASIAN AMERICAN
5 NATIVE AMERICAN
6 OTHER
98 DK (DO NOT PROBE)
99 NA / REFUSED

Q: MARITAL T: "Are you currently married, widowed, divorced, separated, or have you never been married?"
1 MARRIED (INCLUDE COMMON LAW MARRIAGE & SPOUSE AWAY IN MILITARY)
2 WIDOWED
3 DIVORCED
4 SEPARATED
5 NEVER MARRIED (INCLUDING ANNULMENTS)
6 LIVING TOGETHER NOT MARRIED
98 DK (DO NOT PROBE)
99 NA / REFUSED

Q: EDUC T: "What is the highest grade in school, or level of education that you've completed and received credit for?" [READ RESPONSES]
   1 Eighth grade or less,
   2 Some high school,
   3 High school graduate, (INCLUDES G.E.D.)
   4 Technical school,
   5 Some college,
   6 College graduate,
   7 Or postgraduate work?"
   98 DK (DO NOT PROBE)
   99 NA / REFUSED

Q: INCOME T: "What was you total household income (including all wages, public assistance and child support) for 2006, before taxes? Counting all members living in your household, would you say that it was less than $40,000, between $40,000 and $90,000, or more than $90,000?"
   1 LESS THAN $40,000
   2 $40,000 TO $90,000
   3 MORE THAN $90,000
   98 DK (DO NOT PROBE)
   99 NA / REFUSED

Q: INCLOW T: "OK, would you say that your total household income was more or less than $20,000?"
   1 LESS THAN $20,000
   2 $20,000 TO $40,000
   98 DK (DO NOT PROBE)
   99 NA / REFUSED

Q: INCMED T: "OK, would you say that your total household income was more or less than $60,000?"
   1 LESS THAN $60,000
   2 $60,000 TO $90,000
   98 DK (DO NOT PROBE)
   99 NA / REFUSED

Q: INCHIGH T: "OK, would you say that your total household income was more or less than $160,000"
   1 LESS THAN $160,000
   2 MORE THAN $160,000
Q: DISABLE T: "Have you received any income from disability insurance or SSI within the past two years?"
   0 NO
   1 YES
   98 DK (DO NOT PROBE)
   99 NA / REFUSED

Q: TANF T: "Have you received any from TANF (the Temporary Assistance for Needy Families program) within the past two years?"
   0 NO
   1 YES
   98 DK (DO NOT PROBE)
   99 NA / REFUSED

Q: FOODST T: "Have you received food stamps within the past two years?"
   0 NO
   1 YES
   98 DK (DO NOT PROBE)
   99 NA / REFUSED

Q: OPTIMIST T: "Based on what you see of the situation today, do you think that ten years from now, your community will be a better place to live, a worse place, or about the same?"
   0 WORSE PLACE
   1 ABOUT THE SAME
   2 BETTER PLACE
   98 DK (DO NOT PROBE)
   99 NA / REFUSED

Q: D14 T: "Not counting business lines, extension phones, or cellular phones -- on how many different telephone NUMBERS can your household be reached?"
   1 ONE
   2 TWO
   3 THREE
   4 FOUR
   5 FIVE
   6 SIX
   7 SEVEN OR MORE
   98 DK
   99 NA / REFUSED

Q: D15 T: "Finally, would you be willing to be interviewed by a researcher to discuss your reactions to some of the topics we've been talking about?"
1  YES
2  NO / DK
99  NA / REFUSED

Q: D150 T: "Could I have just your first name in case a researcher wants to call you?"
ENTER RESPONDENTS FIRST NAME

Q: END T: "Thank you for your time and participation. Your input has been very valuable. If you would like to learn about the results from this survey, as they come in over the months and years ahead, please send us a letter or e-mail at the Carsey Institute, University of New Hampshire."

IF ASKED FOR ADDRESS
Carsey Institute
University of New Hampshire
cerasurvey.carsey@unh.edu
Durham, NH 03824
APPENDIX E

GRANITE STATE POLL #35

BERLIN, NH QUESTIONS

Q: CAR1 T: “Now I’d like to ask you about your impression of Berlin [BUR’ lin], New Hampshire – a city in the northern part of the state. Would you say it is mostly favorable, mostly unfavorable, or don’t you have any impression of that city one way or the other?”

1  MOSTLY FAVORABLE ➔ SKIP TO CAR1A
2  MOSTLY UNFAVORABLE ➔ SKIP TO CAR1B
3  NO IMPRESSION

98  DON’T KNOW
99  NA/REFUSED

Q: CAR1A T: “What is it about Berlin [BUR’ lin] that gives you a favorable impression?”

RECORD VERBATIM

Q: CAR1B T: “What is it about Berlin [BUR’ lin] that gives you an unfavorable impression?”

RECORD VERBATIM