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The Future of Shrinking Cities:
Problems, Patterns and Strategies of Urban Transformation in a Global Context

Karina Pallagst, Jasmin Aber, Ivonne Audirac, Emmanuele Cunningham-Sabot, Sylvie Fol, Cristina Martinez-Fernandez, Sergio Moraes, Helen Mulligan, Jose Vargas-Hernandez, Thorsten Wiechmann, Tong Wu (Editors) and Jessica Rich (Contributing Editor)

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Monograph Series

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Content

Introduction

This publication is the outcome of a symposium held at UC Berkeley in February 2007, organized by the Center for Global Metropolitan Studies and the Institute of Urban and Regional Development at UC Berkeley. It brought together urban and regional planners, architects, engineers, developers, artists, and academics to examine the perspectives of a largely underrepresented topic: shrinking cities.

"The Future of Shrinking Cities: Problems, Patterns, and Strategies of Urban Transformation in a Global Context" presents research carried out under the aegis of the Shrinking Cities International Research Network (SCiRN) and – in addition – selected case studies from the United States. The purpose of the publication is to encourage and inform discussion to improve the quality of life in shrinking cities. The authors identify and examine critical projects and issues in shrinking cities and present lessons learned from relevant projects and experiences in the US and abroad. The comparative approach to shrinking cities, incorporating a wide range of case studies in order to widen the debate, is both unique and innovative.

The shrinking city phenomenon is a multidimensional process, comprising cities, parts of cities, or entire metropolitan areas that have experienced dramatic decline in their economic and social bases. Thus, urban shrinkage is often a challenge on the wide scale of metropolitan regions and requires policy-makers to redefine traditional paths of regional governance. Urban decline and the loss of employment opportunities are closely linked in a downward spiral, leading to an out-migration of population.

The joint work places shrinking cities in a global perspective, setting the context for in-depth comparisons of selected cities considering specific social, economic, environmental, cultural, and land-use issues. Especially in the United States, planning practice is to a large extent concentrated on either managing urban growth or tackling redevelopment in a fragmented – not a regional – way, despite the fact that in many metropolitan regions urban shrinkage reaches beyond individual cities. In this regard, the papers will help initiate a redefinition of regional governance in the U.S. and also in the other participating countries via comparative research on shrinking cities.

The first part presents the problems of shrinking cities and lessons learned from an international comparison.

Thorsten Wiechmann's paper "Conversion Strategies under Uncertainty" focuses on post-socialist shrinking cities. It traces government efforts to manage demographic changes in Dresden, Eastern Germany, where the breakdown of the state-directed economy caused economic decline, industrial regression, and high unemployment rates. From 1989 to 1999, when the city lost population due to out-migration and decreasing birth rates, the administrative system was still directed towards growth objectives throughout the 1990s. Yet over the last seven years, the city has experienced an unexpected growth. Processes of suburbanization have turned into processes of reurbanization, and today in Dresden, areas of shrinkage and decline are in close proximity to prospering and wealthy communities. The strategic challenge is to deal with this patchwork while accepting that the future remains unpredictable.

Emmanuèle Cunningham-Sabot and Sylvie Fol present shrinking cities in France and Great Britain. They examine how globalization has led to city shrinkage through the relocation of industry and "metropolization." The new distribution of economic structures has led to agglomerations of activities in some regions, whereas others are experiencing decline. In France,

as well as in Great Britain, the transformation of local production systems resulted in a polarization of regional spaces and a growing imbalance among urban territories. The process of economic restructuring left behind most of the former industrial spaces. This paper suggests that the particular patterns of shrinkage observed in both countries might offer an explanation for the relative lack of interest in urban decline in France and Great Britain.

A global overview on shrinking cities and concerns about Australian mining cities are presented by Cristina Martinez-Fernandez and Chung-Tong Wu. The first part of this paper outlines some of the conceptual frameworks that throw light on the phenomenon of urban shrinkage. The second part of the paper outlines the effort by several cities in Australia to manage urban shrinkage. It questions the dominant paradigm among planners and policy makers as planning for and managing growth by refuting the underlying assumption that all cities and towns can achieve growth. It concludes that the scenario of "growth for all" may be possible while the economy is expanding rapidly and population growth continues, but that this is hardly the case for most countries.

Hans Harms' paper deals with changes on the waterfront and transforming harbor areas. He compares and evaluates transformations in port cities under two contrasting planning contexts: the Bay Area, California and Hamburg, Germany. Cities looking to achieve an important position as a container port face two planning challenges: to transform their traditional ports into ones that meet the technical requirements for handling container ships, and to create new urban uses out of the former ports that have suffered decay. This means that, besides global factors, local decisions by government entities, private firms, and civic groups strongly influence what role a port will play under new global economic conditions. In both cases, conflicting interests and different actors are often involved in the planning process.

Sergio Torres Moraes' paper discusses inequality and urban shrinkage in Latin America. This paper elaborates the argument that the territorial dynamics of Brazilian cities cannot be understood without considering their unique context: enormous socio-economic inequality generated from a long history of economic and political processes that have maintained a strikingly large gap between rich and poor throughout the majority of Brazil's modern history. It emphasizes that the increases in poverty and social exclusion that have resulted from urbanization in Brazil – and, more broadly, in Latin America – are key points for understanding the population mobility that has led to the abandonment of small towns and even some metropolitan areas in Brazil.

The second part of this publication aims at kicking off the shrinking cities debate in North America.

Robert Beauregard's paper sheds light on shrinking cities in the USA in historical perspective. This paper documents the history of population loss among large cities in the United States. Although it focuses on the shrinking cities of the last two decades, it argues that these cities cannot be understood in isolation from the declining cities that preceded them, or – even earlier – from the cities that lost residents in the 19th and early 20th centuries. Specifically, the paper traces transformations in the prevalence, severity, persistence, and regional incidence of urban population loss. It observes that their intensity was greatest in the decades just after World War II and least in the decades prior to the Depression. Most strikingly, it shows that in the most recent years, population loss has been less prevalent, less severe, and less persistent than in the earlier period of massive urban decline.

Ivonne Audirac discusses urban shrinkage amid fast metropolitan growth as two faces of

contemporary urbanism. This paper deals with the recent surge in European shrinking-cities research and compares it with its American counterpart. It offers an overview of theoretical positions on urban decline, and it reviews the latest statistics on American urban shrinkage and approaches to forestall it. Based on an examination of realized utopias of spatial form, it presents and discusses an alternative way to understand the co-presence of growth and shrinkage in American urbanism.

Karina Pallagst presents three cases of shrinking cities in the United States of America, representing three planning stories. This paper argues that in the United States, urban planning often concentrates on either managing urban growth or tackling redevelopment in a fragmented (not a regional) way – this despite the fact that similar urban issues, including shrinkage, often occur throughout an entire metropolitan region. The paper concludes that explicitly dealing with the problem of shrinking cities could provide a window of opportunity for introducing a paradigm shift from growth-centered planning to planning for more sustainable regional development patterns – thus helping to stimulate a redefinition of urban and regional governance in the United States.

David Leadbeater's paper presents shrinking cities in Canada, in particular single industry resource communities. The shrinking, even disappearance, of urban populations and communities is a useful starting point for understanding key aspects of the changing economic and planning conditions of hinterland regions under globalization. This can be said for many countries, but it is especially true of Canada, which in its vast territory has both a high level of urbanization and a large hinterland with many communities economically dependent in large part on the extraction or harvesting of natural resources. This paper focuses on mining-dependent communities in Canada, with some particular references to Sudbury, the largest mining center in North America, though much of the analysis can apply also to single-industry forestry, fishing, and rail communities.

In a third part, creative approaches to revitalizing shrinking cities are presented.

Helen Mulligan discusses environmental policy action regarding shrinking cities. While shrinkage is not an entirely new phenomenon, there is a new context. Specifically, the response to urban shrinkage is being shaped by a growing consciousness of environmental change: for instance, observable changes in global temperature data, the regression of glaciers, and the disappearance of certain species from their customary habitats. This paper addresses the response to this perception of environmental change in cities and, in particular, in shrinking cities.

Jasmin Aber presents "The Creative Imperative in a Postindustrial Economy to Foster a More Sustainable Development in Shrinking Cities". The paper analyzes emerging strategies and initiatives in urban design that use creativity, culture, and cutting-edge technology to energize declining cities in the global economy. It is a study of the direct and indirect socio-economic contributions of the Culture, Creativity and Knowledge Sector to growth, competitiveness, job creation, sustainable development, and innovation. The author proposes that the lessons from contemporary trends in cultural, social, and urban studies can inform future decisions for effective and sustainable urban planning.

Jose Vargas Hernandez's paper analyzes the relationships of cooperation and conflict between a mining company and the community of Cerro de San Pedro, a mining town in San Luis Potosí, Mexico. Specifically, the paper details the extreme lack of sensitivity on the part of a foreign mining company toward the consequences of its activities for the communities and environment surrounding its project. At the center of the controversy is a cheap and efficient technology used

for excavation, but which the inhabitants of these communities – supported by environmental groups and NGOs – argue will pollute sources of fresh water and perturb the environment and ecology of the region. This paper examines how the lack of negotiation between firms, communities, NGOs, and governments around the use of land can pose a strong obstacle to planning for the development and revitalization of a shrinking colonial town.

The last part of the publication deals with planning and policy making for shrinking cities.

Rollin Stanley's paper on "The Relative City" evaluates and underscores the importance of regional policies undertaken as part of a national agenda in relation to sprawl and land use, highlighting the problem that real-estate developers are currently driving the process. It argues that where infrastructure already exists, revitalization policies could ensure that "shrinking" or "rebuilding" cities would be a priority for both housing and tax policy, encouraging growth in cities that have declined.

Teresa Gilllotti and Daniel Kildee discuss land banks as revitalization tools with the example of Genesee County and the City of Flint, Michigan. Flint is a quintessential shrinking city. Based around a single industry and, even more, a single corporation, Flint's fortunes mirror those of General Motors. Like the company, the city peaked in the 1960s with a population reaching nearly 200,000. Currently, the population of Flint hovers just below 120,000. During the last twenty years, the issues of property abandonment and vacancy reached a tipping point, when they stopped being merely symptoms and instead became an active part of the problem. This paper evaluates the Genesee County Land Bank's interventions and its attempt to place abandoned property in the city and county into public hands.

Joseph Schilling's paper "Blueprint Buffalo – Using Green Infrastructure to Reclaim America's Shrinking Cities" proposes a new "right-sizing" model that could be broadly deployed to address one of the major economic and social consequences of shrinkage – the decay and blight caused by vacant and abandoned properties. It argues that green infrastructure initiatives, in combination with land banking and community-driven planning, can together form the nucleus of any effort to right-size a shrinking city. It also suggests that without a conscious "right-sizing" policy or plan to readjust a shrinking city's physical and built environment to better accommodate existing and projected populations, the surplus of infrastructure and properties will likely persist for years to come, thereby perpetuating dysfunctional economic and housing markets.

Gabi Troeger-Weiß and Hans-Jörg Domhardt focus on Germany's shrinkage on a small town scale. The development of rural areas has always been an especially important issue for spatial planning, since they constantly suffer from a lack of jobs, under-worked infrastructure, and emigration. Demographic change in these areas is certainly the largest challenge facing spatial development in Germany today. This paper discusses the challenges of demographic change in Germany and offers several approaches to spatial planning, focusing on demographic change in rural areas on both the national and regional levels.

I What are the problems of shrinking cities? Lessons learned from an international comparison

Conversion Strategies under Uncertainty in Post-Socialist Shrinking Cities: The Example of Dresden in Eastern Germany

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Introduction

At the beginning of the 21st century, the shrinking cities phenomenon is widespread over Europe. This applies to Western European industrial agglomerations in economic decline and to peripheral, sparsely populated areas in Northern Europe as well as to rural areas in Southern Europe suffering from emigration and a rapid decrease in birth rates. Yet it is the former socialist transformation regions in Central and Eastern Europe that have been hit hardest by population decrease and industrial regression since the political changes in 1990.

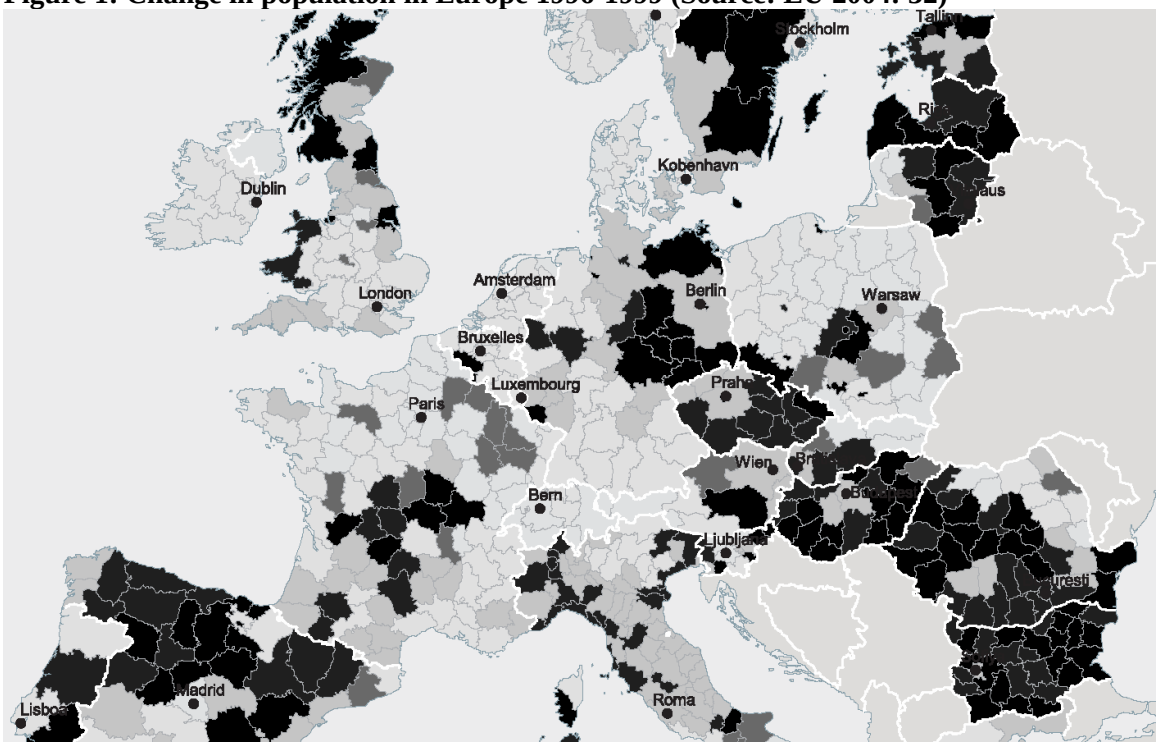
This paper focuses on the post-socialist type of shrinking cities. It highlights the example of Dresden in Eastern Germany, where the breakdown of the state-directed economy caused economic decline, industrial regression, and high unemployment rates. Due to out-migration and decreasing birth rates, the city lost 60,000 of its 500,000 residents within one decade (1989-1999). As a consequence, too many housing and office vacancies as well as infrastructure oversupplies plagued the city. Yet the administrative system was still directed towards growth objectives throughout the 1990s.

After 2000 this situation changed dramatically. The new strategic plan for Dresden (2001) is no longer growth-oriented. Instead, the plan focuses on a model of the compact "European city," with an attractive urban center, reduced land consumption, and a stable population. However, in another unexpected turn of events, within the last seven years the city has experienced an unexpected growth of 25,000 residents, despite the fact that the suburban *landkreise* (counties) are still losing population. Surprisingly, processes of suburbanization have turned into processes of reurbanization. Today in Dresden, areas of shrinkage and decline are in close proximity to prospering and wealthy communities. The strategic challenge is to deal with this patchwork while accepting that the future remains unpredictable. Hence, strategic flexibility becomes more important than the strategy itself.

Urban Shrinkage in Central and Eastern Europe

Only a few years ago, shrinkage was a politically taboo subject in Europe and systematically disregarded as a dominant development trend in specific areas. This was also true for East Germany, despite the fact that the real shape of development had long since been obvious. But within the administrative system, traditionally oriented towards growth objectives, shrinkage was considered to be intractable. Policy makers and experts in the administration were unable to cope with the issue in a constructive way.

Figure 1: Change in population in Europe 1996-1999 (Source: EU 2004: 32)



light grey: increase; dark grey: decrease

Since the turn of the millennium, however, the situation in Germany has changed significantly. Suddenly, the term 'shrinkage' has resounded throughout the land. Innumerable activities and events deal with the issue. In 2000, an independent expert commission was installed by the German Federal Government to analyze the housing market problems related to contraction processes. East German cities like Schwedt, Eisenhüttenstadt, Hoyerswerda and Leinefelde started to tear down buildings in large housing areas with federal and state support. Also in 2000, the Federal States (*laender*) in East Germany established an urban restructuring policy with deconstruction and conversion in housing areas and an emphasis on the revitalization of city centers. The existence of integrated city-wide urban development strategies became a precondition for funding the demolition of abandoned or underused buildings. More broadly, endeavors for a political answer to demographic shrinkage in East Germany show up in the seven year program *Stadtumbau Ost* (Urban Restructuring East; 2002 -2009), jointly run by the Federal

Government and the six East German Federal States, with a budget of 2.5 billion Euros. To deal strategically with the consequences of emigration and a declining natural population, many East German cities have elaborated integrated urban development strategies.

What is often forgotten in the recent debate in Germany, however, is that shrinkage is by no means just an East German problem (cf. figure 1). For years, one has been able to observe demographic decline in large parts of Europe. Between 1995 and 1999, the highest annual loss of population in relative numbers was recorded in northern Finland, in central and northern Sweden, and in the Central and Eastern European states (with the exception of most of the Polish regions). A substantial loss of population took place as well in southern Italy, in the central regions of France, in Scotland, and in the Alentejo in Portugal (EU Commission 2004).

According to the urban audit – a European database for comparative analysis of EU cities – out of 220 large and medium-sized European cities, 125 (57 %) lost population in the period from 1996 to 2001 (EU 2007). Included in this list are 22 German cities (14 from the western part, 8 from the eastern part of Germany), 19 Italian cities, 11 British cities, and 5 Spanish cities. In the Central and Eastern European accession countries, 53 out of a total of 67 cities shrank. The ten cities with the highest relative loss of more than 1.75 % annually were: Halle an der Saale, Frankfurt an der Oder, Schwerin, Magdeburg (all in the eastern part of Germany), Bacau, Cluj-Napoca, Piatra-Neamt, Targu Mures (all Romania), Lisbon (Portugal), and Venice (Italy). This urban shrinkage in Europe was not predominantly caused by suburbanization. Out of 98 larger urban zones (a functional urban region mainly based on commuter connections) included in the database, 53 (54 %) still shrank. In addition to the suburban loss, economic decline in structurally weak, old industrialized cities (typical examples are Turin, Bilbao, Liverpool and Essen) has led to problematic development paths, in some ways similar to those in American metropolises like Detroit, Pittsburgh, and Cleveland. This is particularly the case in Central and Eastern Europe, where the combination of post-socialist and post-fordist transformation processes led to exceptionally severe shrinkage phenomena, with out-migration and natural population losses.

To deal with the results of demographic contraction – often linked with economic and physical contraction – and to manage the restructuring of shrinking urban regions in Europe is one of the most challenging tasks for Europe's cities in the forthcoming years. The still-dominant one-sided growth strategy is risky; on a pan-European scale, population decrease in many (if not most) cities is inevitable in the coming decades. In general, a growth-oriented strategy intensifies the negative consequences of shrinkage because it goes along with a single-minded orientation toward massive external investment, which is necessary to break the downward economic spiral (Häußermann / Siebel 1987). In this regard, the experiences with conversion strategies in East Germany could be of value for many deindustrializing regions in Europe and elsewhere. Here, maybe for the first time in modern urban planning, planners disengage from the illusion of new growth and aspire to conduct a pragmatic deconstruction.

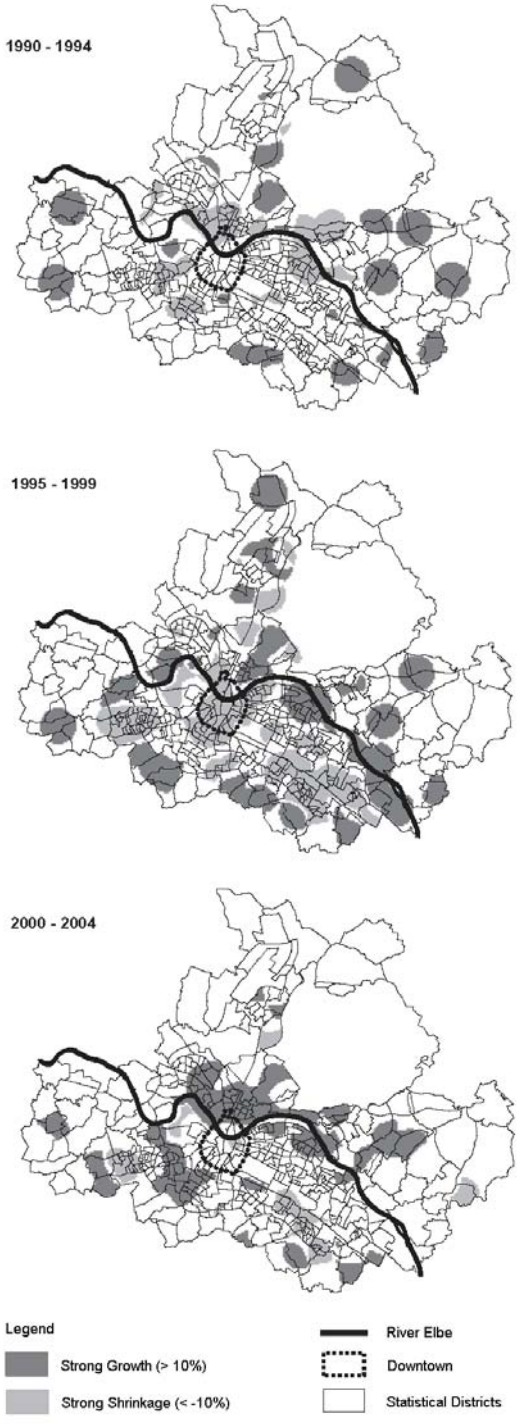
Figure 2: Dresden city centre on the banks of the river Elbe (Photo: City of Dresden)

The Example of Dresden: a 'Stabilized' Shrinking City

The City of Dresden is located in the southern part of the former East Germany (see figure 1). Since German reunification, Dresden has been the capital of the federal state of Saxony. However, the development path of Dresden in the 1990s did not meet the high expectations people had after the fall of the Berlin wall. Rather, the East German economy underwent a "system shock." As a consequence, all important areas of urban development and public services underwent a radical change. The abrupt collapse of the East German economic and social order led to escalating unemployment rates, accompanied by a dynamic out-migration to the western parts of Germany and a dramatic drop in birth rates. In the first half of the 1990s, Dresden faced residential decrease—in particular in the historic neighborhoods around the baroque city center, where the housing policies of the GDR had left behind very bad housing conditions (see figure 3).

Immediately after the political changes of 1989 and 1990, Dresden experienced vibrant construction activities—especially in a large-scale retail and hospitality industry. New commercial zones and office locations were planned and, with a certain time lag, the construction of new housing units and the rehabilitation of historic neighborhoods started. However, in quantitative terms, the construction activities were insufficient to ease the tense housing market. As in many other East German cities, the spatial focus of investment activities lay initially on the outskirts of the city. Plans for the inner city were impeded by long-held opinions regarding principles of urban design and by controversial property rights.

Figure 1: Population Development in Dresden 1990 – 2004 (Source: Siedentop / Wiechmann 2007: 58)



After 1994, the relatively moderate construction activities were superceded by a period of "hyper-dynamic" housing construction. Heavily influenced by national investment incentives, the construction of housing units reached a peak between 1995 and 1998 with an annual completion of more than 5,000 dwellings. This level was two to five times higher than in comparable cities in West Germany. Since 1990, 38,000 new housing units were built and 25,000 housing units were rehabilitated. To a large extent, the new construction took place on the outskirts of Dresden and in areas that were incorporated by Dresden at the end of the 1990s.

Parallel to the intensive construction and rehabilitation activities of the mid 1990s, Dresden was affected by a strong trend of suburbanization. Paradoxically, housing construction and out-migration reached their post-reunification peaks in the same period, from 1995 to 1998. The result was an oversupply of housing, leading to a vacancy rate of more than 20% at the end of the decade.

In economic terms, the city recovered slowly from the industrial breakdown. With state support, a highly competitive high-tech industry was established in the mid 1990s. The "Silicon Saxony" micro-electronics cluster with chip designing, and semi-conductor and component manufacturers encompasses more than 760 companies and about 20,000 employees in the region. Infineon Technologies and AMD run their most

up-to-date manufacturing facilities in Dresden. Today, 45 percent of the city's industrial production happens in this sector, which has close linkages to various research institutions, including the TU Dresden, a technical university with 30,000 students.

Since the turn of the millennium, Dresden has had an increasing population for the first time since the early 1980s, due to rising birth rates and a positive migration balance. This development is reflected in urban quarters in quite different ways (see Figure 3). In particular, the historic neighborhoods around the city center are gaining population, whereas the baroque city center and the large housing areas of the 1970s and 1980s, composed of buildings made of precast concrete slabs, are still losing residents. Today, growing and shrinking neighborhoods are located in close proximity.

With the increasing vacancy rates in the city, the suburbanization process has nearly stopped. Obviously, Dresden has benefited from the easing of the housing market and the structural problems of the surrounding rural areas. At present, Dresden offers a broad housing stock as well as land for building in the inner city. Even though the city is growing, there is no need for new green field developments in view of the huge stock of brown fields. Approximately 1,300 hectares (3,212 acres) of derelict urban wasteland cover nearly 14 % of the land available for building in Dresden.

Today, Dresden is performing quite well in comparison with other East German cities. In general, there is a trend towards increasing disparities within the urban system. On the one hand, promising cities appear: besides Dresden, this includes Potsdam, Jena, and Erfurt, with high potentials in fields like culture and research. On the other hand, there is another group of "loser cities," with low potential and a sustained loss of population and prosperity. Cities like Gera, Magdeburg, and Cottbus belong to this group (Bertelsmann Stiftung 2006). In economic and demographic terms, Dresden has become one of the growth poles in a shrinking environment. But in comparison with prosperous West German cities like Munich, Frankfurt or Hamburg, the situation is still challenging. Unemployment rates remain above 12%, purchasing power is approximately 15,000 Euro per capita–10% below the national average and less than two thirds of the per-capita purchasing power in wealthy cities like Munich. However, with economic growth rates between 4% and 6%, and with a population increase of 0.6 % annually since 2000, Dresden outperforms other cities in Germany. Nevertheless, the current population – 510,000 residents in 2006 – is far below Dresden's peak of 650,000 residents in the 1930s.

Dresden's strategy since 1990

Strategic planning in the City of Dresden after the German reunification can be divided into three major phases: going for growth (1990 – 1995), urban restructuring (1996 – 2001), and reurbanization (2002 on).

Phase I - Ignoring Shrinkage / Going for Growth (1990 - 1995)

After 1990, the urban strategy of Dresden was characterized on the one hand by extensive debates about local visions (*Leitbilder*) and on the other hand by the orientation toward single urban projects. Spatially, the focus was on the recovery of the historic center, with its gorgeous baroque silhouette that was largely destroyed at the end of World War II. There was a broad consensus around preserving the historic layout and rebuilding central buildings like the *Residenzschloss* (Royal Palace) and the *Frauenkirche* (Church of our Lady). The second focal point was the historic neighborhoods around the city center, which dated mainly from the turn of the 19th to the 20th century. After fifty years of economic scarcity, these quarters were in ruinous conditions. The city's prior task was the protection and preservation of these neighborhoods with – at that time in the early 1990s – low population density and sustained out-migration.

In general, the first years after the political changes of 1989/90 represented a great departure from previous planning strategies along with a high level of uncertainty about future developments. In 1991/92, the city planning department prepared three major strategic plans: a city development strategy, a downtown vision, and a transportation concept. After intensive public discussions, these plans were finally approved by the city council in 1994. The concepts were based on optimistic assumptions about the future socioeconomic development of Dresden. The planners expected 500,000 residents in 2005, which was more or less the same level as in 1989—before nearly 60,000 people left the city. This mass exodus was seen as a singular occurrence. Zoning and infrastructure plans were adjusted toward a target figure of 520,000 residents. Consequently, the city development strategy assumed the necessity of 50,000 new housing units, 700 hectares (1,729 acres) of new commercial zones, and more than 3 million square meters (32 million square feet) of new office floor space. The ambitious stated aim was to reverse the prevailing trend and to make Dresden a city of immigration

Phase II – Urban Restructuring (1996 - 2001)

In the second half of the 1990s, the city changed its policy. In light of the actual population development – a continued loss of 19.000 residents between 1991 and 1996 – faith in regaining the population size of 1989 gave way to widespread disillusion, despite good economic progress. After 1994, public debate about Dresden's urban development was marked by urban design competitions and architectural controversies. The new zoning plan in 1996 stated that the population development was worse than originally expected and assumed the city would have only 430,000 residents in 2005. Nevertheless, due to political considerations the City Council enforced that building areas and technical infrastructure were designed for a city of 500,000 residents.

While redesign of the city center was beset with substantial difficulties, the rehabilitation of historic neighborhoods made great strides. The fact that Dresden was able to recover these areas in spite of a substantial population decline and tremendous building activity on the urban

periphery is one of the most remarkable achievements of urban planning in the 1990s. In the face of new demographic and economic challenges, Dresden's planners were able to preserve the cultural heritage of a considerable European city. Parallel to that, the city intensified its efforts to rehabilitate and develop some of the large housing areas of the 1970s and 1980s, which had become increasingly impoverished and were hotspots of out migration and social inequality.

At the end of the decade, the state of Saxony implemented a municipal incorporation policy to compensate for the effects of ongoing suburbanization and to make local administrations more efficient. Between 1997 and 1999, nine municipalities with a total of 34,000 residents were incorporated by the City of Dresden. The new population of 471,000 residents inside the enlarged municipal area (329 km² instead of 226 km²) corresponded approximately with the population inside the old, narrower borders only five years before.

A major turning point in the urban planning of Dresden was the year 2000. Encouraged by national government funding programs, most East German municipalities established urban restructuring strategies. The federal program *Stadtumbau Ost* (City Restructuring East) has an eight-year budget of 2.7 billion Euros. It is intended to stabilize the housing market by tearing down abandoned or underused buildings and improving more stable housing quarters. As a precondition to receiving funds, municipalities have to elaborate integrated development concepts for their territories. The idea is that local strategies of urban restructuring should contribute to adapting the city to the consequences of urban shrinkage and should offer favorable conditions for new development opportunities.

The new strategic plan for Dresden from 2001 on, called *Integriertes Stadtentwicklungkonzept* (Integrated City Development Concept, INSEK), was no longer growth oriented. Instead, the model of the compact "European city"—with an attractive urban centre, reduced land consumption, and a stable population—was emphasized. The expectations concerning the population development now reflected the incipient stabilization trend. In the INSEK, the expected number of 480,000 residents in 2015 more or less equates to the population in 1997. Different from earlier concepts in the 1990s, the INSEK was based on the presumption that the medium-term demand for new housing can predominantly be satisfied by the existing housing stock. Only 1,000 new housing units—mainly inner-city town houses—will be built annually. A certain share of the existing brown fields will become green spaces. Furthermore, nearly 6,000 housing units have been torn down since 1989 (see Fig. 4). These areas will be reused as green spaces or as potential sites for single-family homes. Since 2002, the city planning department has made annual funding applications within the framework of the federal program *Stadtumbau Ost* on the basis of the INSEK. Nevertheless, it remains an informal planning document. In legal terms, it has no binding effect on public or private stakeholders.

Figure 4: Deconstruction of large housing blocks in Dresden (Photo: IOER)

Phase III – Reurbanization (from 2002 on)

In recent years, Dresden has experienced an unexpected growth of 25,000 residents, even though the region is still losing population. Processes of suburbanization have turned into processes of reurbanization. The economic growth of Dresden is showing rates of up to 6% annually and demonstrates that the city was successful in building up highly competitive local industries, particularly in the fields of microelectronics, information technology, and biotechnology. However, the creation of new jobs for skilled labor in the high-tech sector has not been sufficient to balance the continuous loss of jobs in more traditional sectors of the economy and in the public sector. Hence, economic growth has not gone along with job growth. Instead, the number of jobs in Dresden has decreased every year since 1990. To a large extent, the driving forces of the recent population growth are still unknown. However, several developments are thought to contribute to the trend reversal: rising birth rates, less suburbanization, and a positive migration balance with regard to the state of Saxony, to the Federal Republic as a whole - and with regard to foreign countries.

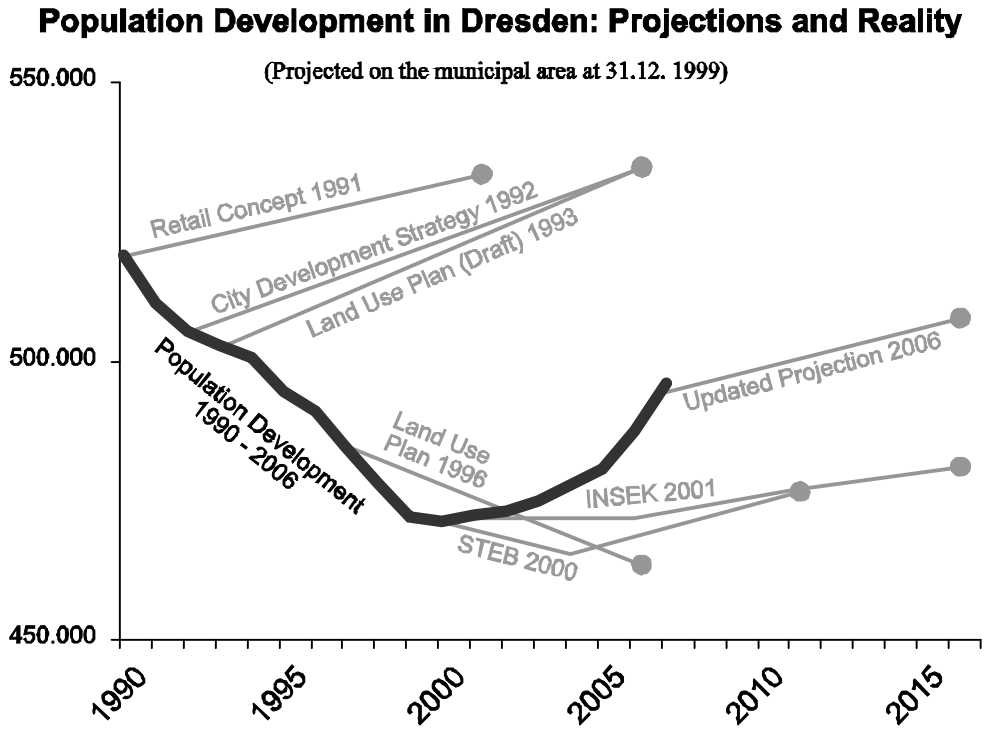
After the completion of rehabilitation, the historic neighborhoods around the city center have become very attractive housing areas with increasing densities and low vacancy rates (see Fig. 3). As a consequence of population growth and the demolition of vacant buildings in the frame of the *Stadtumbau Ost,* the average vacancy rates in other parts of the city have dropped as well. This has also been true for some of the large housing areas built in the 1970s and 1980s, mainly the relatively smaller ones in a comparably attractive location. Other large housing areas in the urban periphery still show symptoms of decline and social segregation. Today in Dresden, areas of

shrinkage and decline are in close proximity to prospering and wealthy communities. To continue the consolidation of the housing market and to improve the quality of the urban fabric, the city plans to demolish an additional 5,000 dwellings with state funding. Furthermore, the city strives for refinement of the high-tech industry, closely associated with various research institutions - and the maintenance of a broad variety of cultural offerings and historic sites that attract seven million tourists from all over the world each year.

Lessons from the Dresden case

Mistimed strategies?

Figure 5: Population development and prognoses in Dresden since 1990 (Siedentop / Wiechmann 2007: 61)



There is a striking asynchronicity with regard to planning strategies and the actual urban development of Dresden over the past fifteen years (see Fig. 5). In times of strong population losses, the city forecasted a population increase. In a period of stabilization, local planners and politicians assumed continuous shrinkage. And as substantial growth set in, the prognoses were based on premises of a stable population development. To explain the discrepancies, one has to take into account on the one hand a certain time lag in analyzing the structural developments of settlements. On the other hand, a normative bias toward optimism among the city's planners also played an important role. The City of Dresden consciously relied on growth and the reversal of negative trends. In the face of great uncertainty about future developments, the city abandoned

the option of drawing synoptic plans and saw "additive urban planning" as the best opportunity to meet the specific requirements of the city's struggling neighborhoods. However, this incremental growth-oriented strategy had its limitations. For example, city planners failed to propose a realistic quantity structure. Moreover, there was no guideline to prevent private misinvestments. Better public communication about the real changes in demand for residential, office, and commercial spaces in the – at that time – shrinking city would have helped contain the "investment mania" of private developers triggered by state incentives.

What's the bottom line?

The description of Dresden's development path since the political changes nearly two decades ago demonstrates that most trends were very hard to predict if not completely unforeseeable. In the 1990s, people–particularly politicians and planners—were too optimistic about the future. This reaction was by no means exceptional for European post-socialistic cities in the 1990s. In practically every East German city, local economic development was overestimated at that time. Later on, as people focused on correcting this false estimation, nobody in Dresden anticipated the amount of new growth that would take place after the turn of the millennium. Today, areas of shrinkage and decline are in close proximity to prospering and wealthy communities. The strategic challenge is to deal with this patchwork while accepting that the future remains unpredictable. In shrinking cities, there is truth in the saying that "for every complex problem, there is a simple solution that is wrong." Linear trend extrapolation or "business as usual" is very likely to lead to counterproductive strategies. The only steady trend in Dresden has been a continuing trend reversal. Hence, strategic flexibility has become more important than the strategy itself. Cities that are, like Dresden, characterized by manifold talents and confronted with dynamic change in their fundamental parameters within a historically short period of time should neither plan for growth nor for shrinkage. They should plan to stay flexible and make their cities adaptive to change.

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Shrinking Cities in France and Great Britain: A Silent Process?

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Introduction

City shrinkage is the result of globalization and its effects in terms of the relocation of industry and metropolization. The new distribution of economic structures has led to agglomerations of activities in some regions, whereas others are experiencing decline. In France, as well as in Great Britain, the transformation of local productive systems resulted in a polarization of regional spaces and a growing imbalance among urban territories. Most of the former industrial spaces were left behind by the process of economic restructuring. The particular patterns of shrinkage observed in both countries might offer an explanation for the relative lack of interest raised by urban decline in France and Great Britain.

The emergence of a globalized, post-industrial economy in France and Great Britain has led to new regional specializations, as intense capital mobility has driven a relocation of investment into higher-profit sectors. One important consequence of this shift has been a rapid and flexible reconfiguration of production and distribution sites (Audirac, 2002). This new form of production, which has emerged since the 1970s, has been facilitated by cheaper, easier, faster and safer transportation, information, and communications. As distances and boundaries disappear, activities tend to be increasingly "footloose." While this redistribution of business has led to agglomerations of activities in some regions, other regions have suffered a decline that reinforces prior trends toward uneven economic and urban development (Storper & Walker, 1989; Storper & Scott, 1992). Cities that focused on one branch or one cluster of economic activities were particularly harmed by this process. The steel, textile, and mining cities of Northern England and Scotland are notorious examples of the difficulties that some cities experienced in adapting to post-Fordist economic requirements (Bontje, 2004). While globalization is generally accompanied by strong competition between regions and cities, in high-wage countries the competitiveness of these regions and cities is increasingly based on knowledge, innovation, and networking: those places with intensive reciprocal links between local players have become more competitive. At the same time, urban areas that have not been able to connect to information networks are experiencing decline and shrinkage, becoming “black holes” in the so called space of flows (Castells, 2000).

In France and Great Britain, the transformation of local productive systems gave birth to a polarization of regional spaces and a growing imbalance among urban territories (IAURIF, 1999). While a number of "pôles d'excellence" were the winners of economic restructuring, some industrial spaces were left behind by this process, thus intensifying social differentiation among urban territories (Beckouche, 2001). These areas are not only suffering from numerous social problems, but they are also characterized by economic and demographic decline. Nevertheless, cities have not all reacted in the same way to globalization: local context and strategies matter in addition to global change in determining the shape of urban transformation (Amin and Thrift, 1994).

Despite the acuity of its manifestations in some places, urban decline is not a high-profile issue at the national level in either France or Great Britain. This dearth of interest and analysis is probably due in large part to the demographic fact that, along with Ireland, France and Great Britain are the only countries in Europe currently unaffected by population decline. However, this quasi absence of interest and analysis can also be explained by the particular characteristics of the cities and towns facing decline in both countries.

Patterns of Urban Shrinkage in France and Great Britain

While city shrinkage is a common phenomenon for a number of countries in Western Europe, it takes a variety of forms depending upon national, regional, and local contexts. The shrinking cities of France and Great Britain are clear examples of this range of variation.

Three Types of Shrinking Cities in France

Between 1990 and 1999, population growth in France remained relatively high at the national level although it slowed down a bit when compared to the 1982-1990 period. (Whereas the annual growth rate between 1982 and 1990 was 0.51%, annual growth between 1990 and 1999 was 0.37%). The natural rate of 0.36% per year is among the highest in Europe. However, the 1999 census also reveals that at the subnational level, about one third of French urban areas shrank between 1990 and 1999 or, in other words, 112 out of 361 urban areas[1] lost part of their population (Julien, 2000).

Three types of urban areas are shrinking in France. The first type comprises large urban areas whose decline is clearly the result of deindustrialization. Among the 52 largest urban areas in France[2], only 8 are shrinking, and almost all of them are located in declining industrial regions such as Lorraine, Nord-Pas-de-Calais and Haute-Normandie[3]. Economic development in these

[1] The 361 urban areas in France are defined by a group of "communes" made of an urban pole (with more than 5000 jobs) and its periurban ring (rural or urban "communes" in which more than 40% of the working population have a job within the urban area).

[2] The largest urban areas are those with a population of more than 150,000 inhabitants.

[3] These urban areas are: Saint-Etienne (Rhône-Alpes), Douai (Nord-Pas-de-Calais), Montbéliard (Franche-Comté), Lens (Nord-Pas-de-Calais), Béthune (Nord-Pas-de-Calais), Le Havre (Haute-Normandie), Valenciennes (Nord-Pas-de-Calais) and Thionville (Lorraine).

shrinking cities was traditionally based on mining, port industries, or another single industry. The crisis that occurred in these industrial sectors has led to economic, social, and demographic decline.

Most of the shrinking cities in France, however, belong to a second type, which is constituted of small urban areas[4]. These are located in the middle of the country, from the Ardennes in the North to the Pyrenees in the South, passing through the Massif Central. In four central "regions"[5]—Champagne-Ardennes, Midi-Pyrénées, Limousin, and Bourgogne—more than three quarters of small urban areas decreased in population between 1990 and 1999 (Julien, 2000). In France, as well as in many other countries, urban growth has been recently concentrated in litoral regions, near the borders (especially Alsace and the Alps) and following important transport infrastructures. Growing urban areas are those located in the valleys along major road infrastructures (Vallées de la Loire, du Rhône, du Rhin) and those linked by the TGV (Rennes, Nantes, Poitiers, Bordeaux). On the contrary, shrinking urban areas are those that are isolated from infrastructure networks or urban networks. Most of them are located in the heartland of France.

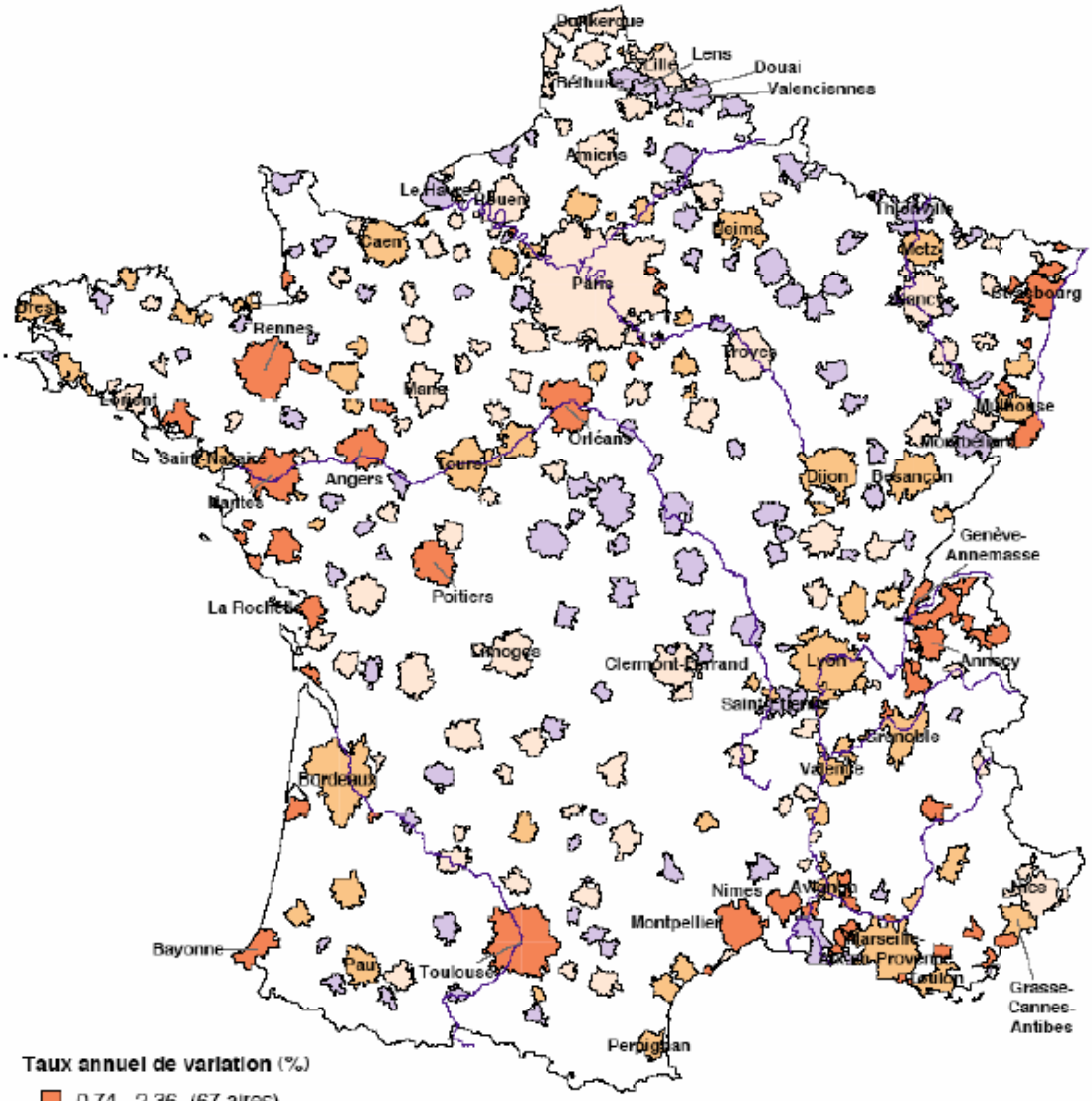
These first two types of shrinking urban areas reflect well the role of globalization on shrinking processes. The decline of large cities is clearly the result of the redistribution of production at the international scale, while the smaller cities have been left behind by globalization, being too far from the larger metropolises and from networks to be considered actors in the process.

A third type of urban shrinkage is occurring within urban areas that are growing as a whole: city centers are declining while outer suburbs are gaining population. This process, which is not particular to France and is often related to urban sprawl[6], is particularly observable in fast growing regions such as in the South of France (e.g. Marseille, Avignon, Toulon, Perpignan) (Bessy-Pietri, 2000). This type of shrinkage can also affect “first suburbs”—those places in industrial countries that were the first to develop after their city centers (Puentes and Warren, 2006). In France, these suburbs were characterised by their strong industrial infrastructure and by a large working class population, who lived in large housing estates called “grands ensembles.” The deindustrialization process, along with the “flight” of a large share of their inhabitants to the outer suburbs, led to a dramatic decline of these suburban towns in terms of demographic, economic, and social evolution.

4 Most of them have less than 50,000 inhabitants.
5 France comprises 22 "régions".
6 In a number of urban regions, the growth of urban peripheries has been fed by the urban core’s decline (Beauregard, 2003 ; Squires, 2002).

Map 1

The 361 Urban Areas: Population change between 1990 and 1999



Sont nommées les 52 aires urbaines de plus de 150 000 habitants

Source : recensement de la population de 1999, Insee

Two Types of Shrinking Cities in Great Britain

Great Britain is now a country of net immigration, with particularly high gains in recent years for London and a number of other settlements in the southeast of the country[7]. (Between 1991 and 2001, the population of Great Britain grew by about 1,500,000 or 2.7 %.) In England, the areas affected by shrinkage are metropolitan areas and/or industrial areas clustered around the middle and north of the country; in Scotland, it is the central belt and also, as in Wales, certain peripheral areas such as the islands. Scotland is significantly affected by this decline, especially in Greater Glasgow and the Western Isles. The south and southeast of England show little signs of shrinkage because, with the exception of London, this area is made up of small rural and mixed/rural districts. The divide between the prosperous southeast and the deprived northwest has long been studied by British geographers (Bovaird, 1993; Massey, 1984; Massey & Allen J., 1988). This uneven economic fate has been strengthened by the economic downturn, in particular in industrial sectors, and this regional difference does not diminish when looking at growth and shrinkage of population.

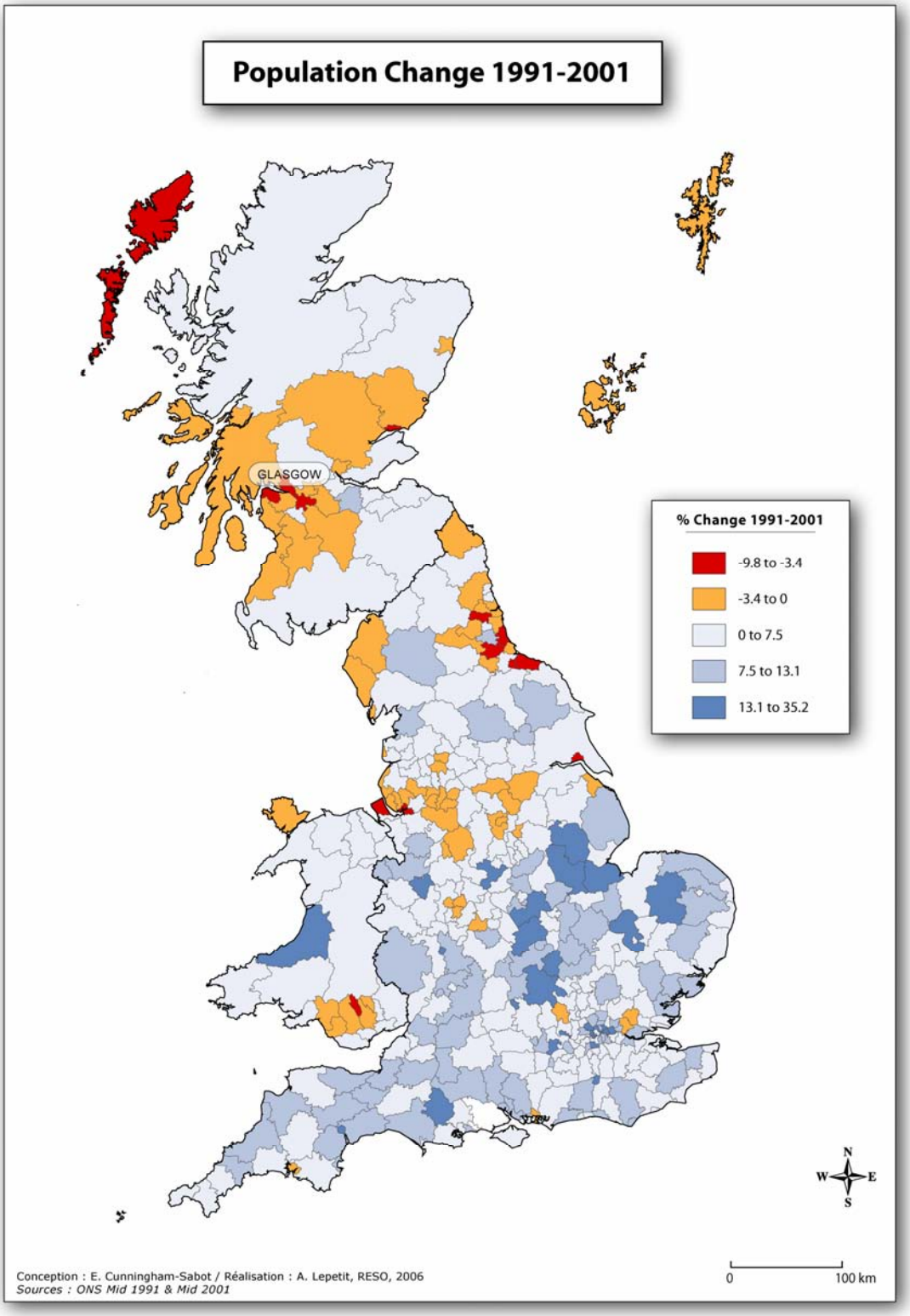
According to Lupton & Power (2004) and another governmental report (ODPM, 2006), the urban population of Great Britain could be divided into 4 kinds of settlements (Cf. Graph n°1):

1. Major "Metropolitan Areas" that could also be called Conurbations. They include the major metropolitan cities and their hinterlands. Their population is between 1 and 2.5 million. Eight of these metropolitan areas, including London, have experienced the biggest population growth. Of the seven others, six are shrinking.
2. Other Large Cities ("freestanding cities" such as Edinburgh or Nottingham). There are fourteen, their populations ranging from 150,000 to 450,000. They are typically large industrial centers or ports, and of these fourteen large cities, eight are shrinking.
3. Medium Cities. These seventeen medium cities can be small industrial centers, or educational centers (like Oxford or Cambridge), or an urban settlement serving a rural hinterland. They are places of growth.
4. The remaining local authorities, towns, or districts which, because of their size, have not been elevated to city status. They include new towns, seaside resorts, small industrial towns, and towns in rural areas. These places have growing populations.

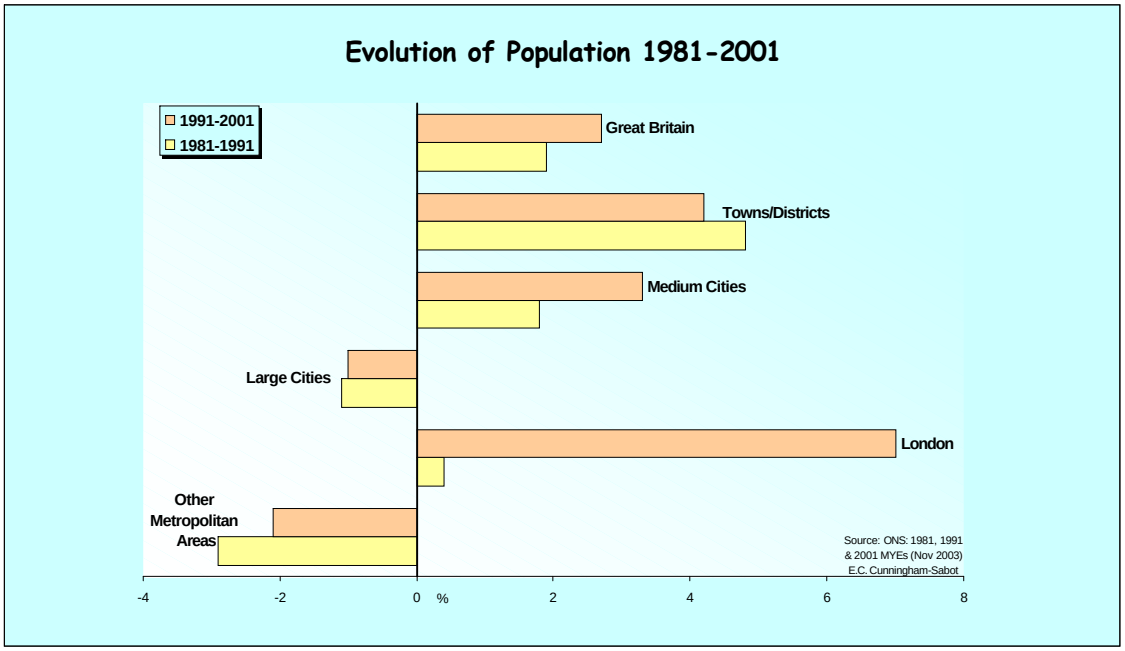
With the exception of London, urban shrinkage is specific to large urban settlements (large cities and metropolitan areas) while a significant growth is occurring in medium cities and towns.

[7] According to the data published in November 2005, 293,000 workers were registered as legal immigrants, among them 170,000 Poles, 40,000 Lithuanians, 31,000 Slovakians, 20,000 Latvians and 17,000 Czechs. The survey estimates that the real figure is probably double. Some agencies specialise in recruiting central European workers, mainly in professional fields where there is a lack of British workers: the construction industry, agriculture and haulage. Thanks to their legal status, many arrange for their families to join them with the intention of settling down in Britain.

Map 2


Population Change 1991-2001
GLASGOW
% Change 1991-2001
-9.8 to -3.4
-3.4 to 0
0 to 7.5
7.5 to 13.1
13.1 to 35.2
N
W
E
S
0
100 km
Conception : E. Cunningham-Sabot / Réalisation : A. Lepetit, RESO, 2006
Sources : ONS Mid 1991 & Mid 2001

Graph 1:



Differences in Shrinkage Patterns Between France and Great Britain

While in Great Britain urban shrinkage affects the largest conurbations and cities, in France it is mainly the smallest cities that are affected. Demographic decline is probably lower as a whole in France than in Great Britain[8]. However this does not explain the fact that urban shrinkage is more scattered in France. One possible explanation is historical: Because the Industrial Revolution started in Great Britain, particularly in big cities close to mining areas, they were reliant on their industrial base for a longer period of time than their French equivalents. This made conversion to service industries more difficult. Another possible explanation is that French regional planning policies have been relatively successful in reversing the decline of most old industrial regions, although they have done almost nothing to prevent the shrinkage of small towns. It could also be pointed out that in France, the residential mobility of the unemployed is relatively low for unskilled workers, whereas in Great Britain mobility in the work market is the norm. This particular pattern has resulted in relative demographic stability in the French industrial areas affected by a strong economic decline. While in France, most of the unemployed population does not move away, even to get a new job (Moscovici, 1959; Wachter, 1991; Vignal, 2005), in Great Britain, workers are more likely to move from declining cities in search of a job or better living conditions.

[8] The French population is still growing a little more than Great Britain's: France had a 3.3% growth rate between 1990 and 1999 (annual rate = 0.37), compared with a 2.7% growth rate for Great Britain between 1991 and 2001. (INSEE, 2000 ; ONS, 2001).

Perceptions of Shrinkage in France and Great Britain

It is important to point out that urban shrinkage is not identified as a public policy issue at the national level either in Great Britain or in France. Rather, the growth paradigm is still dominant in both countries. Yet this absence of consideration might be explained by the fact that France and Great Britain are not experiencing the same demographic decline as other European countries, such as Germany, and are proud to keep the highest fertility rates in the European Union. In Great Britain, the population has continued to rise over the last three decades (Cf. Graph 1). This explains the quasi non-existence of debate regarding the problem of urban decline, especially at the national level. While the growth of towns and districts is slowing down, medium cities are booming demographically, and as of recently, London's growth has beaten all the others. This trend has been reinforced with the enlargement of the European Union in 2004 and the British government's open-door immigration policy, which encouraged the arrival of workers from countries of the newly enlarged European Union. Moreover, shrinkage in metropolitan areas and large cities outside London has also slowed down over the last two censuses, which again is most likely due to immigration.

In France, the economic decline of former industrial and mining regions has been well analyzed (Wachter, 1991). However, the attention of scholars and policy makers in France is more focused on the regional level than on the urban level. The lack of interest in urban shrinkage in France might be explained by the characteristics of the urban areas that are affected: most of them are small and weigh very little in the nation's economy. The few studies dedicated to small towns have concluded that they were generally losers in the process of metropolization and globalization (Lugan, 1994), becoming "forgotten peripheries" (Duvillard, 2003). The general trend towards concentration and competition resulted in small towns being condemned to decline in terms of population and activities (Pumain, 1999). Relatedly, there are no major academic research centers in the small towns affected by shrinkage in France. Thus, very few studies have addressed the challenges of shrinkage in French towns.

In Great Britain, large metropolitan areas are most affected, and thus local scholars are concerned and actively involved in the future of their metropolitan area. Yet at the same time, the bulk of British researchers are located in London and the South of England, which is booming demographically. While debate about urban decline has already started on some local scenes, particularly in the most affected regions like Scotland (Pacione, 2002, 2004; Turok & Bailey, 2004) or the north of England, the subject has not really reached a national level. Furthermore, with recent immigration from new European Union members, the debate might be postponed for a while. According to a report from the Office of the Deputy Prime Minister (2006), "The population of England is now growing more rapidly than at any time since the early 1970s, providing a demographic driver for city growth." This extract from "State of the English Cities" reflects well the fact that, thanks to immigration, Great Britain is still viewing urban development through a growth paradigm.

Conclusion

While city shrinkage is a result of globalization and its effects in terms of relocation of industry and metropolization, it can take various forms. It does not affect comparable areas of France and Great Britain in the same way, and even within the same country, types of shrinking cities differ. Both of them (along with Ireland) being countries with sustainable birth rates, there is no pressing debate about urban decline.

At the same time, in both Great Britain and France, urban decline is difficult to acknowledge at any scale—whether it be national, regional, or local. Nationally, in both countries, the population is growing, and when surrounded by growth areas, pockets of decline pass unnoticed. Moreover, as globalization and "glocalization" (Amin 1994, Jessop 1994, Swyngedouw 1997) increase competition between cities, urban marketing is focused on presenting glossy images of postmodernity rather than highlighting difficulties like urban decline. In psychological terms, France and Great Britain are still in denial when considering urban shrinkage. However, demographic decline related to lowering birth rates is becoming an issue in most European countries, and some regions in Great Britain and France are already affected by this process, with a growing share of an aging population. In this context, it is likely that the issue of city shrinkage will emerge in the near future in both countries at a national level and on the policy agenda of urban and regional planners.

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Shrinking Cities: A Global Overview and Concerns about Australian Mining Cities Cases

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Introduction

There is now general recognition that the dominant paradigm among planners and policy makers is planning for growth. The language of the planning paradigm is unabashedly tilted towards development, progress, expansion and management of growth. The underlying assumption is that all cities and towns can achieve growth, but this is where the problem arises. While the economy is expanding rapidly and population growth continues, the scenario of growth for all may be possible, but this is hardly the case for most countries. With perhaps the exception of countries experiencing hyper-economic growth and continuing population expansion, the common experience for most nations is to have growth in some limited number of cities and very slow growth or shrinkage for the great majority. With the relentless march of globalization, intense competition between city-regions of nations yields winners and losers. Within nations, those centers that are part of the global city region network are likely to gain over other national cities. The point is that growth and shrinkage are two faces of the same coin of urban change. This paper is an attempt to outline some of the conceptual frameworks that throw light on the phenomenon of urban shrinkage. The second part of the paper outlines the effort by several cities in Australia to manage urban shrinkage.

Conceptual Frameworks

The study of urban shrinkage can be approached focusing on the notion that urban growth and shrinkage are the result of the same economic, social, and political changes in a society. A brief survey of the available conceptual frameworks can assist in gaining a deeper understanding of the shrinking cities phenomenon. Table 1 is a summary of the key conceptual frameworks that can be applied to study urban growth and shrinkage. The focus here is on what each of the conceptual frameworks identifies as the drivers of urban shrinkage, how urban shrinkage is manifested, and the strategies proposed or undertaken, with an example of sectoral studies undertaken to study the phenomenon in detail. Some comments are offered here to highlight the different approaches, as each one contributes to an understanding of aspects of the phenomenon. None of them fully canvasses the issues associated with urban growth and shrinkage, and they are all cast in the growth paradigm of seeking development for backward regions. For each locality, parts of several conceptual frameworks may be more important than others.

Table 1: Conceptual Frameworks for Shrinking Cities

Macro Models	Industrialization Center-Periphery	De-industrialization Post-industrialization	Globalization	Population Transition	Climate Change
Drivers of Shrinkage	Concentration of public/private investments; Centripetal forces created by growth poles	Concentration of professionals; Flow of creative class; Technology changes; Industrial restructuring	Corporatization of cities; Global city formation; Competition between world city regions; Shift towards professional services employment; Concentration of innovation and knowledge workers; New megalopolis	Decline in birth rate; Ageing of Population; Absolute population decline; 'Population echo'	Persistent droughts, floods, Natural disasters-- Hurricanes, tsunamis, Corporatization of farming
Economic/ Social/ Environmental Manifestations	Rapid development of 'centers'; Industrial zones; 'Free trade zones'; Pollution	Downtown decline; Inner cities decline; Brown field sites; Increase in socio-economic inequality	Global cities; Decline/Abandonment of cities/parts of cities/metro areas; Gentrification (Silicon Valley); Increase in socio-economic inequality	High levels of housing vacancy; Abandonment of residential areas; Wastage of infrastructure; Increase in socio-economic inequality	Abandoned farms; Destroyed infrastructure; Changing coast lines; Shrinkage of territories; Rapid change of ecosystems Increase of socio-economic inequality; Cultural displacement due to relocation
Urban & Regional Policies & Strategies	Growth poles/centers; Decentralization policies aimed at stimulating growth in the periphery	Urban renewal programs; Tax free zones; Industry clusters; 'Smart cities'; 'Creative cities'; 'Design cities'; Land banks	Branding of cities; Science Parks; Bio-tech Parks; 'creative cities'	Demolition & renewal; 'smart shrinkage'; Reinventing urban centers; Re-urbanization	Water management; Disaster recovery; Environmental refugees; Visa concession
Sectoral Case Studies	Higher education; Industrialization; Manufacturing	Innovative industries; Service sectors; Mining Technology Services	ICT; Mining; Clothing & Footwear; Auto	Building & construction; Retail; Health care; Housing	Agriculture; Tourism; Rural industries; Fisheries

Martinez-Fernandez & Wu (June 2007)

The authors who proposed the center-periphery model used it to analyze both the national context and the international context (Friedmann et al. 1971). They are concerned about the centripetal forces created by a "growth pole" drawing into itself the innovations, investments, and well-educated—thus leaving the periphery less able to achieve development. Popular in the 1960s, the strategies focused on promoting industrialization or the decentralization of industries in order for the periphery to have the opportunities to develop. The concept of development is biased towards economic growth, and much attention is given to the backward areas of industrialized countries (e.g. the Appalachian Commission in the United States) and the less industrialized regions of developing countries (e.g. growth centers in Venezuela). The key concern is the extreme imbalance between the economic development of the primate city (often the capital city) and the rest of the country. The recent announcement of the Chinese leadership about assistance to the less-developed western region of China is a reflection of the same concerns about the dominance of the coastal major cities in Chinese development.

Beginning with the 1980s and into the 1990s, industrialized countries faced competition from newly industrialized countries such as the Four Dragons of Asia (Hong Kong, Singapore, Taiwan, and S. Korea) and began to experience deindustrialization; their manufacturing centers, including many heavy industrial centers, became uncompetitive against the rapidly expanding export-oriented economies in Asia. The United Kingdom and the United States in particular focused on the brown fields of old industrial centers suffering from economic downturn. This process took place in the context of their economies shifting to the tertiary sector and the rise of high-tech industries that have very different demand for labor and locations. The rise of "silicon valley" first in California, then in Massachusetts, eventually spawned a number of others in different parts of the country. In the process, some regions experienced significant growth while many others experienced significant shrinkage, due chiefly to differentials in the cost of land and labor. Many of the strategies were initially still based on the industrialization model, which spawned policies such as "enterprise zones" and industrial cluster analysis. As understanding of the fundamental economic changes that were occurring became more sophisticated, a focus emerged on the "creative class" to attract those who were key to the new economy to take root in the new growth communities. Given that many of the necessary ingredients (universities, good climate…etc.) are simply not available everywhere, those communities left behind in the blossoming of the new economy were left to fend for themselves. The likes of Detroit, Cleveland, Troy, and St. Louis experienced vast population declines (Brachman, 2005; Downs, 1994).

As the study of deindustrialization gathered pace, scholars' attentions were also drawn to the global economic changes that resulted from the flow of capital. These economic transformations were leading to the rapid expansion of export-oriented economies in Asia and the rise of global cities based on professional services—chiefly banking, finance, and insurance. The rise of global city-regions that are centers of financial and related services (Los Angeles, New York, London, Singapore and others) changed not just their own regional economies but also the national economic spaces in which they are located (Sassen, 2002). More recently, the shift has been not only to financial services but also to those high-tech industries, such as bio-tech, that are dependent on highly trained professionals and their support staff, as well as on the knowledge base available in universities or other research institutes. The rise of global cities has led to shifts in employment structures and to demand for offices and housing.

There was a time when the key concerns were about population growth and how it might impede economic development. For an increasing number of countries, the reverse is now the issue. Mature industrial economies such as Japan, Germany and Switzerland are concerned about the absolute decline of population and what that means for their economy and urban areas. Regions of many other countries also struggle with declining population caused by out-migration of the young and able – a phenomenon particularly acute in economies that do not have the sustained economic growth to provide employment for their labor forces. (Romania in Eastern Europe is an example.) Ageing populations and declining fertility rates in mature industrial economies have led to the depopulation of urban neighborhoods (for example, Dresden) and have prompted strategies to demolish urban housing to create open spaces and to make urban neighborhoods more attractive to residents. In these cases, a very different kind of gentrification is taking place, in which urban centers try to lure back residents who have

moved to the suburbs. Abandoned neighborhoods are not only seen as an urban blight associated with urban crime (Rybczynski & Linneman, 1996), but they are also associated with a significant deterioration of urban infrastructure that must be replicated elsewhere at great expense.

As we become more aware of the impacts of climate change, it is obvious in places that have suffered prolonged drought, such as many parts of Australia, that climate changes have significant urban consequences as well. Regional cities whose economies are tied to agriculture have suffered significant downturn as drought has persisted and, consequently, businesses close and the population moves. In many Australian regions, the drought has been so prolonged (more than 7 years) and so drastic that farms are being abandoned because farmers can no longer afford to continue. As small farms are sold to large conglomerates or taken over by banks due to loan defaults, the economic structure has shifted. Local businesses may be bypassed as large corporate farms centralize purchasing to exploit economies of scale, which results in the loss of local employment and in spending flowing out of the region. While scientists are just beginning to fathom the impacts of climate change, there is little doubt that sectors such as tourism and rural industries are bound to be affected. These impacts will spill over to the urban settlements as the population—in particular, the young and well educated—leave.

This very brief survey outlining the key drivers of urban shrinkage demonstrates that in specific communities a combination of centripetal forces is at work: industrial restructuring, global competition, ageing populations, and climate changes. Specific locations exhibit different combinations, with different degrees of importance assigned to the various factors at work.

Australian Mining Cities Cases

Closely tied to the rise of global capital is one sector that has always experienced boom and bust—the mining industry. Global mining conglomerates are usually high-tech oriented in their methods of extraction and refining, and they are skilled in the development of mining towns that tend to have a distinct culture very much tied to the culture of the company that dominates their economy. The key issue for mining towns is determining what would take the place of mining activities once the resource is exhausted or is no longer considered economical to exploit. Furthermore, the likelihood of an environmental legacy that requires expensive remediation often confronts the community (Martinez-Fernandez & Wu, 2007).

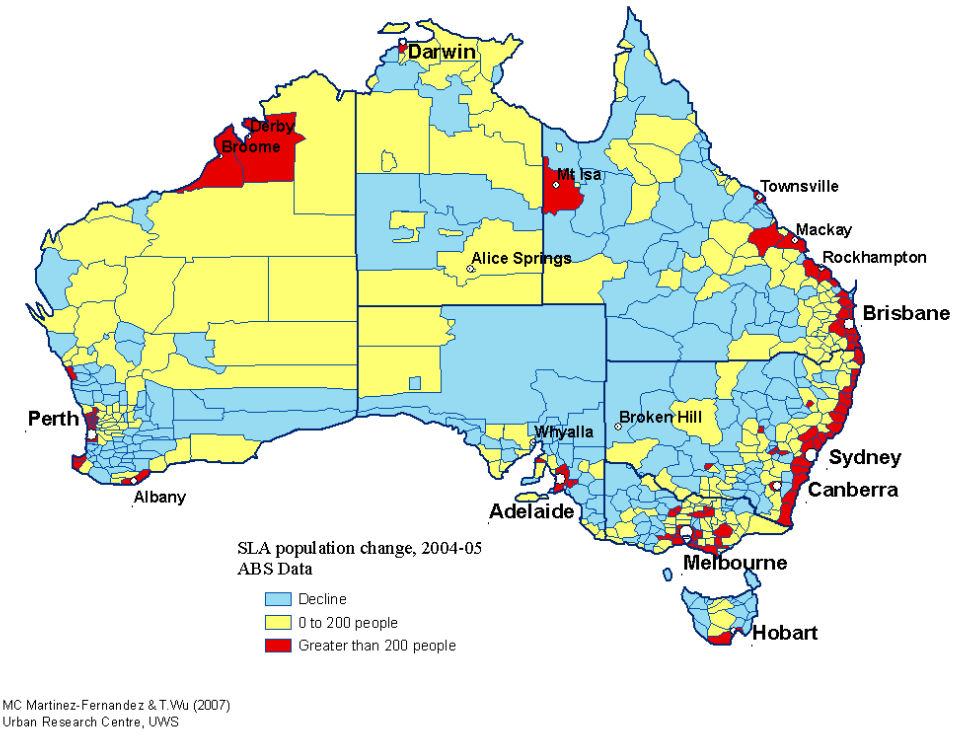
Over eighty-five percent of the Australian population lives in urban areas that hug the coastal zone of an arid continent. The seven capital cities of Australia—in particular Perth, Melbourne, Sydney and Brisbane—are the growth areas of Australia, benefiting variously from internal and international migration. The growth of Australian capital cities is largely based on the availability of employment, metropolitan vitality, and perceived opportunities.

The coastal areas of Australia, especially the mid- and north-east costal zones, are experiencing significant internal migration from those who are escaping from the less pleasant

climate of the southern states. While many of these individuals are seeking retirement living, there are significant numbers who seek life style changes. Consequently, coastal towns and cities—especially the region extending from Brisbane to the coast—compose one of the fastest growing urban regions of Australia. In many respects, the continuing growth of major cities such as Sydney, Melbourne, Brisbane and Perth exemplifies the centripetal forces at work in the urban system of Australia, where the major centers continue to grow at the expense of the rural regions. Rapid growth brings with it severe urban issues; with the severe drought ongoing for the past several years, the Brisbane region is experiencing strict water restrictions, bringing home the message about climate change and urban impacts.

As the coastal and major coastal cities continue to dominate the Australian urban system, another process at work is the consolidation of the major regional towns. These regional towns are growing at the expense of smaller towns in their region. Some 245 local government areas (LGA) lost population in the 2001 census, and the expectation is that this process is continuing (see Figure 1). This process is partly driven by the shrinkage of smaller towns due to changes in the agricultural economy: the out-migration of population, especially the young and educated, now exacerbated by drought and the need for consolidation to gain economies of scale (Martinez-Fernandez & Wu, 2007).

Figure 1: Population Change in Australia, 2004-05



Source: Australian Bureau of Statistics (ABS) (2006c) *Regional Population Growth, 3218.0 2004-05*. ABS, Canberra.

In summary, the Australian urban system is experiencing the multiple impacts of globalization (within which the capital cities of Sydney and Melbourne continue to dominate),

shifts in population due to demographic changes, and the impacts of climate change to both the regional agricultural economy and the coastal zones. One of the more distinctive features of the Australian urban system is the prominence of a number of cities and towns that are creatures of its strong mineral extraction sector. The export of coal, oil and gas and iron ore is a staple of the mining sector. In 2005-2006, the contribution of the mining sector to the total value of Australian exports was 37.6%, a significant jump from the 32.4% of the previous year (Australian Yearbook 2006 ABS Table 16.11).

It is in the context of their importance to the economy that Australian mining towns are of significant interest to the study of urban growth and shrinkage. Given the nature of mining and the location of resources, many mining towns are in remote, semi-arid locations where water shortage is a constant concern. The fluctuation of world mineral and resource prices has an overriding impact on the viability and prosperity of the mining towns. These towns are likely to be one-company towns in that the dominant economic force is based on one corporate entity employing the great majority of the labor force. Significantly, a number of these towns are created by corporations for the explicit purpose of exploiting the mineral or resource. Broken Hill, Mount Isa, Whyalla, and Katherine are examples of such cities (see Figure 1). To the extent that they are the creatures of the same corporation, they have very similar features and cultures to other mining towns established or dominated by the same corporation in different parts of the world.

To illustrate the kind of issues faced by a mining community, we briefly explore the case of Mount Isa**,** a city in the outback of the state of Queensland. Mt. Isa is the largest inland city in terms of population in north Australia. Founded in 1923 after the discovery of copper-silver-lead-zinc ore, Mt. Isa has been dubbed the 'Oasis in the Outback' and is known in short as 'The Isa.' In 1963, the estimated population was 15,192, and population growth in the area continued until the 1980s when it passed the 30,000 mark (Kirkman, 1998). However, Mt. Isa has lost population since the 1980s, mainly due to various collapses of the metal markets; in 2006, population counts were 21,371. Employment at the mines has declined from a peak of 63.59 percent in 1954 to 9.73 percent by 2001 (Martinez-Fernandez & Wu, 2007). Mount Isa Mines (MIM) was the only mine operating in town from 1924 to 2003, when Xstrata, a Swiss based mining group, bought MIM.

Despite the cyclical reduction of population and employment, technological innovation remains high in Mt. Isa; first driven by the MIM Corporation, and now by Xstrata. Xstrata's global strategy of exploiting technological innovations has secured patents of the 'ISA Smelt,' one of the most advanced technologies worldwide, which have been sold or licensed to Chinese, South American, and U.S. firms. MIM's copper extractor technology was similarly exploited. Another area of strong innovation is the hundreds of mining technology services (MTS) provided by fly-in/fly-out companies—now one of the most innovative industry sectors in Australia (Martinez-Fernandez 2005).

The case of Mt. Isa exemplifies a unique characteristic of mining centers in Australia: they constitute *hubs of knowledge intensity,* where internal and external experts prepare innovative solutions tailored to specific problems in the mine site. Knowledge travels through these MTS companies from one mine site to the next, bringing the latest technological applications and a

wealth of interconnections in the Australian mining 'innovation milieu.' MTS companies are highly dependent on the integration of knowledge they learn from each contract, as the application of new solutions is frequently based on their previous experiences. Consequently, the interactions between MTS firms and mining companies have a first-class level of innovativeness, from which mining cities could benefit. However, there is little sign of knowledge transfer from the mine site into the city. This is not surprising, as the strategies and skills needed for the transfer of knowledge into the city businesses and organizations would be very different from those used for managing urban growth. More often than not, mining companies constitute mobile investment that flies in and out of the city. Thus, it is more in the hands of urban managers to look for opportunities to capture a share of the technological and organizational knowledge operating in the mine site. This, indeed, calls for a different way to manage the relationship between city councils and corporations.

As a concluding remark, it could be argued that a key conceptual framework for explaining shrinkage in mining cities is the impact of globalization in the corporatization of cities. Population loss is evident with the decline of mining activities but, perhaps, this decline would be less if the knowledge-intensive activities undertaken by mining corporations in the industrial site were more connected to other businesses and organizations in the city. The corporations grow from making use of global knowledge networks while the cities 'shrink' because they are isolated from global knowledge and from the impact of that knowledge in other businesses and organizations in the cities. These cities only receive the part of the impact that is more 'place-dependent', while the global knowledge where the corporation is embedded is footloose. In the end, when a corporation moves on, either because the resource is exhausted or it is no longer economically viable to exploit, it takes with it the financial base of the city, while the legacy of environmental damage and an abundance of unused infrastructure stays behind. The more skilled and talented generally also move on, leaving the city with a damaged financial and knowledge base. The lack of strategic planning tools for managing change and for adapting to a new development path of shrinkage may result in further rapid shrinkage as well as an increase in socio-economic inequality.

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Changes on the Waterfront – Transforming Harbor Areas.
A Comparison and Evaluation of Waterfront Developments in Two Contexts: The San Francisco Bay Area, United States, and Hamburg, Germany[1]

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Introduction: The Global Transformation of Shipping Activities and Seaport Cities

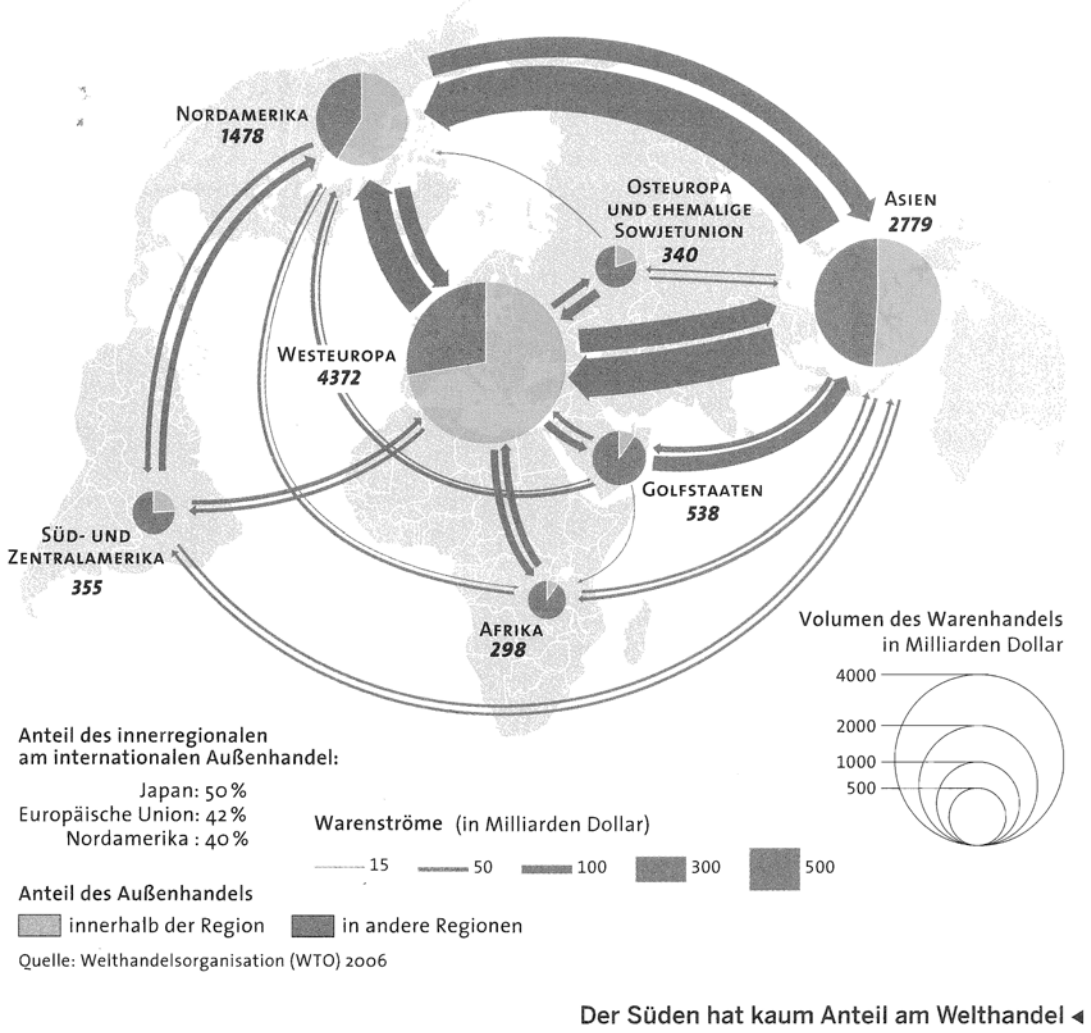
From ancient times until just a few decades ago, the waterfront was the place where information and news of other places were exchanged, where locals met foreigners, and where sailors were looking for entertainment. However, all that changed with the appearance of the container, the computer and the internet. In addition since the 1960s, a new "international geography of world trade" has emerged which has dramatically changed the relationship between port and city.

Now, eighty-five percent of the world's goods, services, and capital investments are exchanged among the three economically most powerful regions in the world: Western Europe, North America, and Asia. (Fig. 1: The three main trading blocks.) These goods are transported to a very large extent through container ships, which require new high-capacity container ports. In order to achieve success as a container port, each local port has to satisfy certain technical conditions (e.g. deep water channels, extensive areas of level ground for storage and for intermodal transfers, and adequate rail and motorway connections to population, production, and consumption centers). This means that, besides global factors, local decisions by government entities, private firms, and civic groups strongly influence what role a port will play under the new global economic conditions.

This recent transformation of the waterfront embodies two different local planning issues. One is how to transform the traditional port into one that meets the requirements for handling container ships. The second issue is how to create new urban uses (such as offices, housing, or recreation) out of the former ports, or the parts of them, that have suffered periods of decay. In both cases, conflicting interests and actors are often involved in the planning process. In particular, the decisions of two sets of actors are important: global transnational shipping corporations and their partners (who pursue economic efficiency), and local government, business, and civic actors (who pursue mostly public values, such as developing the local economy and improving the quality of the local public environment). These two sets of actors with their conflicting interests and perspectives have to negotiate with each other for cooperation on the ports. This paper compares and evaluates the decision-making processes and their consequences for port cities in two contrasting planning contexts: the Bay Area, California and Hamburg, Germany.

[1] A longer and more detailed paper is available from the author.

Figure 1: The three main trading blocks, volume of world trade flows (in billion $) and the main trading routes. (2004)



Source: *Atlas der Globalisierung*, Le monde diplomatique, 2006, p.91

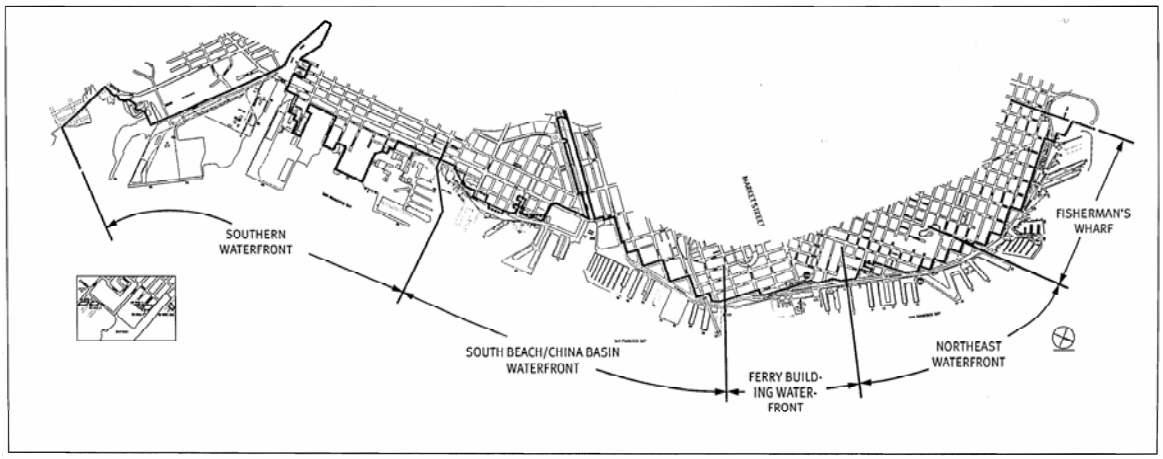
Port Modernization in the San Francisco Bay Area and Hamburg

The Ports of San Francisco and Oakland

The first container freighter brought the container revolution to the San Francisco Bay in 1958. With increasing containerization, break bulk operations declined rapidly and drastically. Yet while San Francisco's old finger piers are useless for container handling, other parts of the port could have been converted into container terminals. However, the port of San Francisco took no decisive action to convert. Why was that so?

In brief, the regulatory and governing structure was and is extremely complicated, the income-generating possibilities remain limited, and the state harbor commission had no strong leadership. The Burton Act of 1968 transferred authority over the port from the state of California to the city of San Francisco in 1969. However, with this transfer, responsibilities became confusingly divided between different authorities with different constituencies. The 'Port of San Francisco", a public agency, is responsible for its specifically designated port area, whereas the San Francisco city planning commission is responsible for the directly adjacent areas. Yet many project proposals include both areas and require negotiations between the two agencies. (Fig. 2: San Francisco port area)

Figure 2: San Francisco Port Areas with 5 sub-areas and Mission Bay



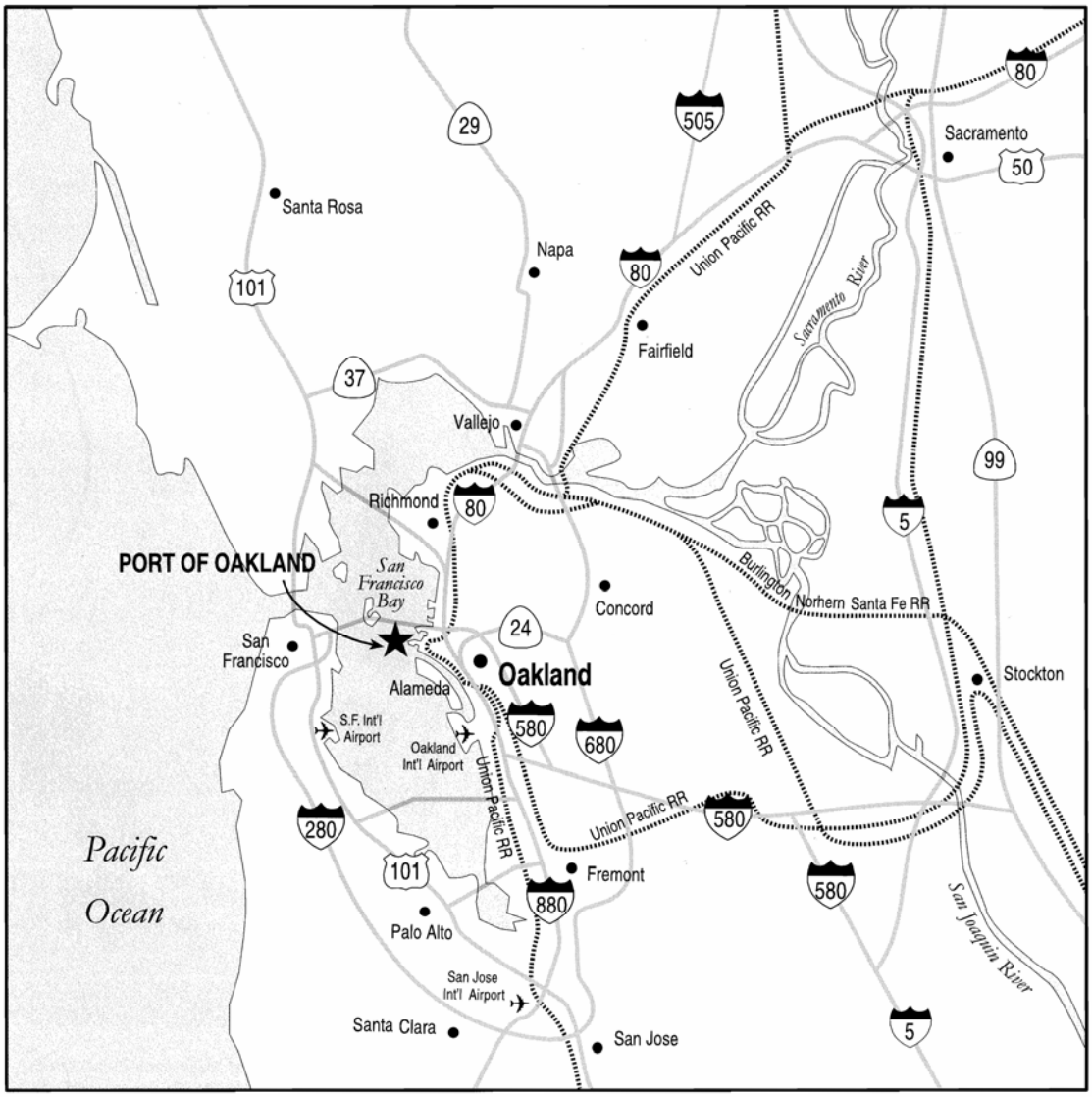
Source: The Port of San Francisco: Waterfront Land Use Plan (revised version 2000) p.85

Moreover, financial planning power for the port was severely restricted. Under the Burton Act, the port is supposed to generate its own income from the port operation without financial support from the state or the city to repair and upgrade the run-down infrastructure. The specific task of the port is to promote water related activities such as shipping and fishing, to protect public access to the water, and to preserve the environment—and the port must do this without the ability to issue bonds. Furthermore, by law, port property can never be sold or used for private purposes, and San Francisco's conservative municipal zoning and general planning policies apply to all properties adjacent to the ports as well. Thus, income generation from anything other than narrowly defined port uses is very restricted.

As a consequence of San Francisco port's incoherent and weak governance structure, the port had neither a facility plan nor a policy document for its development. There had been no thorough analysis either of the potentialities for a container port—including an existing deep water channel and many shipping-related services like banking, insurance, and customs brokers—or of the disadvantages related to San Francisco's geographic location on a peninsula or its infrastructural and railway deficits.

In the meantime, the port of Oakland—located across the bay— (Fig. 3: San Francisco Bay with location of the port of Oakland) had done some strategic planning and taken initiatives to expand and to use any opportunity to attract container shipping lines.

Figure 3: Map of San Francisco Bay with the 2 ports of San Francisco and Oakland.



Source: Minor, Woodruff, 2000, p.166, *City and Port of Oakland*

The port of Oakland is governed by a board of port commissioners, nominated by the mayor of Oakland and appointed by the city council. This one board has broad authority, overseeing the port's maritime cargo operations, inco me from port properties, and even the operations of Oakland's international airport. In contrast to San Francisco, Oakland's authorities have both a clear mandate and the power to secure its economic viability.

As a result, Oakland's port has expanded and modernized, whereas San Francisco's has stagnated. In the 1960s, Oakland's mayor and port commissioners began to actively seek and receive federal grants to convert its mud flats into modern container terminals. Its container port expanded rapidly, and by 1965 the total cargo tonnage it received equaled that of San Francisco's port. Between 1968 and 1973, San Francisco lost five major steamship lines to the port of Oakland. While there had been negotiations between the shipping lines and the two ports whereby one port was played off against the other, in the end Oakland won the contracts for a number of reasons, including better lease terms, lower construction costs and better transcontinental rail and truck services. The port of Oakland is now the dominant container port in the Bay Area and ranks as the fourth largest container port in the United States, handling 2.4 million twenty-foot equivalent units (TEU) in the year 2006.

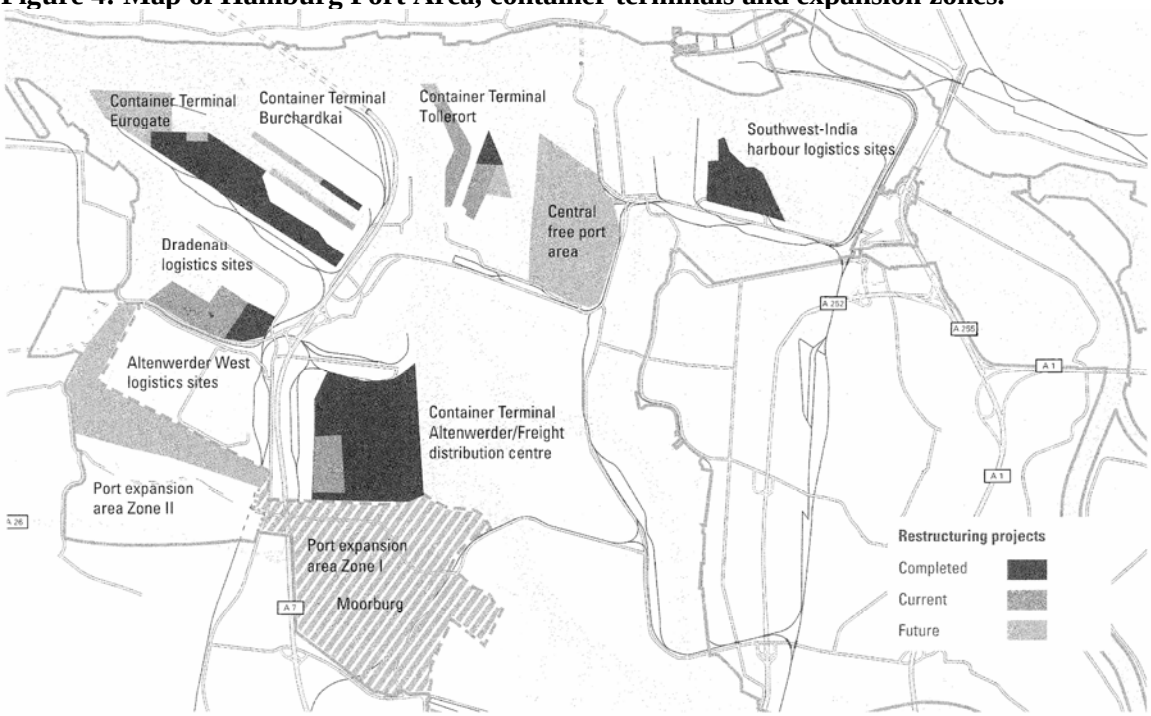
The Port of Hamburg

Hamburg faced a very different set of challenges in the early 1990s when, with the unification of Germany and the opening up of Eastern Europe, the city experienced a "boom from the East," yielding a record turnover in sea freight in 1991 that has since further increased each year. This meant that the suddenly booming port needed to be extended, with new container terminals, expensive handling infrastructure, and increasingly deeper dredging of the waterway in the river Elbe—all at high costs, but with diminishing benefits to the city of Hamburg. The particular danger was that the increasing costs to the city of maintaining the port would not result in more jobs and activities that added value to Hamburg's economy.The questions facing the city of Hamburg were therefore: who is to carry the costs, and who is to benefit in the long run?

To address these questions, the city of Hamburg developed a set of new and innovative organizational forms for regulating its port activities. In 2005, a new Hamburg Port Authority (HPA) was founded as an enterprise independent from the city of Hamburg: three city departments who formerly governed the port were combined and taken out of the administration of the city. The intention of the legal change was to allow the administration of the port to be more flexible, removing the constraints that come with being part of the city administration. While the port authority is still responsible for the construction and maintenance of its infrastructure, private terminal operators and other firms are responsible for its "supra-structure," i.e. the port's buildings and cargo handling equipment. While the HPA owns all the land in the harbor, it leases the individual lots and the user-specific infrastructure to these private firms for periods of up to thirty years.

Largely as a result of Hamburg's progressive planning for port expansion, the city now continues to have the second largest container port in Europe and the sixth largest in the world. In 2005, the port handled eight million TEU of containers, and it is predicted that the average annual growth rate up to 2015 will be nine percent, which could mean that the amount of container transfer would double in that time. (Fig. 4: Map of Hamburg port area, container terminals and expansion zones)

Figure 4: Map of Hamburg Port Area, container terminals and expansion zones.



Source: City of Hamburg, *Focus of dynamic growth markets*, 2005, p.30

One major problem remains. A deeper navigable channel must be dredged in the river Elbe (3 meters deeper to 15 m), so that the larger container ships of the future can reach Hamburg. This requires political approval from the two neighboring federal states and poses great environmental problems, including what to do with the dredged material. It can also risk floods, and so may require additional flood control measures.

New Urban Uses for Old Port Areas in San Francisco and Hamburg

San Francisco

In San Francisco, it was the natural disaster of the 1989 earthquake that finally provoked change in the dynamics of the relationship between port and city. Specifically, the barrier of the freeway along the waterfront had collapsed and was not to be rebuilt. Under public pressure from citizen groups, the port developed a comprehensive waterfront land use plan that incorporated a diversity of interests, including maritime industry, labor unions, and neighborhood and city-wide representatives. After a participatory process of negotiation that took seven years and over 100 meetings to complete, *The Port of San Francisco Waterfront Land Use Plan* was finally adopted and published by the Port Commission in 1997.

This plan achieved a number of visible improvements along the waterfront: The freeway barrier was replaced by an attractive palm-tree lined boulevard with the service of traditional trams. The ferry building was well restored with shops and restaurants on the ground floor, offices above, and a street-level market on the weekends. Public access to the water has improved and more ferries are operating. Finally, many of the old bulkhead buildings have been restored and modernized internally for office uses. Generally, the waterfront north of the Bay Bridge has become more attractive.

At the same time, the plan provided a clearly-defined set of regulations for evaluating projects to be proposed by investors and developers on the San Francisco waterfront, based on a Public-Private Partnership model of development. The expectation of the newly-streamlined regulations is that they will attract more project proposals from private capital to revitalize the waterfront, producing new economic activities and thus improving the financial situation of the port.

Yet south of the Bay Bridge, in the Mission Bay area – a former industrial and mixed use district – a large urban development project stalled for more than two decades and produced questionable results. In this case, most of the land was not owned by the city, but rather by Southern Pacific (SP) railway, the state's largest private landowner. In contrast to the participatory planning process that guided development of the San Francisco waterfront, in Mission Bay a developer-dominated planning procedure took place.

After SP announced a redevelopment project in 1982 that involved constructing a large number of commercial and residential high-rise buildings in Mission Bay, strong concern was voiced by various groups: residents of neighboring Potrero Hill, fearing their view would be blocked; housing activists, angry that the plan included no low-income housing; blue-collar workers fearing the loss of jobs in an area of existing industry and warehouses; planners and others wary of the impact of creating, in effect, a second downtown on the site, fifty percent larger than the current downtown district. In the following years, a considerable struggle emerged between the city, community groups, and the large corporate land owner—turning the development process into a zero-sum game, with no clear winner emerging in the end.

After over 20 years of conflict-filled political and economic wrangles, and four discarded plans, the developer Catellus, initially a subsidiary of SP with experience mainly in suburban development, was put in charge of marketing and selling the land according to an agreement of 1991 between the city and the developer. This agreement was cancelled by the developer for financial reasons. Then a new larger project was initiated and an agreement was reached by the incoming mayor (William Brown) who brought in the San Francisco Redevelopment Agency. A high-powered civic group, BALSA, became active, related to investors in the life sciences, and the medical school of the university (UCSF), who wanted to leave the city for lack of expansion space. The university was offered land in the Mission Bay area, and a new round of plans was presented for the campus, which was later replaced by a rather simple layout plan. The university would now constitute the anchor for a cluster of biotech and high-tech research firms, who could then buy land in the rest of the area. Yet there is no urban vision or regulatory plan to guide the

project. Each firm or enterprise can construct its buildings according to its own wishes, and there is no urban design concept or coordination between them.

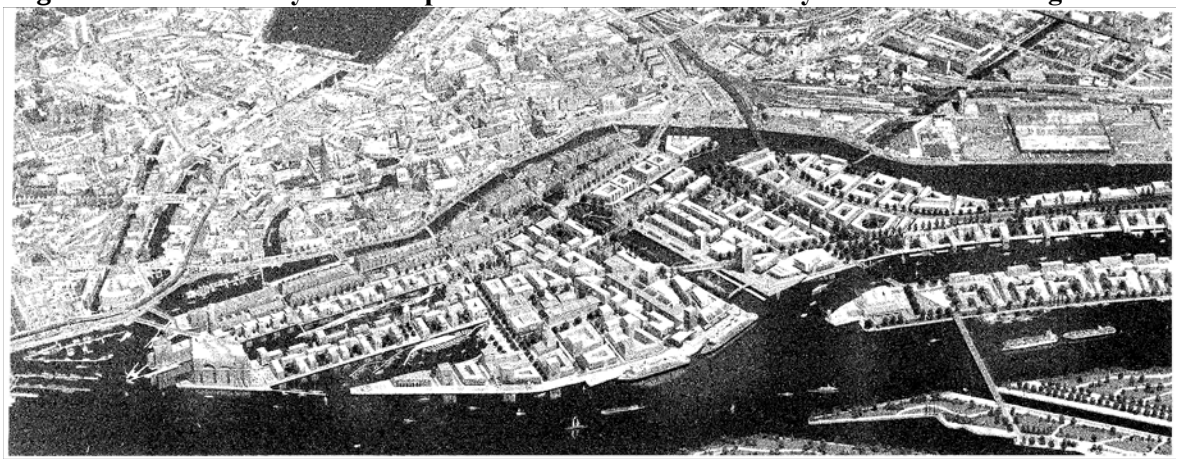
Hamburg

In Hamburg, while the important parts of the port are now located on the south bank of the river Elbe, most of the northwestern bank has become obsolete for port functions and has thus been transformed for urban use. Initially, the transformation of Hamburg's old port created conflict between the port administration and the city planning department; in order to change the use of the land, the area had to be taken out of the jurisdiction of the port and put under the control of the city planning department. However two key factors facilitated the successful and relatively rapid transformation of Hamburg's port. First, the largest part of the old port area was owned by the city of Hamburg. Second, the area had already been exposed to a planning and urban design workshop in 1989, in which planners and architects were asked to develop ideas and concepts for redevelopment of the district. This type of workshop constituted an important emphasis within Hamburg's planning culture, which involved taking certain urban districts with problems or potential for improvement and exposing them to intensive professional, public and political discussions about their future.

Thus, in May 1997 the mayor of Hamburg announced a plan for "a return of the city to the river Elbe," transforming the area that separated the city center from the river into a whole new urban quarter, the "HafenCity" (harbor city). Authority over the district was taken away from the port administration and placed under the jurisdiction of the city planning department, and a new municipal law was enacted by the city government that placed the former port land into a special trust fund, called "Harbor and City." In 1999, the city organized an international architectural and planning competition to guarantee high-quality proposals for the area that promoted mixed-use neighborhoods, combining work places and housing for different income groups. The competition results were then used as a basis for the master plan of the area, (see Fig. 5), prepared by the city planning department and laying out detailed structural plans for all of the various districts. Finally, the sale of individual building lots to selected developers and their architects depended on additional limited architectural and urban design competitions.

In early 2000, the city senate of Hamburg approved the master plan, and now the first phases of the whole project are under construction. Currently the first phase of commercial and residential construction is completed and fully occupied. Also completed are a series of public access roads, several public squares on the water, and new pedestrian bridges to the city center. Moreover, a new concert hall on top of a former cold storage warehouse and a maritime museum are in the advanced planning stages. Perhaps more impressively, about fifty private investment projects involving over two billion Euros have been secured. It is claimed that the 'HafenCity' is presently the largest urban development project in Europe.

Figure 5: "Harbor-City" Master plan with connection to the city center of Hamburg



Source: "HafenCity" Hamburg, GmbH. (Photo: Schiebel) 2004

Comparisons and Conclusions

In Hamburg and in San Francisco, the decision making processes for the modernization of the port and for the revitalization of older port areas are very different in their characteristics. While in Hamburg longer-term strategic planning with visions for the future is predominant, in San Francisco much less decisive steps were taken by the institutions and authorities responsible for the port and for city planning. What are the reasons and causes for the differences?

While the ports on the San Francisco Bay and in Hamburg (since 2005) are all managed by port authorities, the ways in which they are organized and relate to the city government differ considerably. In Hamburg, the creation of the Hamburg Port Authority (HPA) meant the port became an independent public enterprise, still 100 percent owned by the city of Hamburg. At the same time, it is now administratively more flexible and financially more independent from the city government, setting its own budget and paying taxes.

In San Francisco, the authority over the port was transferred in 1968 from the control of the state of California to the city of San Francisco, but with responsibilities divided between the state and the city and without a clear mandate for financial or other planning. In other words, the institutional and governing structure of the port is relatively weak. As a result of this and of other disadvantages, the dominant port in the Bay Area is now Oakland and not San Francisco. At the same time, the qualities of the locality of San Francisco (views, hills etc.) have made the city a preferred place for urban living, and for financial and other service functions. The port and its traditional "ambiente" of piers and bulkheads are seen by many San Franciscans as an historical and visual asset and an attraction for tourists. It seems the workings of a container port with traffic problems and the required costly infrastructure improvements were not considered important for a more gentrified city.

In contrast, the port and its related transport links and industries are the economic engine of Oakland. The institutional structure of the port of Oakland was also always very clearly connected with the city government. Moreover, the port authority had strong professional leadership and was keen to use any opportunity to expand and use its location and infrastructure advantages to acquire additional land and federal subsidies.

Looking at the Bay Area as a whole and from an environmental point of view, the location of the container port on the east side of the bay with much better transport connections into the continent seems to be an advantage to the region. It causes less environmental pollution and transport disturbances there than on the peninsula.

Comparing decision making in California and Hamburg raises two important questions: First, how do legal and institutional contexts affect the role of urban and strategic planning and the position of the planner? There are major historical and cultural differences regarding the role of the state (federal and local) and the market between the United States and Germany. What is seen as the "public interest" and how "participation in planning" is seen and practiced in terms of local participation or the influence of citizen groups and other interest groups in planning decisions varies greatly between the two contexts. The question of "efficiency" in decision making is rather complicated and depends on the perspectives of the different interest groups.

Second, what is transferable in terms of planning procedures and decision-making structures from one context to another? Because the contextual differences are very great the answer is probably that direct transferability would hardly be possible. Any procedural transfer would require mediation into the other context. But in my opinion it is very well possible to learn from one context to another and to try to see tendencies that would be worthwhile to have strengthened. For example, in Hamburg more open and participatory planning procedures that include earlier public discussions, not only among professionals, before decisions were finalized would be preferable to the present decision making process. In the San Francisco situation the role of professional planning and strategic thinking could be strengthened, so that alternative visions could be discussed publicly in an informed way. In both contexts professional planners, private developers, and local neighborhood and other local action groups are the important actors in urban development.

Generally speaking a more open participatory process and at the same time more professional planning would be desirable. To combine these two tendencies in a new planning paradigm is the challenge.

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Inequality and Urban Shrinkage: A Close Relationship in Latin America

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Introduction

The territorial dynamics of Latin American cities cannot be understood without considering their unique context: enormous socio-economic inequality generated by a long history of historic economic and political processes that have maintained a strikingly large gap between rich and poor over the majority of Latin America's modern history.

This study starts with a brief overview of the history and current socioeconomic context of Latin America, and specifically Brazil. Brazilian territorial dynamics as well as new urban land policies recently established to fight inequality within cities also are mentioned. The paper aims to point out how inequality might specifically have influenced population mobility and urban morphology in Brazil. Afterward, I illustrate how shrinkage happens in Brazil with two case studies.

Inequality and the Colonial Legacy

Many of the reasons for Latin America's high degree of inequality are historic, relating to the region's particular forms of colonization and slavery, which put in place a social and economic structure that remains today in spite of modernization. The Iberian colonization process was structured around ownership of great areas of land. The relationship between "landowners" and the community has been described by Suarez (1993) as a "gift policy," in which the provision of basic goods was subject to the generosity and whims of the landlord. Even after the abolition of slavery and the creation of Republics in different countries in Latin America, this relationship of "favors" continued, since the rural aristocracy remained in power (Suarez 1993).

The path of modern Brazilian politics is a particularly a strong example of oligarcic permanence. From the proclamation of the Republic in 1889 until 1988, the right to vote was harnessed to education, but the aristocracy did not make any major attempt to expand basic education (Ribeiro and Soares 2003). By restricting the right to vote to those who could read, the Brazilian aristocracy guaranteed the exclusion of the majority of the population from political participation, and the great mass of poor workers passed the 20th century with very limited citizenship.

In this context, the search to escape from various conditions of subservience has stimulated major migratory movements that define Brazil's internal migratory patterns.

The Relationship Between Economic and Territorial Dynamics in Latin America

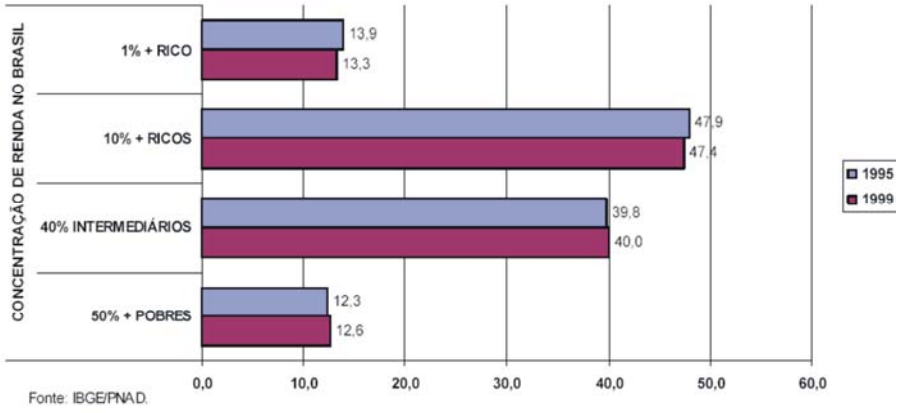
In the second half of the twentieth century, cities in Latin America experienced very intensive urbanization, mainly due to the economic base changing from agriculture to industry.

After 1980, the arrival of neo-liberal economic policies had a strong impact on low-income workers. The end result was an increase in inequality. Although since the early '90s some countries, such as Brazil, have decreased inequality by implementing strong social policies, most Latin American countries experienced further increases in inequality during this time, establishing a territorial pattern that segregates the urban poor and relegates them to living without infrastructure.

Socio-economic and Territorial Dynamics in Brazil

Within this common context, Brazil's development stands out as particularly unequal. In spite of many socialist attempts at social reforms, modern Brazil has not been able until now to overcome the social exploitation established since the very beginning of its colonization.

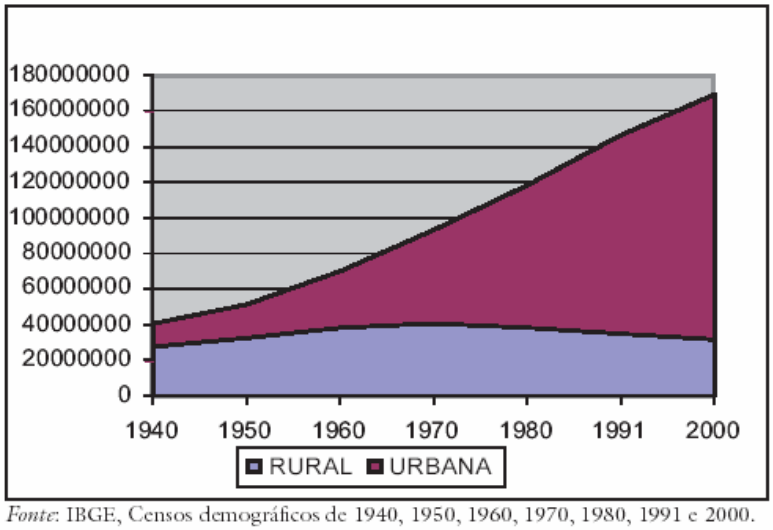
Near the end of the century (1995) in Brazil, while the poorest 50% of the population had only 13.3% of the national gross income, the richest 10% had 47%, and the richest 1% had 14.4%.



Since the 1920s, 83% of the Brazilian population has come to live in urban areas. Huge urban growth due to national economic policies in the 1970s further enlarged industrial parks in the big

southeastern cities and attracted additional millions of people from rural areas (by 1980, almost 43 million rural people had moved to cities).

Rural/Urban population dynamic in Brazil—1940-2000



Fonte: IBGE, Censos demográficos de 1940, 1950, 1960, 1970, 1980, 1991 e 2000.

Casas em área de proteção ambiental próximas ao lixão na encosta da Serra da Cantareira (SP).

This important migratory dynamic within the country has changed the territorial and social structure of Brazilian cities. The economic decline of the ’80s and ’90s, the rise of globalization, the retreat of social policies, and the governance mode of the welfare state contributed to more recent increases in income inequality. Brazil’s territorial patterns have replicated this dynamic of socio-economic inequality. Specifically, the dynamics of the real estate market have kept infrastructured areas in the elite’s hands. In this process, fragile environmental areas (mainly in the city’s outskirts) became a necessary alternative for low-income illegal occupancy.

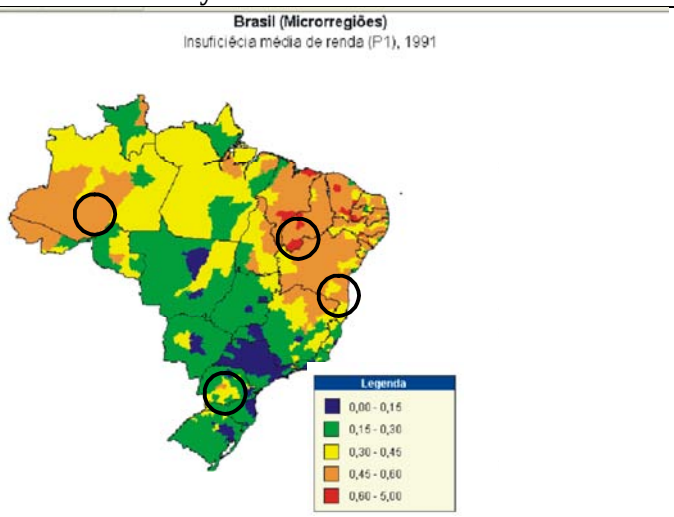
Urban Shrinkage in Brazil

In Brazil the problem of urban shrinkage does not follow the patterns found in Europe or the United States. An unfair territorial dynamic generated by the Brazilian land oligopoly, the government’s incapacity to produce jobs, the highly speculative real estate market, the lack of housing subsidies for low income workers, and the inadequate use of land policies has led to the emergence of empty rural towns, emptied and decaying (or sometimes gentrified) metropolitan areas, and swollen slums on metropolitan outskirts.

A recent analysis published by the Brazilian Institute of Geography and Statistics (IBGE) shows that 27.2% of the 5560 municipal districts in Brazil (containing 1496 cities) lost population between 1991 and 2000 (IBGE 2004). However, these numbers do not imply real socio-economic shrinkage for larger urbanized areas. Almost all (99%) of the actually shrinking municipal districts have fewer than 50,000 inhabitants, and in many of them, their urbanized areas have continued growing while the rural areas emptied.

Other recent government research has raised an alert about the strong decline in the birthrate, showing a continued decrease in births since the 1980s. Nowadays, Brazil's index is 2.1 children per woman, compared to 3.5 in 1984. At this pace, the country will start to lose population by the year 2035. Although the declining birthrate has not yet appeared to affect territorial patterns, the broader phenomenon of population shrinkage in urbanized areas has already caused a decline in economic growth. Comparing the map of population decreases with the map of poverty intensity, we can detect clear correlations (map 01).

Map 1: Relationship between Population Loss and Poverty



Shrunken Municipalities (IBGE 2004) Poverty Intensity (IBGE/IPEA/JOAO PINHEIRO1996)

Much of the shrinkage in Brazilian cities was also caused by the relatively high mobility of the elite within the metropolis helped by a speculative real estate process. Trailing the higher income population, services and commerce have also left the city's central area, creating new "sub-centers" and leaving behind large amounts of idle land.

In Brazil, where there are few housing subsidies for low-income residents, the gentrification of urban sectors pushes low-income residents out of central areas, thereby increasing the number of slums in the city periphery.

The Statute of the City

In recent decades, many city administrations in metropolitan regions have become concerned about the impact of shrinkage. Some are trying to cope with the problem by invoking a new federal law (#10257/2001) known as "Statute of the City," aimed at promoting land reform in urban areas.

The law regulates a chapter of Brazil's constitution (1988), which incorporates constitutional provisions that have legitimized a broad array of new grassroots claims for social welfare policies.

Specifically, the Statute of the City was elaborated on the principle of the "social function of property and of the city," and it provides a "range of legal, urban and fiscal instruments to be used by the municipal administrations, especially within the context of their master plans, to regulate, induce and/or revert urban land and property markets according to criteria of social inclusion and environmental sustainability" (Fernandes, 2007).

Unfortunately, many administrations have failed to take advantage of these new opportunities due the difficulty of breaking the urban land oligopoly, the lack of public resources, and their own inadequate use of legal tools. The two cases described below show two different paths taken by local administrations to respond to the challenges of urban shrinkage.

Two Cases of Urban Shrinkage in Brazil

Both Nilópolis and São Caetano do Sul are cities with populations of over 100,000 inhabitants, without rural areas, and with little overall territory. Even though both contain non-developed areas supposedly available for expansion, both have experienced a decrease in their populations in the last decades.

Nilópolis

Nilópolis, is a densely populated city of 19 sq. km, 13 sq km of which are occupied by a Brazilian Army Training Camp (Gericinó). With approximately 154,000 inhabitants in 2000, the population decreased at a rate of 0.31% a year between 1991 and 2000. Nilópolis is a classic blue-collar bedroom community, dependent on Rio de Janeiro for jobs. The city worries about the loss of population-linked federal grants, which is its main source of income.

Rio de Janeiro Metropolitan Area

Nilópolis' decay is evidenced in a variety of socio-economic data. In 2000, the city exhibited the smallest rate of income per capita out of all cities in the Rio de Janeiro metropolitan region (Observatório Ippur/UFRJ-Fase) and also the only city in the metropolitan region with a negative growth rate from 1980 to 2000 (Table 1).

Table 1: Geometric Medium of Population Growth Rate in Rio de Janeiro Metropolitan Area

Taxa Média Geométrica Anual de Crescimento da população residente do Estado e dos Município da Região **Metropolitana do Rio de Janeiro - 1940 a 2001**

	Taxa média geométrica anual de crescimento							
	1950/1940	1960/1950	1970/1960	1980/1970	1991/1980	1996/1991	2000/1996	2000/1991
Estado	**2,61**	**3,68**	**2,97**	**2,30**	**1,15**	**0,92**	**1,75**	**1,28**
Região Metropolitana	**3,61**	**4,36**	**3,52**	**2,44**	**1,03**	**0,76**	**1,63**	**1,14**
Rio de Janeiro	3,03	3,36	2,54	1,82	0,67	0,26	1,33	0,73
Belford Roxo	14,47	11,91	9,00	5,01	2,25	2,05	2,05	2,05
Duque de Caxias	12,06	10,17	5,88	2,93	1,36	1,38	1,90	1,61
Guapimirim	6,41	2,08	5,30	4,83	1,73	3,10	3,85	3,43
Itaboraí	2,40	5,08	5,49	5,79	3,48	2,77	4,00	3,32
Itaguaí	8,45	3,07	4,78	5,35	1,92	2,75	4,18	3,38
Japeri	10,29	9,35	5,36	4,47	1,41	2,16	3,27	2,65
Magé	4,24	5,43	6,93	3,82	1,21	2,26	2,95	2,57
Mangaratiba	3,04	1,63	-0,25	1,16	2,38	2,11	5,72	3,70
Maricá	0,04	0,26	1,97	3,26	3,29	5,31	6,16	5,68
Nilópolis	7,58	7,60	2,86	1,70	0,38	-0,36	-0,27	-0,32
Niterói	2,44	2,80	2,82	2,05	0,86	0,64	0,45	0,56
Nova Iguaçu	10,22	8,83	6,59	3,82	1,42	1,35	2,60	1,90
Paracambi	2,34	3,59	4,97	1,80	1,68	1,60	0,61	1,16
Queimados	10,29	9,35	9,89	4,20	0,43	1,89	2,90	2,34
São Gonçalo	4,06	6,89	5,67	3,64	2,18	1,34	1,65	1,48
São João de Meriti	6,81	9,63	4,66	2,81	0,60	0,40	0,85	0,60
Seropédica	13,13	6,88	5,16	4,39	2,27	1,20	4,00	2,43
Tanguá	1,79	-0,94	1,51	5,17	1,94	1,15	1,38	1,25

Fonte: Fundação Instituto Brasileiro de Geografia e Estatística - IBGE, Censos Demográficos e Contagem da População - 1996.

The reasons for Nilópolis' population loss are not clear yet, but scholars have speculated that the city stagnates because there is no immediately available land for growth, few available houses, very few industries, no significant increase in jobs, and no investments toward increasing the quality of life. Table 2 provides a comparative overview of the housing problem in the

metropolitan area of Rio de Janeiro for the year 2000. Nilópolis presents the highest relative index of housing deficit among all metropolitan districts. The shortage of jobs and vocational schools in the city is evidenced by the fact that Nilópolis also has the highest commuter index among municipalities within the greater metropolitan area (Map 2).

Table 2: Housing overview in the Metropolitan Area of Rio de Janeiro (2000)

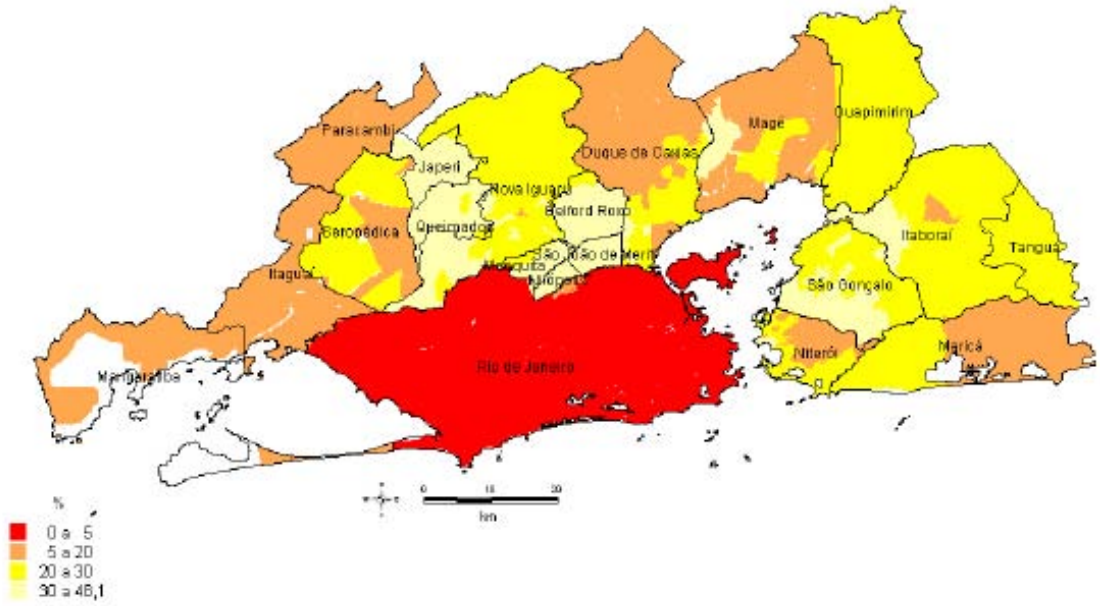
City	Improvised Dwellings	Borrowed or Rented	Family Shared Dwellings	Housing Deficit	Percentual Deficit
Niterói	254	461	7.542	8.257	6,0%
Rio de Janeiro	5.958	20.104	110.284	136.345	7,4%
Belford Roxo	740	854	6.027	7.621	6,2%
Duque de Caxias	604	1.760	13.368	15.731	7,1%
Guapimirim	50	40	660	750	7,0%
Itaboraí	355	361	3.141	3.857	7,1%
Itaguaí	32	212	1.698	1.942	8,4%
Japeri	30	208	1.494	1.732	7,5%
Magé	150	421	4.065	4.636	7,9%
Mangaratiba	100	77	501	678	9,2%
Maricá	85	181	1.215	1.481	6,4%
Nilópolis	59	189	3.992	4.239	9,5%
Nova Iguaçu	579	1.625	17.604	19.809	7,6%
Paracambi	19	48	918	985	7,5%
Queimados	145	354	2.208	2.707	8,1%
São Gonçalo	446	1.323	17.239	19.008	7,2%
São João de Meriti	73	1.098	9.625	10.796	8,3%
Seropédica	58	216	1.456	1.731	9,5%
Tanguá	21	105	455	581	7,9%
Total RMRJ	9.758	29.63	203.494	242.888	7,4%

Source: Observatório das Metropolis/ UFRJ—2006

The change in the social structure of Nilópolis highlights the lack of skilled and high-income jobs through its increase in blue-collar and low-end commercial employees. In the urban periphery of the city, the middle class has also shrunk while the percentage of blue-collar workers has increased.

Due to the lack of access to housing, jobs, and services, living in the city has become unviable for many low-income workers, and Nilópolis has not been able to compete with other municipalities within the metropolitan area or along Rio de Janeiro city's northern periphery, where better services, jobs, and a new metro line have become recently available. Yet the Nilópolis city council has failed to accept evidence of its population loss, failing to provide strategies for urban management that cope with population flight.

Map 2: Percentage of Commuters (for work or study) within the Metropolitan Region of Rio de Janeiro (2000)



Source: Observatório das Metropolis/UFRJ (2000)

For the public administration of Nilópolis, expansion of the city through new uses of its non-urbanized territory—the Brazilian Army Camp of Gericinó—is the only possibility for the city to avoid population loss. In the new master plan, the city administration counts on a partnership with the federal government and developers to urbanize that land. However, several requests from the city council to the Brazilian army to use this area for expanding the city have been denied. In other words, the Gericinó area is, in reality, not available

São Caetano do Sul

The second example is São Caetano do Sul, near the southeast end of the city of São Paulo and within the limits of the São Paulo metropolitan area. São Caetano also has a small territory—15 sq km- and also struggles to find space to grow. With 154,000 inhabitants, it differs from Nilópolis by the high income profile of its inhabitants and also by its status as the cradle of Brazilian industrial development in the last century. But São Caetano do Sul currently finds itself in an odd situation: at the same time that there has been a decrease in population (between 1991 and 2000 it recorded a negative annual growth of almost 1%) and an idleness of public services, especially public schools, there has also been an increase in the construction of apartment buildings, which are not accessible to blue-collar residents. The population is aging, enriching, and having fewer children (Cf. Medice, 1993).

São Caetano's shrinkage originated when several important industries (General Motors among them) that originally chose to locate in the city because of its proximity to the railroad leading to the port moved away in the '60s to be closer to newly developed highways. This move left behind a vast empty area and promoted outward emigration.

Table 3: Changes in the Population of São Caetano do Sul over Time

São Caetano do Sul	1980	1991	2000	2006
Aging index (%)	31.42	53.49	89.53	106.94
Population Annual Geometric Growing Index—2000/2006 (Em % a.a.)				-0.36
Population Annual Geometric Growing Index—1991/2000 (Em % a.a.)			-0.70	
Population Annual Geometric Growing Index—1980/1991 (Em % a.a.)		-0.81		
Urban Population	163,268	149,436	140,241	137,277

Source: Seade—Governo do Estado de São Paulo

In the 1970 census, São Caetano presented an index of demographic growth that was smaller than the other municipal districts of the area, and since 1980, it has shown an absolute decrease in the number of its inhabitants. The census of 1980 of São Caetano do Sul showed 163,282 inhabitants, the 1991 census showed 149,436, and the most recent data (2006) counts a total of 137,277 inhabitants (Table 3).

S.Caetano do Sul—A huge void area where a technologic pole and gated condominiums will be constructed (photo: Sergio Moraes)

In the 1980s, the growth of commerce, services, and industrial diversity (Table 4) helped the municipal district achieve growth in its percentage of professionals with higher incomes, resulting in the largest IHD among all cities in the country in 2003. However, the high level of São Caetano's quality of life has not attracted new residents, because the real estate market has raised the prices of land and housing. High housing costs and low birth rates are pointed to as among the primary causes of São Caetano's population loss.

Table 4: Changes in Industry within São Caetano do Sul 1991-2005

	Commerce	Construction industry	Industrial jobs	Services
1991	7,948	2,177	23,777	24,325
1999	9,236	2,488	14,684	46,685
2005	14,264	5,942	19,187	64,758

fonte: Seade—Governo do Estado de São Paulo

The city administration has been trying to cope with these problems by requiring more commercial than residential occupancy in the central areas (a 70% to 30% ratio), and reducing the floor area of new residential buildings. Despite the fact that the "Statute of the City" legally requires municipal administrations to reserve infrastructured land for low-income housing, São Caetano's new master plan does not include any, revealing the clear intention of the city's administration to preserve the gentrification process.

The city is also trying to attract new technology industries through public-private partnerships. The idea is to build a new technological pole as well as high income, gated residential condominiums on an empty old industrial area. However, even though a technological pole might bring new oxygen to the city's economy, it will increase social inequality and the gentrification process.

It is important to highlight that São Caetano's wealth has not reached everyone in the city, and the poor continue to have no access to housing and, consequently, continue to be expelled to the edge of the Metropolis.

Conclusions

Five factors could be pointed out as the primary reasons for the high degree of population migration in metropolitan areas of Brazil: 1) the highly speculative real estate market; 2) the political and economic oligopoly that keeps for themselves urban land with infrastructure, 3) the idleness of infrastructured land in central areas; 4) the lack of housing subsidies for low-income residents; 5) the lack of jobs and infrastructured areas in close proximity to low-income housing. As a result of these trends, city cores have been losing population, land prices have risen and gentrification has increased, while blue-collar residents have migrated to the outskirts of the city, illegally occupying fragile environmental areas.

While a progressive new law (Statute of the City) brings good initiatives to the table, such as legal requirements for low-income housing within areas with infrastructure and new legal mechanisms to avoid real-estate speculation, more effective monitoring of municipal efforts to comply with the law is required. More broadly, it is difficult to evaluate whether the new law can change centuries of inequality and confer real citizenship on Brazil's poor. For example, the establishment of public-private partnerships to revitalize shrunken areas, as in the case of São

Caetano do Sul, might set up patterns of development that continue to gentrify large urban areas by promoting the construction of gated residential areas and "big box" enterprises. Yet, given that the new law was established less than a decade ago, more time is necessary before we can properly evaluate the effectiveness of the Statute of the City in reversing shrinkage, revitalizing abandoned urban areas, and preventing gentrification.

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II Kicking off the Shrinking Cities Debate in Northamerica

Shrinking Cities in the United States in Historical Perspective: A Research Note

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In the decades after World War II, many large industrial cities in the United States shed jobs and residents at alarming rates (Beauregard, 2003: 75-178; Bradbury, Downs, and Small, 1982). Suburbanization, coupled with the growth of cities in the Sunbelt, made their dire fate even more pronounced. As the 1980s unfolded, however, population loss diminished. By the following decade, commentators were touting the revival and resurgence of these very same cities (Beauregard, 2004; Cheshire, 2006; Furdell, Wolman, and Hill, 2005). Yet many former manufacturing centers—places like Youngstown (OH), Erie (PA), Flint and Detroit (MI), Bridgeport (CT), Camden (NJ), and Rochester (NY)—continued to cast off residents (El Nasser, 2006; Lanks, 2006). Cities were still shrinking.

This research note historically documents the population loss from large cities in the United States. Although my focus is the shrinking cities of the last two decades, these cities cannot be understood in isolation from the declining cities that preceded them or the cities, few as they were, that lost residents in the 19th and early 20th centuries. Specifically, my intent is to document the prevalence, severity, persistence, and regional incidence of urban population loss. Their intensity was greatest in the decades just after World War II and least in the decades prior to the Depression. In the most recent years, population loss was less prevalent, less severe, and less persistent than in the period of massive urban decline. In this respect, the recent period of shrinking cities might well be a break from the prevailing form of urbanization.

In order to document and assess these relationships, I use aggregate (and net) population loss as the measure of decline and shrinkage. Although population change cannot fully capture the developmental fortunes of a city, it is a reliable indicator of the city's attractiveness to investors and households as well as a direct consequence of economic growth. The quantitative evidence comes from a data set of the 50 largest U.S. cities by population for every decade from 1790 to 2000. The data set consists only of central cities of metropolitan areas. Thus, the analysis privileges the political status of and boundaries between the core city and its suburbs over the "natural" urban area. That is, it ignores the relationship between city growth and regional (or metropolitan) growth. I do so because, at least in the United States, central cities were the locus of decline in the postwar decades and are politically and fiscally important in their own right.

Moreover, central cities are the places that many researchers have in mind when exploring both resurgence and shrinkage.

In order to make the relevant historical comparisons, I devised a periodization scheme. It is based on an analysis of distributive and parasitic urbanization (Beauregard, 2006a, 2006b). From 1790, when the U.S. government first began the systematic collection of population data, places grew almost continuously. A few villages failed to become towns or towns to become cities, but not many shed significant numbers of businesses and residents. Some places simply grew too slowly to maintain their demographic status. This was a period of distributive urbanization. In stark contrast, after World War II numerous large cities, particularly the manufacturing centers of the northeast and upper Midwest, began to cast off residents. This phenomenon continued through to the 1980s with 33 of the 50 largest cities experiencing population declines in the 1970s. At the same time, large cities in the southwest and west - along with their suburbs - were growing rapidly, in part because they were attracting residents from the older, declining cities. Subsequently, though, decline began to ebb.

This historical trajectory suggests three periods: one encompassing the widespread urban growth that occurred between 1820 and 1920, the second capturing the extensive urban decline between 1950 and 1980, and the current period (1980-2000) in which assertions of resurgence and shrinkage are framed. In terms of population loss, these are the periods, respectively, of aberrant, declining, and shrinking cities.

Prevalence, Severity, and Persistence

The analysis begins with the number of instances in which a large city experienced a decade of population loss. (See Table 1.) The instances of loss are numerically greatest in the second period, less in the third period, and least during the time of distributive urbanization.

Table 1: Prevalence of Large City Population Loss

	Aberrant Cities 1820-1920	Declining Cities 1950-1980	Shrinking Cities 1980-2000
Total Number of Instances*	16	81	30
Average Number of Instances/Decade	1.6	27.0	15.0
Average Percentage of Instances/Decade	3.2	54.0	30.0

* An “instance” occurs when a single city loses population.

During the period of distributive urbanization, three decades - 1860-1870, 1880-1890, 1910-1920 - no large cities lost population. In one decade (1830-1840) 5 large cities lost population, and in another decade (1890-1900) 3 cities did. Additionally, in two decades—1890 to 1900 and 1900 to

1910—the population loss of one of the cities is in dispute (Beauregard, 2003b). Historians believe that Omaha's (NE) loss in that first decade was not "real" but fictitious, produced when local boosters inflated the population count for the earlier year (Larsen and Cottrell, 1982:122). Historians also suspect that St. Joseph's population in 1890 might have been inflated (Logan, 1979:136), thus bringing its loss into doubt as well.

In the other two periods, large cities shed residents in all decades. And whereas no discernible historical pattern was obvious in the first period, the decades from 1940 to 2000 show a clear rise and then fall in the number of instances of population loss. Only 2 large cities had a diminution of residents in the 1940s. By the 1950s, the number had jumped to 24 and then to 33, thereafter dropping to 18 and 12 cities for the next two decades.

Moreover, the relative positioning of the periods remains similar even when accounting for differences in the number of decades. In fact, doing so accentuates the gap between the anemic population loss in the first period and the deluge of the second period. However, it closes the gap between the second and third periods. What is so striking about the decades of parasitic urbanization is that population loss occurred in more than half of the potential instances.

The data on the severity of population decline (that is, the net number of residents involved) present a slightly different set of findings. (See Table 2.) The average absolute change in population for each instance closely follows the prevalence pattern, but this is not the case for the percentage change. Given measurement error, the percentages for the first and second periods are essentially equal. Or, to say it differently, the severity of city population loss during the postwar period of "urban decline" was no different than that experienced by cities losing population during a period of rapid urbanization, even though its prevalence was quite dissimilar. And, while the percentage measure shows an expected drop-off in severity from the second to the third period, the drop-off is not as pronounced as that indicated by the absolute measure.

Table 2: Severity of Large City Population Loss

	Aberrant Cities 1820-1920	Declining Cities 1950-1980	Shrinking Cities 1980-2000
Average Absolute Loss/ Instance	5,063	71,953	50,416
Range: High	37,671	823,223	218,346
Low	17	1,448	2,568
Average Percent Population Loss/ Instance	8.6	8.7	7.3
Range: High	27.0	27.2	14.6
Low	0.4	0.3	0.7

Table 2 also indicates significant variation in the severity of population loss within periods. As expected, the "high" ends of the absolute ranges of loss increase from the early to the middle

period and fall thereafter. At the "low" ends of these ranges, however, the severity of population loss continues to increase throughout the periods. However, because bigger cities have the potential to shed more residents, and because cities have grown in size with the country's expansion, we need to attend to severity in percentage terms. If we represent the ranges as percentages, we see that in the first two periods, the severity of population loss was similar at both the high and low ends of the range. Furthermore, although population loss was less severe in the last period for the city with the biggest losses, it was more severe for the city with the smallest losses. Severity, then, is much less pronounced when measured as a percentage—with the first and second periods virtually indistinguishable. Note, also, that some cities experienced small declines in population—less than one percent. Finally, consider that larger size does not automatically produce a larger loss. In the 1970s, St. Louis (MO) had the 6th largest population decline and was the 26th largest city.

Within the periods, the ranges of loss—whether absolute or relative—are large. The high/low ratios of the absolute ranges go from over 2,000 in the first period to 80 in the third period. Of course, a caveat is necessary regarding the first period. The city with the largest absolute population decline was Omaha between 1890 and 1900. It had a "questionable" population loss. If Omaha were to be taken out of the data set, the city with the next largest population loss would be St. Joseph (MO), which between 1900 and 1910 lost 25,576 residents. Its census figures, though, are also problematic. This leaves Memphis (TN) with a decline of 6,634 residents, still a large multiple—390—of the city with the smallest decline. The cities with the largest losses in the second and third period were New York City (1970-1980) and Chicago (1980-1990). The cities with the smallest declines across the periods were Trenton (NJ) (1820-1830), Cincinnati (1950-1960), and Minneapolis (1980-1990). In percentage terms, the high/low ratios range from 20 for the shrinking cities period to 90 for the declining cities period, less than for the absolute ranges.

In addition to the prevalence and severity of population loss, we need to assess its persistence; that is, the extent to which individual cities shed residents from one decade to the next. (See Table 3.) Overall, the data show a high degree of persistence in the second and third periods, with 4 out of 5 large cities having multiple instances of population loss. This is extremely important. A population drop confined to a single decade is a temporary set-back; losing residents over two decades is cause for alarm. The latter indicates a more daunting problem for residents, investors, and public officials. Moreover, it hints at a structural rather than a circumstantial impediment to the city's ability to grow.

Consider those large cities that lost population in only one decade. In the first period, they constitute the great majority of cities; in the second and third periods they comprise less than one-half of all the contracting cities. Correspondingly, in the second and third periods, most cities had multiple instances of population loss. The concentration of population loss in a few cities is striking. In the second and third periods, cities with multiple losses were responsible for 8 out of 10 instances.

Table 3: Persistence of Large City Population Loss

	Aberrant Cities 1820-1920	Declining Cities 1950-1980	Shrinking Cities 1980-2000
Total Number of Cities	15	41	18
Number of Cities That Lost Population in Only One Decade	14	17	6
Percent of All Cities	93.3	41.5	33.3
Number of Cities That Lost Population in Multiple Decades	1*	24	12
Percent of Instances	12.5	79.0	80.0
Number of Cities with Losses in Consecutive Decades	0	21**	12
Two Consecutive Decades	0	5	12
Three Consecutive Decades `	0	16	***

* Charleston (SC)

** The three cities with non-consecutive, multiple losses were New York, Portland (OR), and St. Paul (MN).

*** The period has only two decades.

Even more to the point, almost all of the cities that lost population in multiple decades did so in consecutive decades. This was true of the entire group of multiple losers in the most recent period, while only three cities—New York (NY), Portland (OR), and St. Paul (MN)—in the second period avoided consecutive losses. Sixteen cities during that time had three consecutive decades of population declines. The fact that no cities in the third period had three decades of continuous losses, though many had two, is wholly a consequence of the periodization scheme. In short, population loss during the time of parasitic urbanization and the subsequent period has been chronic.

Overall, these findings suggest that the more recent period of shrinkage is not so different from the second one. To this extent, the turn-about from massive decline to mere shrinkage, or even the transition from shrinking to resurgent cities, is tenuous. Table 4 provides further evidence by listing the large cities with multiple population losses in each period. The cities that had consecutive losses in the third period, with the exceptions of Milwaukee, Toledo, and New Orleans, have been falling in population since 1950. With 50 years of unrelenting population loss, they are “hard-core” in the world of urban decline. Of those not so burdened, Milwaukee and Toledo began shedding residents in 1970 and continued to do so in each subsequent decade, while New Orleans began its uninterrupted losses in 1960. These cities are also chronic population

losers. And, given the devastation and resident flight caused by hurricane Katrina in August of 2005, New Orleans is likely to stagnate for decades.

Table 4: Cities with Multiple Instances of Population Loss

Aberrant Cities: 1820-1920 (n=1)	
Charleston (SC)	
Declining Cities: 1950-1980 (n=24)	
Two Decades: (n=8)	
Birmingham (AL)	New York (NY)
Jersey City (NJ)	Portland (OR)
Louisville (KY)	St. Paul (MN)
New Orleans (LA)	Seattle (WA)
Three Decades: (n=16)	
Baltimore (MD)	Newark (NJ)
Boston (MA)	Oakland (CA)
Buffalo (NY)	Philadelphia (PA)
Chicago (IL)	Pittsburgh (PA)
Cincinnati (OH)	Rochester (NY)
Cleveland (OH)	St. Louis (MO)
Detroit (MI)	San Francisco (CA)
Minneapolis (MN)	Washington (DC)
Shrinking Cities: 1980-2000 (n=12)*	
Baltimore (MD)	New Orleans (LA)
Buffalo (NY)	**Philadelphia (PA)**
Cincinnati (OH)	**Pittsburgh (PA)**
Cleveland (OH)	**St. Louis (MO)**
Detroit (MI)	Toledo (OH)
Milwaukee (WI)	**Washington (DC)**

* Cities in bold also had three decades of population loss in the second period.

Regional Incidence

In terms of population loss, the parasitic urbanization of the early post-World War II decades was understood to have mainly affected the cities of the Rustbelt, the region stretching from Maine to Maryland, Ohio to Nebraska, and Minnesota to Kansas. That is, it did not extend across the urban space of the United States but was concentrated in industrial cities that had built their prosperity on manufacturing and ports. And, while a few cities—Oakland, Birmingham, New Orleans—are located outside this region, they are manufacturing centers and, except for Birmingham, ports. Was this regional concentration in place for the earlier period, and is it the case for the most recent period?

The absolute numbers of cities losing population in each period, shown in Table 5, do not support the Rustbelt/Sunbelt comparison. During each period, approximately 60% of the cities that lost population were in the Northeast and Midwest regions. This is not an overwhelming proportion and is relatively invariant, suggesting that urban population loss might be as much a regional problem as an industrial one. Note also that the South had a relatively large portion of population losers in the first period and more than 1 in 4 in the second and 1 in 3 in the third. It is the West that has been relatively immune. Still, from one period to the next, relatively fewer Rustbelt cities are in the Northeast and more are in the Midwest. To this extent, city population loss is "moving" westward, but only within the Rustbelt. Nationally, the data for the South and West support this westward movement for the first two periods, but, after that, fewer cities decline in the West. Only Denver (CO) in the West region lost residents in the third period.

Controlling for the number of large cities in each region produces a slightly different set of findings. Most striking are the percentages for the Northeast and Midwest in the second period; they support the claim of decline as a Rustbelt phenomenon. In the first period, it was more of a Southern phenomenon, while it persisted in the Rustbelt in the third. Only during the years of parasitic urbanization do Western cities suffer. What we see, then, is a slightly more spatially concentrated pattern of city population loss from the first to the second period, and then a shift to the South and Midwest in the third period. That the Northeast had fewer large cities by then is part of the explanation. Yet, as the number of large cities in the West increased, it did not experience a corresponding rise in population losers.

Table 5: Regional Incidence of Large City Population Loss

	Northeast	Midwest	South	West
Aberrant Cities: 1820-1920				
Number of Cities	7	2	6	0
Percent of Total	46.7	13.3	40.0	0
Percent of Large Cities in Region**	24.1	20.0	60.0	0
Declining Cities: 1950-1980				
Number of Cities	11	14	11	5
Percent of Total	26.8	34.2	26.8	12.2
Percent of Large Cities in Region**	157.1	107.7	57.9	45.5
Shrinking Cities: 1980-2000				
Number of Cities	3	8	6	1
Percent of Total	16.7	44.4	33.3	5.6
Percent of Large Cities in Region***	60.0	66.7	33.3	6.7

* Using the number of large cities in 1870 as the denominator.

** Using the number of large cities in 1970 as the denominator. A percentage greater than 100.0 indicates that the large cities in the region were declining in number.

*** Using the number of large cities in 1990 as the denominator.

Conclusion

Set in historical perspective, the current period of shrinkage is distinguishable from the earlier period of decline and an earlier period of growth as well. However, the differences mainly lie in the prevalence of population loss, less so in its severity, and not in its persistence or lack thereof. Fewer large cities cast off residents in the 1980s and 1990s, but the ones that did were, for the most part, the same ones that had declined in the previous three decades. Only the severity of their losses abated. These cities, one-half of all the shrinking cities, remind us that decline endures. The country remains in the grip of a seemingly diminished parasitic urbanization. (Renewed immigration, the shift to financial, producer, and consumer services, the build-out of peripheral areas, and a new-found interest in city living are all factors in this weakening.) Until these cities begin to grow, then, any claim that shrinkage is an aberration, and thus different from systemic decline, will be difficult to defend.

Thus, the issue for anyone researching shrinking cities is the persistence of loss from earlier decades, not what new forces have suddenly brought about shrinkage. The key question is: Why have these particular cities not (yet) rebounded from the prior years of decline?

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Urban Shrinkage Amid Fast Metropolitan Growth (Two Faces of Contemporary Urbanism)

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Introduction

Demographically, cities throughout the world seem to be expanding rather than shrinking. However a closer look at recent urban population change among the world's largest urban agglomerations of one million people or more reveals that between 2000 and 2005, 30 out of 414 cities experienced zero to negative average annual growth (U.N. 2005). Recently, this internationalized pattern of city contraction has been widely recognized as a global phenomenon requiring a paradigm shift away from traditional theories of urban growth and change (Oswalt 2006). Yet new theories about the causes of this phenomenon remain contested and vary according to authors' theoretical perspectives, as well as the geographical context and spatial scale of their analyses.

This paper compares European and American perspectives on urban shrinkage. It examines inner suburbs as the newest geography of American metropolitan decline. It offers a critical overview of several anti decline interventions and their corresponding utopian visions of urban form, and argues that a steady-state sustainability vision may be most realizable in shrinking cities.

European urban shrinkage

The most dramatic and extensive urban population decline of this decade can be traced to post-socialist urban change (see Table 1). Correspondingly, East German cities, the European forerunners of demographic and economic decline, have been the focus of a large body of work bemoaning mainstream theories and models of urban change that are ontologically focused on growth. This literature urges a re-theorization of urban change that can simultaneously account for growth and decline, as well as a corresponding shift in planning paradigms (e.g., growth management, smart growth, growth control, etc.) (Kabisch, Haase and Haase 2005, Haase 2005). More specifically, shrinking city scholars in Eastern Germany identify deindustrialization, post-socialist change, demographic aging, and suburbanization as the leading causal forces of urban retrenchment (Oswalt 2006). They also recognize that in most cases, shrinking cities are embedded in growing regions where population loss in the inner cities is accompanied by sprawling peripheries, and where fewer people and fewer activities are spread out over a more extensive space (Rienits 2006:6).

Table 1: World's Shrinking Urban Agglomerations of One Million or More (UN 2005)

United Nations 2005 Urban Agglomerations		Population (millions)	Average annual rate of change (per cent)	Population residing in agglomeration, 2005, as percentage of	
Agglomeration	**Country**	**2005**	**2000-2005**	**Total population**	**Urban population**
AMERICAS					
New Orleans	USA	1	0	0.3	0.4
Montevideo	Uruguay	1.3	-0.3	36.5	39.7
Puebla	Mexico	1.8	-0.7	1.7	2.2
La Habana	Cuba	2.2	0	19.4	25.7
W. EUROPE					
Glasgow	United Kingdom	1.2	-0.2	1.9	2.2
Manchester	United Kingdom	2.2	-0.1	3.7	4.2
Birmingham	United Kingdom	2.3	—	3.8	4.3
Torino	Italy	1.7	-0.4	2.9	4.2
Milano	Italy	3	-0.2	5.1	7.5
Roma	Italy	3.3	-0.2	5.8	8.5
Berlin	Germany	3.4	—	4.1	5.5
E. EUROPE					
Belgrade	Serbia/Montenegro	1.1	-0.4	10.5	20.2
Bucharest	Romania	1.9	-0.8	8.9	16.6
Budapest	Hungary	1.7	-1.1	16.8	25.3
Prague	Czech Republic	1.2	-0.2	11.5	15.6
Sofia	Bulgaria	1.1	-1.3	14.1	20.2
FORMER SSR					
Dnipropetrovs'k	Ukraine	1	-0.8	2.2	3.3
Kharkiv	Ukraine	1.4	-0.7	3.1	4.6
Odessa	Ukraine	1	-0.5	2.2	3.2
Samara	Russian Federation	1.1	-0.6	0.8	1.1
Chelyabinsk	Russian Federation	1.1	-0.4	0.7	1
Ufa	Russian Federation	1	-0.3	0.7	1.1
Yekaterinburg	Russian Federation	1.3	-0.3	0.9	1.2
Dmsk	Russian Federation	1.1	-0.1	0.8	1.1
Nizhniy Novgorod	Russian Federation	1.3	-0.6	0.9	1.2
Tbllisi	Georgia	1	-1	23.4	44.8
Yerevan	Armenia	1.1	-0.2	36.6	57.1
ASIA					
Pussan	Republic of Korea	3.6	-0.7	7.4	9.2
Seoul	Republic of Korea	9.6	-0.6	20.2	25
Hiroshima	Japan	2	0	1.6	2.4

Abetted by EU supranational-economic integration, deconcentration and decentralization is a recent phenomenon among European city-regions (Champion 2003), with antecedents in the American experience. In contrast, urban decline amid fast peripheral urban expansion has been part and parcel of U.S. metropolitan change for more than half a century. Consequently, in the European context there is considerable debate about, first, the extent to which European city regions are becoming Americanized, and, second, the extent to which suburbanization is useful as a catch-all concept of urban transformation.

Views of urban shrinkage in the United States

American research on urban shrinkage and related planning interventions has focused on urban poverty concentration, growth of the underclass, slums and blight, racial segregation, and immigration. Neo-classical economic and human ecology explanations have proliferated a view of urban decline resulting primarily from suburbanization processes.

The neoclassical economic view underscores people's preferences and trade-offs between land, commuting costs, and housing location, predicting urban decline at the center of cities and growth at the periphery. In addition to the incurred transportation and commuting costs, affluent consumers can afford more land and housing at the city's edge, while poor and low income consumers concentrate at the urban core, where, commuting and housing costs are presumably lower. Housing trickle-down, or filtering, is a related explanation of urban decline. Older housing stock, found in the central city, will attract low income households because of its affordability. Over time, poor populations concentrate in old cities and old suburbs, leading some neighborhoods to physically decay, as low rents discourage landlords from maintaining their properties. The classical human ecology view (Burgess 1925) explains the spread of decline through successive invasions of poor populations into middle-class neighborhoods, causing white middle-class populations to flee to the periphery or to the next ring of suburbs. In the U.S., massive racial transitions from white to black populations, characterized much of this urban change. As firms and middle-income populations moved out, central cities and first-suburbs further declined, leading to high concentration of economically deprived and racially segregated populations in places characterized by decaying infrastructure, paucity of fiscal resources, public insecurity, and crime (Downs 1997, 1999; Lucy and Philips 2000).

Political economy approaches identify the global restructuring of the international division of labor, innovations in transportation and communications, and local growth regimes (Logan and Molotch 1987)—ever reliant on the exchange value of land and land rent speculation--as principal post-world-war urban deconcentration factors. These factors weakened the agglomerative force of the industrial city resulting in its eventual demise through a process of massive "parasitic" suburbanization (Beauregard 2006). Nonetheless, under the American hubris of exceptionalism, city shrinkage, characterized by jobs and population loss, disinvestment, racial segregation, and lack of economic competitiveness in the Northeastern and Midwestern U.S., has

remained neglected and overshadowed by prosperity, population, and employment growth in the suburbs and Sunbelt cities (Beauregard 2003, 2006).

Alternatives to suburbanization as explanation of urban growth and decline

In Europe, the deconcentration thesis asserts that, aided by globalization, the old integrated system of European cities is being eroded by technical change along with wholesale suburbanization, which has rendered its historical urban centers superfluous. The counterview reasserts the historical durability of the medieval system of cities, which has survived to this day because the upper and middle classes still value town centers, and because the European public sector is more powerful and less dominated by growth regimes than in the U.S. (Giersig 2005). Yet despite the agglomerative strength and vitality of many European central cities, a rapid proliferation of urban nodes, made of commercial strips and swaths of single family homes, have prompted demographers to posit polycentric urban regions rather than mono-centric ones as a more appropriate model for understanding the post-industrial process of urban growth and decline (Champion 2001).

New settlement patterns resulting from employment and population deconcentration have been characterized as polycentric regions in which old traditional cities and urban agglomerations are highly integrated within their wider surroundings. Yet at the same time these are regions where the traditional contrast between city, suburb, and countryside is increasingly blurred, as economic activities spread out over a complex network of centers and subcenters (Bontje 2001). Davoudi (2003) argues that the exact nature of the polycentric system and its new dynamics has remained elusive and marred with definitional ambiguities, particularly at the inter-city spatial scale, while at the inter-regional scale, terms like "megalopolis," "metropolitan macro regions," and "polynucleated urban fields"are increasingly used to describe the growing decentralization of activities in north-west Europe. Furthermore, despite these issues, the concept of polycentricity, is increasingly normatively used in EU spatial planning.

A variety of formulations such as postmetropolis (Soja 2000), postmodern urbanism (Dear and Flusty 1998), and city regions (Bontje 2001) are alternatives attempting to explain the process of post-industrial urban change and the resulting polycentric urban region. Rather than suburbanization, which privileges residential change, Soja (2000) posits industrial urbanism as the driver of these transformations. The post-war restructuring of industrial urbanism, which in the U.S. turned to the car and truck away from rail, eventually transformed the monocentric (fordist) metropolitan landscape into a postmetropolitan region of outer cities, which he dubs "postmetropolis." The current postmetropolitan region emerges around the 1970s as the result of a new restructuring phase of industrial urbanism, this time associated with postfordism, which further emptied out old industrial centers via deindustrialization. This process concentrated high technology clusters in a new wave of industrial nucleation, which spawned its own postfordist cityscape of malls, airports, and allied development. In opposition to burgeoning exopolis at the regional edge, inner cities and old suburbs reemerge as "fractal cities" of haves and have nots -

highly divided and fragmented along economic and social lines. These two extremes converge in the downtowns where gated affluent enclaves and declining neighborhoods jostle for territorial control.

In these views of urban spatial structure, suburbanization, the driver of monocentric urban systems, becomes less relevant, and a more complex system of factors appears, shaping urban growth and decline. These include rapid decentralization of footloose economic activity fueled by increased and faster mobility due to changes in information, communication and transportation technologies; complex cross-commuting; traffic congestion, and changes in lifestyle, household structure, and in the organization of work (Audirac 2005). And although the historical roots and trajectories of European settlement patterns are different from those in the U.S., similar restructuring forces have been at play in both regions since World War II. This has been partially the result of the postwar American "global project[1]" (Beauregard 2006, Harvey 2000), the global industrial shift toward East Asia (Dicken 2003), the emergence of world trading blocs and a global economy that works in real time on a planetary unit (Castells 1996). These global processes have in recent times unleashed a volatile geographical differentiation, which is as much economic as ecological and social, insuring that capital-rich regions grow richer, while capital-poor regions grow poorer (Harvey 2000:78). In the U.S., Sun-Belt and Rust-Belt regions, the Mexico immigration debacle, the turbulent decline of new-economy sectors during the dot.com debacle (Frey 2005), and new rounds of economic decline ushered by the recent subprime financial crisis (Whitehouse 2007, Eckholme 2007), epitomize "glocal" processes, which have vastly reshaped whole cities and metropolitan regions.

Inner Suburbs in the United States, Newest Declining Places

Inner or first-ring suburbs, defined as those counties that in 1950 were adjacent to a central city and contained within a standard metropolitan area, are the most recent addition to American shrinking places. Shrinkage in these locales is mainly related to income and economic decline of high-poverty neighborhoods (Jargowsky 2003), coupled in some instances with abandoned and dilapidated built space.

Nationally, there are 64 inner suburbs. While these suburbs currently represent 20% of the U.S. population, in the 1950s these same suburbs accounted for 40%. Although all first suburbs have gained population since 1950, they have done it at a slower pace than central cities and outer suburbs, and from 1980 to 2000, 13 of these counties experienced negative income growth. In general, first suburbs' social and economic makeup resembles that of central cities characterized by large concentrations of elderly population and foreign immigrants. With the exception of Harris, TX, however, the majority are Rust Belt inner suburbs (see Table 2) (Puentes and Warren

[1] America's global project, according to Beauregard (2006) was for the U.S. to establish world dominance after WWII, situating itself at the center of an international economy based on free trade and by exporting the suburban way of life as a model of the good life to be emulated by other nations and sustained by freedom, democracy, and economic opportunity.

2006). While deindustrialization is the main reason for poverty surge in places like Trumbull, OH, in the Warren-Youngstown-Cleveland corridor, in Sunbelt Harris, outside Houston, influx of low-skilled immigrants employed in low-paid service jobs is the principal cause.

Revitalizing visions

Planners have tried a variety of redevelopment interventions to revive shrinking places in the United States. These range from raze-and-rebuild projects that re-mall old shopping centers with big box retail (e.g., Jennings, MO and Richfield, MN) to outright city downsizing, turning vacant land to parks and open space (e.g., Youngstown, OH). Following the ideas of postindustrial gurus, these interventions can also involve fortifying regional airports (e.g., Detroit) or pursuing new-age town regeneration by attracting the creative class (e.g., Kalamazoo, MI).

Raze and Rebuild

In first suburbs like Jennings and Richfield, cities have cleared old regional shopping centers and dilapidated homes, drive-in retail and run-down car dealerships for re-malling projects anchored by big-box retailers. Hefty state, county, and city subsidies help form public-private partnerships for redevelopment. However, in these public-private partnerships, local government power to declare blight and condemn properties has become highly contested. Since redeveloping blighted properties qualifies developers for tax breaks, city mayors and county commissioners often quietly declare declining homes, apartments and business properties "blighted," even sometimes including undeveloped land that is needed to attract a redevelopment project. Abuses of eminent domain and of "blight laws," many of them passed in the 1940s to support urban renewal, have brought together coalitions of liberal environmental and fiscal conservative groups opposing these new urban renewal schemes as "corporate welfare" (Nearing 2002).

No Growth

Youngstown, beleaguered with steep population decline, a decreasing tax base, and excess infrastructure, eschewed new-urbanist redevelopment formulas and drew up a comprehensive plan that is focused on shrinkage, rather than growth. The plan downsizes the city by transforming vacant properties into open land, capitalizes on having a university campus and downtown legacy architecture, and markets the city as a bedroom community for Pittsburg and Cleveland (Lanks 2006).

Table 2: First Suburbs Experiencing Decline (Source Puentes and Warren 2006)

First Suburb		Percent Change in Population 1950-2000	Percent Point Change in Share of Population Other than Non-Hispanic White, 1980-2000	Percent Change in Foreign Born 1970-2000	Percent Change in Population Age 65 and Over 1950-2000	Percent Change in Population Under Age 15 1970-2000	Percent Real Housing Value Increase 1970-2000	Percent Real Income Growth 1980-2000
Trumbull	OH	41.70%	3.10%	-47.60%	198.00%	-33.50%	38.90%	-14.20%
Lake	IN	63.00%	11.20%	38.30%	303.70%	-29.30%	63.40%	-11.60%
Harris	TX	587.30%	25.50%	2842.60%	990.90%	127.30%	59.40%	-10.20%
Allegheny	PA	13.00%	4.40%	-29.20%	179.90%	-38.80%	44.00%	-8.40%
Stark	OH	78.80%	1.70%	5.40%	231.60%	-22.10%	70.90%	-7.60%
Wayne	MI	89.50%	7.20%	22.40%	405.50%	-32.70%	54.40%	-6.60%
Macomb	MI	326.10%	4.90%	69.50%	1130.00%	-25.50%	50.90%	-5.40%
Cuyahoga	OH	92.90%	8.50%	-2.20%	330.40%	-31.50%	32.90%	-4.90%
Milwaukee	WI	46.90%	6.20%	27.60%	263.80%	-33.90%	42.40%	-3.80%
Montgomery	OH	154.20%	7.50%	82.50%	491.30%	-27.20%	31.50%	-3.60%
Monroe	NY	232.30%	5.10%	55.20%	508.90%	-17.10%	14.90%	-2.70%
Cook	IL	179.40%	21.10%	256.10%	421.30%	-14.30%	68.50%	-2.20%
Erie	NY	106.10%	3.20%	-7.20%	401.70%	-34.50%	33.50%	-1.40%

New Economy Approaches

Inspired by new Asian airport-based cities, and claiming that airports are the new central business districts of the postindustrial economy, John Kasarda, a professor at USC-Chapel-Hill, has promoted the "aerotropolis"—warehouses, shopping malls, and office and retail development centered in and around airports—as an urban regeneration strategy for cities like Detroit and Kansas City (Carey and Stanley 2007). Richard Florida has famously promoted "creative class" strategies, whereby, rather than giving tax breaks to businesses, cities compete for creative talent by developing urban environments that are open, diverse, dynamic, and cool. For example, "Cool Kalamazoo" in Kalamazoo, Michigan, is a revitalization strategy based on downtown boutiques and "hip" establishments that compete with suburban shopping malls for middle-class consumers. Yet strong arguments have been made that creative class approaches à la Florida both require and perpetuate socioeconomic inequality.

Shrinking cities and utopias of urban form and process

Each one of the revitalizing visions described above is infused with a particular utopianism of spatial form and of social processes, that when exposed reveals not only the prevailing collective imagination about ideal urban form and the good life, but also about the imagined (or unimagined) possibilities for change.

The re-malling of America, according to Harvey (2000), is a degenerative utopia not only because malls are built at public risk and private gain, but because they are conceived as a secure and safe fantasy land where the continuous spectacle of commodity culture, including consuming the spectacle itself, foments a detached attitude of political indifference to the world outside the mall. This blasé attitude is ultimately extended to the have-nots and those excluded from the commodity culture.

New-urbanist renditions of town centers and walkable communities, although in theory they offer an alternative to automobile-dependent neighborhoods and proffer a small-town America communitarian utopianism, in practice are exclusionary and unaffordable to the poor. As New-Economy visions, Richard Florida's creative meritocracy, with no room left for blue and pink collar workforces, smacks of an elitist ideology of gentrification. That the most "creative places" (i.e., high concentrations of lawyers, accountants, financial analysts) are also the most socio-economically unequal, is testimony that in spite of its creative acumen, the creative class has not figured out a way to solve the shrinking city problems of poverty, brain drain, and economic decline (Peck 2005).[2]

Although not master planned, aerotropolis development has been sprouting around airports for quite some time . It has attracted Florida's "creatives" (high-tech workers) at one end, and at the other, it has generated the pink and blue collar jobs that service the just-in-time cargo and logistics transportation sectors of this industry. While Kasarda's aerotropolis elevates airports' industrial parks to the level of the new-economy's urban core, depending on the kind of Asian free-trade zone that the areotropolis mimics, his vision could be a sanitized version of the "malling" of industrial parks around airports.

Final Thoughts

Fifty years after the passing of the Federal-Aid Highway Act of 1956, the interstate highway system[3] has become a fundamental structuring component of America's mobility and urban spatial structure embodied in "fast urbanism" (Audirac 2004). This urbanism of interstate freeways and arterials constitutes today the urban fabric of city regions where interchanges are high-value crossroads centering on the latest urban agglomerations (e.g., edge cities, aerotropoli,

[2] For an economic development critique of Florida's concept of "creative class" see Markusen 2006.
[3] And later the national highway system.

warehouse districts, big-box discount centers, tourism and entertainment centers, office parks, boomburbs, amusement parks, and allied drive-through services, etc.). Premised on "time-is-money" and global competitiveness, it structures a mobility regime of fast intra and intercity travel, regional accessibility, and high vehicular capacity at the expense of a "slow urbanisms" of local streets and collectors, slow mobility (i.e. transit, walking, and cycling) and neighborhood accessibility and residence (Audirac 2004).

In postmetropolitan America, planners of central cities and inner suburbs need to understand the structuring dimensions of fast urbanism and discern a local place's (market) niche, either allied with or against speed. They can use the tension between the "space of places"— local spatial organization and accessibility—and the global flow of goods, people, and capital—the "space of flows" through networks of telecommunications and fast mobility (Castells 1996, Harvey 2000, 1989)—to revalue the advantages of slow growth and urban shrinkage amid fast metropolitan growth.

The slow-food movement and other slow-world activities like European Cittaslow, which offer respite not only from fast urbanism's repetitive sameness, but also from its harried tempo and ecological destructiveness (Honore 2004), could become alternative anti-globalization utopias with potential to materialize in shrinking cities. Similarly, regeneration schemes that revert unused infrastructure and vacant lands to green open space could become carbon credit sellers in greenhouse gas cap-and-trade programs. Cities following Youngstown's no growth alternative in the Cleveland-Pittsburg city region or Sustainable South Bronx (SSB 2008) may realize a steady-state economics vision of urban sustainability (Daly 1996), whose opportunity cost appears most available to shrinking cities.

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Shrinking Cities in the United States of America: Three Cases, Three Planning Stories

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Introduction

In the United States, urban planning often concentrates on either managing urban growth or tackling redevelopment in a fragmented (not a regional) way—this despite the fact that similar urban issues, including shrinkage, often occur throughout an entire metropolitan region. The current discourse in urban and regional planning in the United States still displays a high affinity for growth models. Despite the popularity of revitalization, usually focused on city centers, there is no active discussion of shrinking cities (Pallagst and Wiechmann 2005). According to Robert Beauregard, one of the very few planners investigating shrinking cities in the U.S., a focus on urban population losses and their consequences would provide a counterpart to the literature on urban growth. He refers to shrinking populations as a "stigma" not fitting into the ideal of local decision makers (Beauregard 2003: 673).

When looking at the latest trends in the growth-centered urban and regional planning sphere, we find that 'smart growth' is among the most popular. Smart growth is the North American version of sustainable urban and regional development, yet it must be noted that—because of the need to achieve political acceptance of the strategy—the center of the concept is still growth. An active discussion of urban, regional, or metropolitan shrinkage, which European planners have engaged in since the year 2000, is still missing in the United States.[1]

Explicitly dealing with the problem of shrinking cities could provide a window of opportunity to discuss a paradigm shift from growth-centered planning to planning for more sustainable regional development patterns—thus helping to stimulate a redefinition of urban and regional governance in the United States.

Case Studies of Shrinking Cities in the United States

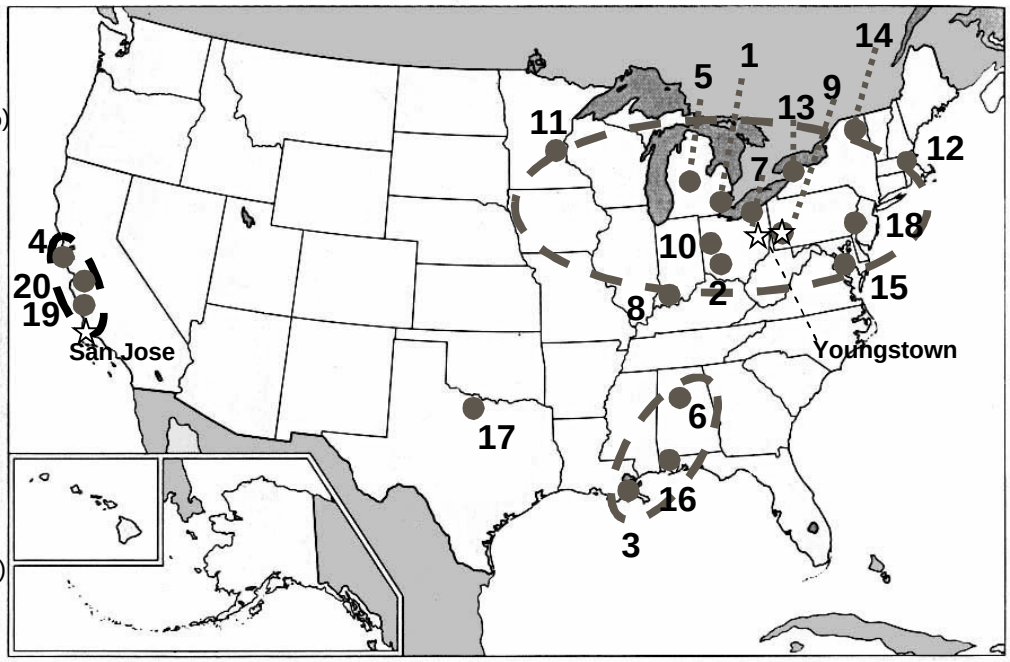
A shrinking city is characterized by economic decline and—as a consequence—the transformation of urban areas. In addition, loss of employment opportunities tends to spark partial out-migration. In the United States, shrinkage can either be part of post-industrial transformations

[1] German planners are on the forefront of this debate: e.g. Thorsten Wiechmann, Stefan Siedentop, Matthias Berndt; but the topic is also on the agenda in other European countries, e.g. Italy: Luisa Pedrazzini, France: Sylvie Fol, Emmanuele Cunningham-Sabot, the Netherlands: Wim Derksen, Frank van Dam, and Slovakia: Maros Finka.

related to the decline of the manufacturing industry, or it can be triggered by economic changes in the so-called "post industrial transformations of a second generation" within the high tech industry (e.g. the dot-com bust).

Figure 1: Urban shrinkage in the United States 2000-2004

1 Detroit (-5.1%)
2 Cincinnati (-5.1%)
3 New Orleans (-4.6%)
4 San Francisco (-4.3%)
5 Flint (-4.2%)
6 Birmingham (-3.9%)
7 Cleveland (-3.9%)
8 Evansville (-3.9%)
9 Pittsburgh (-3.9%)
10 Dayton (-3.5%)
11 St. Paul (-3.5%)
12 Boston (-3.4%)
13 Buffalo (-3.2%)
14 Rochester (-2.9%)
15 Washington (-2.9%)
16 Mobile (-2.9%)
17 Wichita Falls (-2.8%)
18 Philadelphia (-2.8%)
19 Sunnyvale (-2.8%)
20 Daly City (-2.8%)



☆ Case studies of this paper

Source: Pallagst, 2006 based on US Census data

Figure 1 illustrates the most recent clusters of shrinking cities with over 100,000 inhabitants in the US. The cities are listed by their population growth rate, with Detroit and Cincinnati showing the highest shrinkage. Interestingly, among them is San Francisco, with Silicon Valley as a shrinking region (San Francisco, Sunnyvale, and Daly City). This example will be highlighted later in this chapter.

The main observations of the small body of shrinking cities research in the United States are the following:

- The phenomenon of shrinking cities is not limited to well-known post-industrial "Rust-Belt" examples; it happens in other areas as well.
- Transformation processes occur within the sphere of land use. Shrinking and growing are processes that can be observed in parallel within a region.

Unlike in some old industrial regions of Europe, shrinkage in the United States is largely taking place in the urban core, while suburban regions continue to grow. This sprawl pattern has led to dramatic losses of population in the city centers. The problems of derelict sites, vacancies, and abandoned urban quarters are well known, and the social consequences of exclusion, poverty, and

homelessness are occurring to a much more dramatic extent in the United States than in European cities. Nevertheless, suburbanization alone does not account for shrinkage in the U.S. Many regional economies have been in a downward spiral, with out-migration of the working force on a regional scale, ever since the manufacturing industry began to relocate.

The following vignettes demonstrate the main issues of shrinkage in three U.S. cities: Pittsburgh (Pennsylvania), Youngstown (Ohio), and San Jose (California), each of them representing a different course of shrinkage and different strategies to deal with issues.

Pittsburgh's Story of Revitalization

Pittsburgh represents one of the classic and most well-known examples of a shrinking city in the United States. This case study analyzes different planning paradigms that have been applied in the U.S. for the revitalization of shrinking cities over the last fifty years.

As a consequence of the decline of its steel and manufacturing industries, Pittsburgh has lost almost half of its population since the 1950s (Moe and Wilkie 1997). The city has had to face the process of 'hollowing out,' in which the inner city suffers from population loss, segregation, and poverty while the broader metropolitan region gains population due to suburbanization.

During the early stages, Pittsburgh tried to bring population and businesses back to the city's core. The first phase of revitalization, referred to as Renaissance I (Crowley 2001), started soon after World War II. This process focused on clearing vacant industrial sites by tearing down existing structures to create space for high rise buildings, large projects such as Point State Park, and new highways.

The interest of local entrepreneurs in maintaining the competitiveness of Pittsburgh played an important role in the first revitalization efforts. To steer this process, the Urban Redevelopment Authority of Pittsburgh was founded in 1946 as one of the first institutions of its kind in the United States (Economou 1997). However, beginning in the 1960s, discontent arose among citizens about the city's "bulldozer" mentality of redevelopment. Along with this rise in public opposition, there was a shift in the city's redevelopment strategy toward neighborhood revitalization, enhancing its focus on housing development and the preservation of historic buildings (Lubove 1969).

Despite these efforts, however, shrinkage continued until recently. Between the years 1980 and 2000, Pittsburgh's central city areas experienced a population loss of 89,375 people, which was more than one fifth of the city's entire population. In the same period of time, the suburban region (Allegheny County) lost twelve percent of its population (Levin; Chute 2002).

In the beginning of the 1980s, a national economic crisis set off a second wave of revitalization efforts, referred to as Renaissance II (Crowley 2001). This strategy aimed at finding a stronger

and more diversified economic foundation for the city, based on high-tech industries, education, health care, culture, and tourism. The implementation was managed through a 'public/private/neighborhood partnership,' representing the concerns of citizens and aiming at creating neighborhoods. This was facilitated by the newly established Community Development Corporation (Lubove 1996).

Pittsburgh's most recent revitalization efforts are based on a number of core projects known as the 'Big Splash' (Hunter Interests Inc. 2002). This endeavor focuses on reviving high-end retail, new office buildings, housing units, and high-end hotels. Interestingly, the plan will create both additional parking spaces and pedestrian-friendly areas.

The changes in Pittsburgh's planning paradigms over the last fifty years are an example of the broader trajectory in paradigms of revitalization in the United States, also applied in other US cities:
1950s: Tear-downs and new construction following modernity's rigid development principles.
1960s and 1970s: Shift in trend toward the preservation of historic buildings and enhanced citizen participation.
1980s: Diversification of the economy and revitalization at the neighborhood level by means of community building, and a focus on key projects and events such as sports stadiums.
1990s: Mixed use in the city center (retail, housing, office and hotel), with the addition of pedestrian-friendly spaces.
2000s: Regional approaches, promoted by cities such as Buffalo, Youngstown, and Pittsburgh.

Many of these trends are overlapping. For example, preservation of historic buildings, community involvement, and mixed use remain important today.

Shrinkin' Down in Youngstown

For many years, the city of Youngstown was caught in a downward spiral triggered by the downturn of the steel industry. Youngstown's population was cut in half due to out-migration, from 166,000 people in 1960 to a relatively consolidated number of about 82,000 people today. During this period, the city lost its vitality, resulting in many older quarters disappearing and a rise in the number of desolate abandoned spaces.

Today the city has to face the consequences of dramatic shrinkage. It now contains a large number of vacant industrial and housing units, with almost no possibility that the city will experience a significant increase in population ever again. Land-use planning is especially concerned with the question of where to maintain its largely oversized infrastructure—and where to let it deteriorate—since it is no longer affordable to keep up the infrastructure supply in all parts of the city.

The degree of shrinkage in Youngstown made it clear to planners from the beginning that conventional methods of urban planning in the United States were reaching their limits: 'This puts everyone involved into an unknown territory where they must find a way to plan for the future of a radical smaller city' (Rugare 2004: 6). To cope with these problems, the city initiated a planning process called Youngstown 2010, combining the creation of a vision for the future with the implementation of a comprehensive plan based on the vision (Urban Strategies Inc. 2000).

The vision sketched out for the city until the year 2010 appears surprisingly realistic (Urban Strategies Inc.):

- Accept that Youngstown is a smaller city.
- Define its role under the premises of a new economy.
- Improve Youngstown's image and quality of life.
- Call for action with an achievable and action-oriented plan.

The whole process aims at rebuilding the city on a downsized scale, with new principles such as not planning for new settlement areas, but rather creating a land-management pool to create new parks and green spaces, and strengthening existing local businesses in the health, education, public administration, and cultural sectors. Of special relevance is the ecological component: rebuilding the city offers the chance for a "greener" system of space and place (Urban Strategies Inc.).

Youngstown has reacted to its enormous loss of population with a strategy of "urban conversion," oriented toward enhancing quality of life and toward sustainable development. Youngstown's break with the dominant orientation toward growth in land-use planning and development is almost revolutionary given U.S. planning traditions.

Shrinking after the Growth Hype: San Jose, California

Rust-Belt examples of shrinking cities, such as Pittsburgh and Youngstown, have been the focal points of far-reaching redevelopment strategies since the 1950s. In contrast, new cases of shrinking cities have not yet been discovered by the shrinking cities discussion. San Jose represents a recent and perhaps atypical case of city shrinkage. Economic changes in the city of San Jose are related to the bust of the dot-com industry in Silicon Valley that took place at the beginning of the new millennium. The city has had to face vast losses in its high-tech workforce and an increase in immigration of service employees at the same time. In the process of this "exchange" of population, one has to ask if a highly educated, out-migrating population can be compensated by an increase in immigration of low-skilled people.[2]

[2] Traditionally, the region has been a hub for low-skilled workers from foreign countries, mainly Latin America (Mexico) and Asia, many of them arriving as illegal immigrants. The influx of this immigrant group was not dampened by the dot com bust and the related economic downturn.

The shrinking phenomenon can be observed on both the regional and the local scale. At the scale of the metropolitan region, starting in the year 2000 the nine-county San Francisco Bay Area lost 450,000 jobs, 200,000 of them in Santa Clara County, the location of Silicon Valley. The city of San Jose has had the largest share in this downturn, with 50,000 job losses.[3]

The economic changes have affected both population growth and urban and regional development. In terms of population, the San Francisco Bay Area is still considered overall to be a growing metropolitan region. The economic changes, however, have resulted in either an out-migration of the well-educated and highly-skilled population (former employees of high-tech companies and dot com businesses), or parts of this population seeking lower-quality jobs. At the same time, in-migration is taking place. Between 2000 and 2005 in Santa Clara County, where the city of San Jose is located, total out-migration was 201,499 people, compared to an in-migration of 127,224 people from foreign countries.[4] After the downturn of the high-tech industries in Silicon Valley, San Jose's population growth has leveled off considerably. However, due to in-migration, it did not slow down completely. The population growth rate over ten years, which peaked at 118% during the 1970s, had dropped to 5.5% at the beginning of the new millennium with a total number of 944,857 inhabitants in the year 2005.[5]

Regarding urban and regional transformation, the shrinkage has not resulted in significant housing vacancies, but rather in large numbers of abandoned office buildings. This is due to the persistent shortage of affordable housing in the Bay Area, especially in Silicon Valley and in areas adjacent to it. The chances that these office spaces will be reused as offices or for other purposes in the near future are small.

In this situation, it can be noticed that the different stakeholders in planning are reacting in different ways. Starting shortly after the economic changes, the real estate sector shifted from producing the more-profitable office buildings toward providing much-needed housing. The city of San Jose reacted to this demand by developing specific policies and strategies to support affordable housing, for example by allocating $107 million to new construction since the year 1999. This trend can been seen in a large number of newly-built housing developments along transit corridors—developments that are attracting many of the new immigrants.

On the scale of the city, large flagship projects that have long been in planning stages can no longer be realized[6]. Planning practitioners seem to watch the building industry's short-term reactions, and planners are at least hoping for conversions from office buildings into housing. To date, a strategic approach has not been developed.

[3] Stephen Haase, lecture at the quarterly meeting of the Bay Area Alliance for Sustainable Development, San Francisco, October 28, 2004.

[4] US Census data.

[5] US Census data.

[6] For example a large office headquarters facility in an area called Coyote Valley.

On the regional scale, less growth and even shrinkage bring relief from the region's housing shortages and infrastructure needs, while the consequences regarding office space vacancies and other facilities within the urban fabric remain unclear.

Conclusions: Shrinking Cities and the U.S. Planning Debate

Since most of the US examples mentioned in the prior paragraphs are well known, one might ask, what is new to the shrinking cities discussion in the United States?

Today there is a consensus that traditional public-private partnership approaches are not sufficient for successful urban and regional development (remember the example of Pittsburgh). For this reason, cooperation and participation are now carried out as mainstream planning tools. This approach aims at a more democratic understanding of planning, and it is widely applied on a neighborhood scale. In particular, revitalization projects in the city center are the places of collaborative initiatives since the different interests of developers and citizens might be diametrically opposed to each other. These initiatives may have the potential to overcome the fragmentation of planning approaches that is one of the problems observed in this paper.

Even though the problems of shrinking cities can be found in a regional urban-suburban context, planning in these areas is to a large extent focused on revitalizing devastated city centers. While these are the areas with the highest concentration of problems, revitalization efforts often create gentrified areas and do not target the social needs of the poor. A broader, regional perspective of the city is largely absent, due to the fact that the revitalization effort lies in the hands of many different agencies, among them planning departments and redevelopment agencies. This diversity of sometimes competing agencies does not engender a coherent consideration of the complexity of urban development.

In addition to the traditional shrinkage pattern, centering around the locales of manufacturing industries in transition, a new trigger of shrinkage can be detected with downturns in the high-tech sector. Silicon Valley, often considered the role model for many high-tech clusters around the world, has had to face job losses, changes in population, and vacancies in office parks. The Silicon Valley case can be viewed as a reminder for other areas dependent on the high-tech sector that today's high tech might be tomorrow's old industries.

The example of Youngstown can be regarded as the attempt of a shrinking city to turn away from the growth paradigm. Nevertheless, in light of the traditional focus by the U.S. planning community on economic and urban growth, it is doubtful whether these initiatives represent a trend reversal. At the very least, Youngstown offers a sensible and realistic alternative, which could be thought-provoking for cities in comparable situations.

Shrinking cities within the United States is a phenomenon that is more complex than perceived by urban and regional planning thus far. However, unlike in most European countries, these

shrinking processes are embedded within a context of population growth at the national level. The question is whether the planning community in the United States will be capable of dealing with a stigmatized topic in a proactive way. The changes in U.S. planning practice from focusing on sprawl to focusing on smart growth raises hope that the one-sided focus on growth is over. A precondition for investigating shrinking cities would be—much like smart growth—a label, symbolizing consensus on perspectives, and chances for shrinking cities. 'Shrinking Smart' might have the potential as a new planning discourse that draws from experiences in coping with shrinkage to offer a coherent political and planning perspective for shrinking cities.

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Single-industry Resource Communities, "Shrinking," and the New Crisis of Hinterland Economic Development[1]

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Introduction

The shrinking, even disappearance, of urban populations and communities is a useful starting point toward understanding key aspects of the changing economic and planning conditions of hinterland regions under globalization. This can be said for many countries, but it is especially true of Canada, whose territory has both a high level of urbanization and a large hinterland with many communities economically dependent in large part on the extraction or harvesting of natural resources. This paper focuses on mining-dependent communities in Canada, with some particular references to Sudbury, the largest mining center in North America, though much of the analysis can apply also to single-industry forestry, fishing, and rail communities.

The process of "shrinking" in a given urban area or region refers to a long-term population decrease, whether it is a persisting decline or a reduction to a lower, more-or-less stable scale. Population decline is typically associated with absolute and relative declines in employment, living standards, and opportunity, and with increases in poverty and insecurity. Visible material associations include vacant, derelict, or underutilized housing, businesses, farms, schools, streets, transportation, communication and utility infrastructures. One cannot assume that population decline is invariably negative. For instance, in certain contexts, population decline or outflow might be beneficial for some persons or for the environment, for example, in reducing crowding, in facilitating economic growth elsewhere, in returning land to its aboriginal inhabitants, or in reducing a local environmental burden. But in the context of capitalist development, this is not the usual case.

Population decline is not new, and it is affecting a large number of communities, including larger ones, and in particular resource communities and hinterland regions. A recent Statistics Canada study of demographic trends in Canadian communities over the two decades from 1981 to 2001 found, among all 2,607 communities identified in Canada, that about one third grew for most of

1. This paper is based on elements from the Introduction in a forthcoming volume, David Leadbeater (ed.), *Mining Town Crisis: Globalization, Labor and Resistance in Sudbury, Canada*. For reasons of space, references here are limited; more can be accessed in the forthcoming volume as well as Leadbeater (1998). My years of research and living in Northern Ontario and in the Kootenay region of British Columbia has been enriched and facilitated by many labor and community activists, especially in the United Steelworkers at Elliot Lake, the Mine Mill Local 598/CAW at Sudbury, and the Sudbury and District Labor Council. I also acknowledge the suggestions and support of Kathleen Lord, Jeremy Mouat, and, not least, Kate and Jane Leadbeater.

the period, but one-third were in continuous decline (Mwansa and Bollman 2005). Given that Canada's overall population is growing and increasingly concentrated in major metropolitan centers, it is not surprising that larger communities grew more than smaller communities, and that these growing communities comprised about 80 percent of the Canadian population (in 2001). However, continuously declining communities comprised 2.6 million people, or 9 percent of the population. Also, the one-third of the communities described as "stable" and comprising 3.3 million people, or 11 percent of the population, had one or two five-year periods with declines in population. Often, communities identified as stable or even fluctuating might equally be considered "stagnating" and share conditions similar to those with persisting decline.

Population shrinkage and dislocation has been affecting most resource communities, large as well as small. Table 1 shows the larger mining communities in Canada, all with populations of 10,000 or more as of 2001. Over the census years 1996 to 2006, these 13 areas together had a population loss of over 50,000 persons, or about 7.1 percent. These are net figures, which suggests the actual or gross level of dislocation could be much greater.

The pro-growth orientation of most Canadian and U.S. academic research and texts in economics and community development is well known. This also reflects a metropolitan bias, for instance, in the tendency to ignore or downplay hinterland depopulation and the costs of dislocation. The metropolitan bias is entangled with class and gender biases, as the costs and social consequences of adjustment from hinterland employment loss and dislocation are borne disproportionately by working people and by women.

This paper argues that hinterland economic conditions (understood to include interaction with environmental conditions) have changed fundamentally and adversely since the 1970s, particularly for single-industry mining communities. These changed conditions constitute a new stage in the development of hinterland areas, a "new crisis of hinterland economic development" (Leadbeater 1998). This is what underlies urban shrinking in Canada's hinterland areas.

Table 1: Population changes in larger mining and smelting cities in Canada, 1996-2006

Cities	2006	2001	1996	1996-2006 (% change)	2006 area (land km^2)	2006 density (pop/km^2)
Greater Sudbury, Ontario CMA	157,857	155,601	165,618	-4.7	3,382.8	46.8
--Sudbury (dissolved city)		85,354	92,059	-7.3	262.7	324.9
Cape Breton, Nova Scotia	102,250	105,968	114,733	-10.9	2,433.3	42.0
Saguenay, Québec CMA	151,643	154,938	160,454	-5.5	1,753.7	86.5
--Chicoutimi (dissolved city)		60,008	63,061	-4.8	156.1	384.4
--Jonquière (dissolved city)		54,842	56,503	-2.9	216.0	253.9
Timmins, Ontario	42,997	43,686	47,499	-9.5	2,961.6	14.5
Sorel-Tracy, Québec	34,076	34,194	36,021	-5.4	586.8	58.1
Rouyn-Noranda, Québec	39,924	39,621	42,638	-6.4	5,991.1	6.7
--Rouyn-Noranda(dissolved city)		28,270	30,936	-8.6	348.1	81.2
Baie-Comeau, Québec	22,554	23,079	25,554	-11.7	338.9	66.6
Val-d'Or, Québec CA	32,288	32,423	33,756	-4.3	3,548.5	9.1
--Val-d'Or (dissolved city)		22,748	24,479	-7.1	2,889.5	7.9
Thetford Mines, Québec CA	26,107	26,721	27,760	-6.0	290.1	93.2
--Thetford Mines (dissolved city)		16,628	17,635	-5.7	37.0	450.0
Thompson, Manitoba	13,446	13,256	14,385	-6.5	17.2	782.8
Elliot Lake, Ontario	11,549	11,956	13,588	-15.0	698.1	16.5
Kitimat, British Columbia	8,987	10,285	11,136	-19.3	242.6	37.0
Estevan, Saskatchewan	10,084	10,242	10,752	-6.2	17.6	574.4
Total	653,762	661,970	703,894	-7.1	22,262.3	29.4

Note: The above are mining and smelting-dependent communities with a population of 10,000 or more as of 2001. All are formally cities except Cape Breton (a Regional Municipality) and Kitimat (a District Municipality). For consistency, the Greater Sudbury and Saguenay numbers are for the Census Metropolitan Area, though both are cities. The city of Saguenay is the result of a recent (2002) amalgamation, which includes the cities of Chicoutimi and Jonquière. For Rouyn-Noranda, the 1996 and 2001 numbers are for the Regional Muncipality, which the city became in 2002. For consistency, the Val-d'Or and Thetford Mines numbers use the Census Agglomeration areas, which approximate the new cities (2002). For the dissolved cities, the population changes are for 1996-2001 and the land and density numbers are for 2001. The totals exclude the dissolved city breakdowns for 1996-2001, to avoid double-counting.

Source: Statistics Canada, *Census of Canada*, 2001 and 2006, Community Profiles. Natural Resources Canada designates all of the above but three as "mining-reliant communities," based on their having 30 percent or more of their employment income from mining or smelting; to these have been added Elliot Lake, recently a major uranium mining center in Canada, and two major coal-mining centers: Cape Breton, recently a major coal-mining center, and Estevan, currently a major coal-mining center but classed by NRC as an "energy-reliant community."

Mining Towns and the Hinterland

Given the ongoing litany of inadequacy and inferiority that is visited on hinterland areas, one must note at the outset that the problems besetting mining communities in Canada and many other areas are not ones of "underdevelopment." Mining is a highly productive and technologically advanced industry, in fact, one of the most "productive" industries by capitalism's normal standards (CLSC 2004, Dungan 1997).[2] In this sense, the concept that the conditions of mining communities is related somehow to economic backwardness or lack of modernization is actually a serious distortion. So also is the similar notion that the problem is an inevitable maturing, decay, and death, often targeted at older manufacturing towns, with references to a "sunset" industry or part of a "rustbelt."

Such ideas conveniently deflect from questions of why such highly productive industries and towns, which do more than their fair share of society's heavy lifting, generally fare so poorly by most economic and social measures. Of course, the pollution, decaying structures, ghost towns, and ravaged landscapes and bodies left by the mining industry display its history more visibly than in most industries. But this is more a testimony to the exploitive power and considerable success of the mining industry in externalizing its social costs than it is about its level of productivity, technological development, or profitability. Indeed, what happens in mining communities such as Sudbury reveals the impact in hinterland conditions of corporate capitalist development at a very high level—quite the opposite of underdevelopment.

The focus here is on the condition of communities and people whose year-round livelihoods are derived in hinterland regions. Mining communities are an important component of the existing productive system and will likely remain so for at least several more decades. For present purposes, resource towns are understood as communities with economies specialized year-round in the extraction or harvest of a natural resource, or in primary production. Mining and other resource towns are commonly "single-industry" towns. This reflects first the fact that mining or similar industry is the main or principal industry, usually as indicated by some quantitatively high percentage of total community employment or production (GDP). It also reflects the main economic reason for the establishment or ongoing existence of the community. Without the primary industry, the community would not survive or continue its role in some larger division of labor in the system of production.

For most mining communities, especially those in remote areas, the scale of total local employment and production (GDP) relates largely to the scale of primary production for a given standard of living. Such single-industry communities typically have other supporting businesses

2. CSLS (2004) reports that natural resource industries in Canada had "labor productivity levels twice as high as the total economy on average, and labor productivity growth one and one half times as rapid as total economy labor productivity growth."

or industries that provide producer goods and services as inputs to the primary industry as well as consumer goods and services to the local labor force. Employment in the supporting industries thus depends on the local market. Without the labor incomes and profits derived from the primary industry, the demand for the goods and services of the supporting industries would decline possibly to the point of disappearance. Such has been the fate of the many ghost towns dotting hinterland areas, in which the primary industry closed or declined, and the rest followed. In this sense there is an implicit economic base theory or, in the Canadian context, a staple theory.

Recent estimates for the number of mining communities in Canada have ranged widely, from 54, based on the portion of local employment in mining, to 185—more than three times many—based of the portion of local income from mining employment. The latter is from a recent estimate by the federal government, in which all communities having 30 percent or more of employment income derived from mining or another resource industry were deemed "resource-reliant." For 2001, they identify Canada to have no fewer than 1,997 resource-reliant communities, of which 185 are mining-reliant, 804 agriculture-reliant, 207 fishery-reliant, 652 forestry-reliant, and 142 energy-reliant, with the last including some coal-mining communities (NRC 2001). The use of income rather than employment as a criterion will tend to increase the number of communities identified as resource-dependent (or reliant). As well, the use of the term "reliance" is part of a political spin that suggests a less serious connection between resource production and community well-being: to be "reliant" does not imply the same sense of subordination or economic necessity, let alone addiction—a metaphor used by one critic of mining development (Freudenburg 1992).

The vast majority of mining and other resource towns have developed and continue to exist as part of a hinterland to some metropolitan center or group of centers.[3] By World War I, large-scale integrated mining and smelter corporations, such as Inco and Cominco, had been established. So also had a typical form of "company town" and mining community. Unlike earlier mining operations, which relied on rich ore deposits and small-scale operations, the new stage in mining development relied on mass extraction and treatment of ore, including ore of relatively low grades (Mouat 2000: 1-4). This was highly capitalized mining with a much larger and more stable paid workforce, and the communities associated with it came to typify hinterland single-industry mining towns during the twentieth century.

3. For present purposes, I consider the hinterland to be the areas beyond the commutersheds of the largest metropolitan centers. Metropolitan centers are the predominant locations of controlling corporate ownership and political power; in this sense, urbanization does not necessarily mean or equal metropolitanization. Several empirical studies imply a hinterland-metropole divide or the differentiation of developmental patterns between regions inside and outside the commutersheds of metropolitan centers, particularly by separating adjacent and nonadjacent metropolitan regions (such as following Ehrensaft and Beeman 1992). Thus a recent federal government study (AAFC 2002) using 2001 census data divided "predominantly rural regions," into rural metro-adjacent regions, rural metro-non-adjacent regions, and rural northern and remote regions. The latter two together at least 4.5 million or 15 percent of the total population of Canada, which can be taken an absolute minimum estimate of the hinterland population.

For hardrock mining communities, there was overall growth from the 1940s until the 1970s,[4] in contrast to the situation of farming communities and underground coal-mining communities. Many existing mining towns expanded rapidly, such as Sudbury, and some new ones were established, such as the "model town" of Elliot Lake (uranium). By the 1970s, mining and many other resource towns had changed significantly from their pre-1940s phase. In particular, there had been a major expansion of public-sector and social programs. Mining and resource towns, especially the larger ones, became a type of two-industry town, though they were still perceived widely as "single-industry." This two-industry or two-sector character distinguished them from the earlier mining towns, not only in being somewhat less directly dependent on mining employment, but also in opening some employment opportunities for women, who were largely excluded from the rigidly male-dominated mining industry. The growth of the public sector also dampened the effects of some of the many fluctuations and closures and, for some towns, kept them from turning into ghost towns like many of their earlier counterparts.

The Emergence of the New Crisis

Beginning in the early or mid-1970s, both macro-level and community-level conditions changed sharply. The advanced capitalist countries entered a new phase of development, one with generally slower growth. Annual GDP growth rates which once averaged 4.9 percent (1950–73) fell to 2.6 percent (1973–89).[5] In this new phase, which marked the advent of globalization, international competition intensified, widespread privatization and a succession of "free trade" agreements increased the mobility and power of transnational corporations, and government social and regional policy shifted rightward toward fewer social protections. There was also a growing range of growth-linked environmental crises and debates, and high-profile pressures for greater "sustainability." These tendencies conjoined with local mining and community conditions to create a new crisis in hinterland development. The following were its key features.

First, there was an increase in productivity so massive that there occurred an absolute decline in employment while production was maintained or even increased. Employment in mining fell from the 1970s through most of the following decades. Sudbury, for example, at its peak had around 25,000 jobs in mining; by 1991 it had fewer than 10,000, and currently it is below 6,000. Mining towns were confronted not only with cyclical booms and busts but also with a long-term employment trend pointing downward or, at best, toward stagnation.

The increases in productivity were in process before the decisive shift to globalization in the 1970s, and they could have occurred to a degree even under conditions of public rather than

4. In terms of mining, the total employment in mineral industries rose from its 1941 wartime peak of nearly 56,000 to over 86,000 in the early 1970s, while coal mining employment declined almost continuously from its peak levels in the 1920s of over 30,000 to less than 9,000 by the early 1970s (Leacy 1983: P15, Q13).
5. This data from Maddison, and some other data used here is referenced in Leadbeater (1997) and the forthcoming volume noted earlier.

corporate ownership. For this reason, suggesting that globalization was the single or only cause of the crisis misses the deeper systemic issues. However, globalization, by increasing international competition, the concentration of capital, and corporate power, did aggravate and accelerate the process. From a development perspective, a major issue is how the benefits and costs of the productivity gain were distributed. The argument here is that labor and communities were forced to carry most of the costs and were denied most of the benefits.

Second, there has been a massive increase in the concentration of capital and monopoly power, both domestically and internationally. The mining industry has long had international markets and refining operations, but the expansion of Canadian-based mining corporations grew to the point where several had more production and profits derived from out of the country than inside, facilitated by technological advances in transportation and communications and by state policies (such as the federal Export Development Corporation). An important consequence was a shift in the balance of power toward transnational corporations, like Inco and Falconbridge in Sudbury, at the expense of labor and local communities. While workers and communities faced much poorer employment conditions, capital, when challenged, could more easily threaten to go elsewhere. Increased corporate concentration and monopoly went beyond mining to affect most other private sectors present in mining towns, from retail to financial to real estate. Outside corporate control was consolidated and expanded in most business sectors in mining towns, through direct ownership, dependent subcontracting, and franchise and licensing arrangements. A major consequence of this shift in the structure of business ownership and control in hinterland communities is the further destruction and enfeeblement of a locally-based business class.

Third, there was a major shift in state policy toward cutbacks in public employment and social programs. Even as economic conditions in hinterland areas were deteriorating, both federal and provincial governments reduced standards in a variety of social programs (particularly in unemployment insurance and social assistance), weakened labor and collective bargaining standards, eliminated or diminished support for social housing and regional development, privatized a range of public enterprises, reduced funding to education and healthcare, and cut or subcontracted jobs in public administration functions.

Fourth, the growth of production and consumption faced more environmental limits, both at the local and country levels. Not only was the number of large, easily accessible deposits diminishing, but environmental legal restrictions, health concerns, and conflicts with other industries (such as tourism) were also increasing. Such resource and societal constraints continue to emerge despite the dominant general trend of deregulation and more pliant governments.

Fifth, extensive resource development has faced increased political and legal resistance from aboriginal peoples over fundamental questions of sovereignty and ownership claims. The fact that the ownership and governance of resource lands are contested or contestable by actually or potentially sovereign peoples is not necessarily an absolute limit to the expansion of corporate

resource exploitation; transnational mining corporations have long conducted mining across numerous sovereign frontiers. However, within Canada, as limited as this emerging sovereign power may be relative to past conditions it has altered the reach of corporate power and forced a degree of redivision of the rents and profits from resource exploitation. The emergence since the 1990s of so-called Impacts and Benefits Agreements negotiated by aboriginal peoples with mining corporations is an example.

Overall, the changed conditions fundamentally shifted the development prospects for hinterland communities and labor. Not only did the balance of power shift further away from labor and communities in relation to transnational resource companies, but in addition, simplistic growth scenarios based on expanded resource extraction were either constrained by availability or access or, in some instances, limited by their employment impacts.

Consequences

The new crisis affecting mining communities has been expressed in many ways. Here I summarize several of the major consequences in the case of the Sudbury region, forcibly amalgamated in 2001 as the City of Greater Sudbury.

There have been serious and adverse long-term consequences for employment, both the quantity as well as the quality of jobs. Overall, there have been major losses of higher-paid and unionized jobs relative to lower-paid and non-union jobs. This occurred mainly with the massive loss of employment in the mining industry, but it also occurred in the 1990s with cuts to employment in the public sector. Not only did employment become more insecure and prospects diminish, but job losses in mining in particular caused a major shift downward in employment rates. Because they contain fewer biases against hinterland conditions, employment rates (or employment to population ratios) tend to be better measures of labor conditions than official (under) estimates of unemployment.

There has been a shift upward in rates of unemployment, for both men and women. Table 2 displays the employment and unemployment rates for the Sudbury region over the period in comparison to the levels for Ontario and Canada. Ontario is used for comparison because Sudbury is in this jurisdiction but also because Ontario is considered one of Canada's two most wealthy or "have" provinces. As can be seen for employment rates, male rates shifted downwards: above or at the average for Ontario and Canada from 1951-71, they were below it in 1991 and sharply below it in 2001. The female employment rates tended to rise over the period until hit with public sector and some service sector job losses; however, female employment, reflecting the segregating effects of the mining industry, tended to be below the rates for Ontario. Unemployment rates reflected a typical mining town pattern for males: in the earlier decades, it was below the averages for Ontario and Canada, then it rose to exceed both these averages in

2001. For women, the segregating effects of the mining industry led to unemployment rates that were higher than the average for Ontario and Canada in all census years but 1991 for Canada, likely due to Sudbury's public employment growth. Overall, mining areas like Sudbury became more like other low-employment high unemployment hinterland areas–and another part of the hinterland labor reserve. One of the most telling indicators of this condition is the large and permanent net outflow of young persons from Sudbury and other mining communities.

Table 2: Employment rates and unemployment rates for Sudbury, Ontario and Canada, 1951-2001

	1951	1961	1971	1981	1991	2001
Employment rates (%)						
Both sexes						
Sudbury	54.3	54.7	57.2	56.6	59.9	56.3
Ontario	54.1	55.0	57.8	63.4	63.6	63.2
Canada	51.8	52.0	53.4	60.0	61.0	61.5
Males						
Sudbury	84.1	81.1	78.7	70.9	67.0	59.9
Ontario	82.6	78.2	75.4	76.0	70.7	69.1
Canada	80.0	74.9	70.8	73.1	68.6	67.2
Females						
Sudbury	16.7	26.0	33.5	42.7	53.1	52.9
Ontario	25.6	39.1	40.6	51.3	56.9	57.6
Canada	23.1	28.8	36.4	47.3	53.8	56.1
Unemployment rates (%)						
Both sexes						
Sudbury	1.2	3.3	6.2	8.2	8.6	9.2
Ontario	1.0	3.3	6.9	5.6	8.5	6.1
Canada	1.7	3.9	7.9	7.4	10.2	7.4
Males						
Sudbury	1.1	3.1	4.6	6.4	8.2	9.9
Ontario	1.0	3.5	6.0	4.6	8.6	5.8
Canada	1.8	4.2	7.3	6.5	10.1	7.6
Females						
Sudbury	1.7	4.1	10.0	10.8	9.1	8.4
Ontario	1.1	2.8	8.2	6.9	8.4	6.5
Canada	1.6	2.9	8.8	8.7	10.2	7.2

Note: Data for 1961 on are for the Sudbury CMA and persons 15 years of age and over; for 1951, data are for the Sudbury Census Division and persons 14 years and over.

Source: Census of Canada 1951 (Vol. 5, Table 2), 1961 (94-533), 1971(95-749, 94-772), 1981(93-966), 1991 (93-338), 2001 (95-220).

Bankruptcy rates were also much higher than average. In 2001, Sudbury had about 645 consumer bankruptcies, or 4.2 per 1000 population; this is nearly double the average for Ontario (2.2 per thousand) (Canada was 2.6 per thousand). Business bankruptcies were also significantly higher: 64 or 0.41 per 1000 population compared to 0.27 for Ontario (and 0.33 for Canada).

Economic dependency on social programs increased from lower levels to levels well above federal and provincial averages. In 2004, the economic dependency rate on government transfers for men in Greater Sudbury was 14.5, compared to 9.3 for Ontario and 10.8 for Canada. For women, the rate was 29.3 for Greater Sudbury, compared to 21.2 for Ontario and 24.1 for Canada. This general pattern can be explained by three factors: lower average labor market earnings, a larger proportion needing social programs (such as unemployment insurance), and, for those using social programs, more help was needed, for instance, due to longer terms of unemployment.

Poverty rates, as indicated by Statistics Canada's Low Income Cut-Off, suggest generally that Sudbury's poverty rates overall are near average for Ontario and somewhat below the average for Canada (CCSD 2000). However, the rates for younger persons (below 35) tend to be higher than the average for Ontario and similar to those for Canada. Unattached non-elderly persons, especially women, have higher rates than for both Ontario and Canada.

As might be expected, higher unemployment, poverty, social program cuts, and reduced job quality have led to relative and absolute declines in earnings. In earlier decades, mining communities like Sudbury tended to have higher-than-average incomes. In 2001, average earnings in Sudbury were $31,063, about 12 percent lower than the average for Ontario. Moreover, women in Sudbury earned about 62 percent of men's earnings. The analysis of income tax return data shows that average real income in Sudbury has either stagnated or fallen over most years since the 1990s, and income distribution became more polarized.

Conclusion

Among the numerous issues raised by the present discussion of shrinking communities and the new crisis in hinterland development, there are four that deserve special emphasis.

First, the conditions of mining towns shows that the phenomenon of population shrinkage is not only tied directly to generalized employment conditions but to the capacity of transnational corporations to externalize their social costs (such as resulting from productivity changes) at the expense of host communities and labor. Despite major improvements in productivity, the gains of productivity are being exported, and mining communities and labor are receiving diminished benefits from resource development. Without a major effort to capture more of the economic

rents and profits of the industry, not to mention other redistributional measures such as downstream processing, the effects of a new crisis of hinterland development on employment, dependency, and income conditions will be difficult to reverse–even if a certain level of shrinkage is accepted.

Second, the traditional policy response to employment and population loss has been corporate tax breaks and other subsidies or concessions to stimulate mineral production and export. Given the limited employment impact one can now expect from increased mine production as well as growing environmental constraints and often unresolved aboriginal land claims, such a policy direction offers little prospect of major or sustained changes to community employment conditions. Further, there are still not means for mining communities to recoup benefits from mining directly, either through rent or tax sharing or through negotiated Impacts and Benefits Agreements. Whether mining continues at the current or an expanded scale, mining communities and regions need a restructuring of revenue sharing or serious participation in ownership to assure the community a voice in major decisions and substantial revenue transfers.

Third, the redistribution of power toward communities and labor, which is needed to mitigate and counteract the new crisis, requires a strategy of community mobilization. Whatever was the traditional role of the local business class in previous periods of development, its leadership role has been so enfeebled and compromised by the current level of external corporate domination that labor and community organizations need to take a more direct and public role in representing general community concerns.

Fourth, the content of policies needed in mining communities to increase community power will vary by community, though it is likely to include such measures as a strengthened role for the public sector, cooperatives, and community organizations. But whatever the particular priorities of individual communities, labor and community organizations will need to address openly the uncomfortable question of changing the subordinate power relations of communities to resource corporations. This is at the root of shrinking and other impoverishing pressures that globalization is bringing against mining and resource communities.

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The Creative Imperative in a Postindustrial Economy to Foster a More Sustainable Development in Shrinking Cities

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Introduction

For the last three decades, in a process broadly termed the "creative economy," ideas and artistic qualities have contributed to a paradigm shift in planning and urban development from a Fordist economic regime based on manufacturing to one that places high value on human creativity. The cities attracting attention in this process are not only the major urban centers known as "global cities," which monopolize global functions in economics, politics, and cultures; people are also taking an interest in "creative cities," which cultivate arts and culture and foster an innovative economic base.

In built-environment terms, this paradigm shift to a creative economy has influenced the policies and practices of urban development. In an era of globalization, activities of the creative sector – such as fashion, film, television, theater, music, dance, visual arts, design, architecture, advertising, publishing, multimedia, and information technology – have contributed significantly to the local economy, community life, and the creation of places in cities. Some cities have taken advantage of the trend toward agglomeration of "creative industries." Together with this trend, the careful design of places in cities that offer a broad spectrum of life-style choices and amenities emerges as an important strategy for attracting residents, in particular the young and talented, who are vital to the new economy in developed countries.

Emerging strategies: Culture and Creativity as Catalyst for Urban (Re)Development

Since the late seventies, many cities – especially in Europe – have increasingly used "culture" and urban cultural policies within urban revitalization strategies to support the transition to a post-industrial city.

A well-known example of achieving substantial changes through the use of cultural policy is the case of Glasgow, a city severely hit by the decline of its manufacturing industry during the recessions of the nineteen-seventies and early nineteen-eighties. The city was able to gain substantial benefits from a cultural upgrading strategy including environmental improvement initiatives, the opening of the prestigious Burrell Collection in 1983, the launch of the successful "Glasgow's Miles Better" advertising campaign, and the organization of a coherent annual program of cultural festivals. Glasgow's efforts culminated in its nomination as "European City

of Culture" in 1990, the first city to use the event for urban regeneration purposes.

In the last decade, cultural competition among cities has emerged. Cities now nurture a strong interest in becoming "creative," and also in hosting big cultural institutions and major cultural events (e.g. festivals, the European Capital of Culture event, the Olympic Games, etc.), in developing strategies for cultural industries, and in planning "cultural quarters," "cultural districts," or "cultural clusters".

Emerging conflicts: Consumption vs. Cultural Production-Oriented Models and Tourists vs. Citizens' Priorities: A Fight for Sustainability

Urban development based on culture and creativity is a complex process which can presents controversial economic, social, physical, and cultural issues. Bianchini (1993b) has identified several key dilemmas. These include: "audience dilemmas," such as residents vs. tourists, "spatial dilemmas," such as tensions between city center and periphery and the risk of gentrification, "economic development dilemmas" such as cultural consumption vs. cultural production, and "cultural funding dilemmas," in the choice to support ephemeral activity (such as events, festivals, and so on) or permanent activity (primarily in infrastructures).

In order to achieve sustainable urban development, it is necessary to find a balance among cultural investments so that all the pillars of sustainable development are maintained and enhanced. Bianchini (1993b) identified a "cultural planning" approach as a way to reconcile cultural and social priorities with economic ones. Central to this approach is the perception that cultural policies, if integrated and co-coordinated with other urban policies, can have a leading position within urban development strategies. According to this perception, "cultural planning" is not an approach focused on the development of separate cultural sectors or forms but instead consists of a two-way relationship between a city's cultural and creative assets and public policy.

Urban development based on culture and creativity is a process characterized by a complex interaction of different agents and specific socio-economic aspects. It is a process that is rooted in the cultural development of a city. It is not about creating flagship infrastructure or attracting the creative class, but it is about creating support networks in order to encourage entrepreneurialism and risk, to build trust, and to reinforce local identity. From investment in hard infrastructure – cultural infrastructure – cities should move toward investment in soft infrastructure – social, social cohesion, and creative networks.

Case Studies from Europe

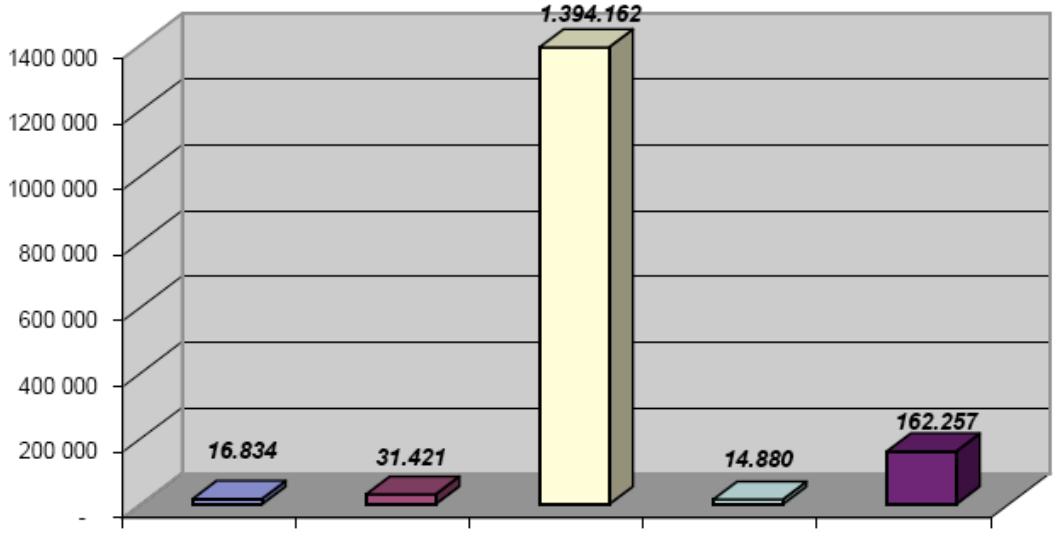
Attention to the creative economy in Europe is relatively recent, culture having in the past been reviewed largely as a limited, if not unproductive, source of activity. Yet in March 2000, heads of state and government officials meeting at the European Council in Lisbon agreed on an ambitious

goal: making the E.U. by 2010 "the most competitive dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion" (European Commission 2006). As a result, there are now various studies underway in Europe that attempt to capture the socio-economic contributions of the cultural and creative sectors to the "Lisbon agenda" – in particular, in terms of realizing growth, competitiveness, more and better jobs, sustainable development, and innovation. For example, while an initial 1998 study by the OECD had estimated that 2% of the European workforce was involved in cultural activities, a second study in 2002 raised the percentage to 7% by incorporating the culture of information technology into the traditional approach to culture (OECD 1998).

Culture and Creative Industries in Europe

The term "cultural industry" emerged in the Frankfurt school in 1944 with a strong negative connotation. In particular, Horkheimer and Adorno described the Cultural Industry as "an instrument of the capitalist elite that deprives both artist and the work of art of its intrinsic artistic value and transforms the consumer to pseudo-individual" (Horkheimer and Adorno 1969). The term "cultural industries" reappeared in the seventies, this time with a more positive connotation, in the first research on the economy of culture, exemplified by the work of Myerscough (see, for example, Myerscough 1990).

Figure 1: Creative industries in the EU25 sorted in accordance with the number of enterprises 2002



Source: http://ec.europa.eu/culture/eac/index_en/html

Case study: The U.K. Approach – "Creative Industries"[1]

In Europe, the terminology "creative industries" is attributed to the United Kingdom, when in the late 1990s the first Blair administration set up a Creative Industries Task Force to outline the promotion of creative industries as economic drivers. Comparatively, the scope of the United Kingdom's definition of "creative industry" is one of the widest, and in 2005, 4.5% of all jobs in the U.K. were to be found in the culture and creative industries (OECD 2005). Since 1997, most of the components of the culture sector in the United Kingdom are brought together in the same government ministry, namely the Department of Culture, Media, and Sport (DCMS).

Case study: Design and Industry in Glasgow, United Kingdom

In Glasgow, Scotland, for the longest time a shrinking city, the development of creative industries in connection with sustainable city development has been a strategic focus for the Scottish government since 2000. Scotland is now universally recognized as a "creative hub," and the creative industries are its fastest growing economic sectors – both in Scotland and in the United Kingdom more broadly. In the U.K., they account for over five percent of GDP, and in Scotland they employ 150,000 people – three percent of the population.

The largest share of these jobs is in Glasgow, with a concentration in film, television, publishing, cultural industries such as galleries and museums, and especially in design. In 2004 the News magazine called Glasgow the new music capital of the world and recent research has asked if the city's concentration of creative industries is the basis for the strength of its international visual arts culture – the so-called Glasgow miracle. In Glasgow, design – which is perceived as the invisible thread that permeates and interconnects architecture, publishing, music, software, and games – may be responsible for the vigor of its cultural and creative community, which in turn is responsible for attracting other categories of people and investment. To put it another way—as theorized by Richard Florida in his book Rise of the Creative Class—design and creative industries are largely the cause of Glasgow's impressive economic development, and not simply the effect.

Case study: Recycling Brownfield Sites into Cultural Attractions and Creative Space in Paris, Fance

Former industrial sites can be recycled into art and creative facilities that in turn will contribute in multidimensional unquantifiable ways to local development and social cohesion. Essentially it can give new life to derelict areas.

[1] The creative industries include: fashion, film, television, theater, music, dance, visual arts, design, architecture, advertising, publishing, multimedia and information technology.

Compared with other major European capitals, the city of Paris, enclosed in an area of 100 square kilometers, is confined within very narrow administrative boundaries. Paris' 19th arrondissement is a working-class district in the east of the city, covering an area of 2.62 sq. miles/ 1.677 acres (6.786 sq. km) located on the La Rive Droite – also referred to as the Right Bank. Currently, the 19th arrondissement hosts several public parks, including Parc des Buttes Chaumont located on the hill. It also hosts the Parc de la Villette, encompassing the Cite des Sciences et de l'Industrie, which is an exhibition center dedicated to sciences and industries, and the Paris Conservatory, one of the most-renowned music schools in Europe. However, well into the 1990's, the 19th arrondissement was not only shrinking but also one of the main centers of crime and prostitution.

The neighborhood's revival began in 1995, when Marin Karmitz, a writer and a noted film producer who in the `80s founded MK2 – producer of films such as Malle's Au Revoire and Les Enfant (1987) – decided to build a movie theatre in Paris' 19th district, then one of the least wealthy parts of the city. This decision was unexpected, since the last movie theatre in the district had closed at the end of the 1980s. Yet one of Karmitz's major goals in fact was to "re-conquer a poor area looking like a culture desert" (KEA report, 2006). The project included a large complex, also including restaurants and museums, and it took advantage of the picturesque landscape, which included Villette's pond. It was highly successful, attracting many more consumers than expected. By 2005, the MK2 group had 64 screens, and today, the group includes all the branches of the movie industry, from production, to distribution, to international sales. It is the first independent film group of this kind in France.

Figure 2: Paris Arrondissements

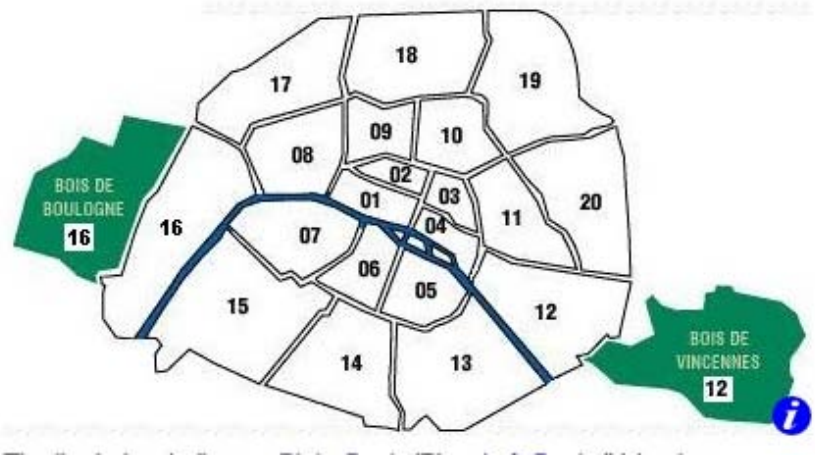


Table 1: Population of the 19th Arrondissement

1872	93.174
1954	155.058
1962	159.568
1968	148.862
1975	144.357
1982	162.649
1990	165.062
1999	172.730
2005(estimate)	187.200

The district took advantage of this success to instigate a broader regeneration of the district, both culturally and economically. According to the head of culture at the 19th district city hall, Joel Houzet, the district changed from a crime-ridden area to a welcoming place. The first change observed by Mr. Houzet was the blossoming of cultural associations around the theaters, such as Cafézoide, a cultural bar where teenagers can socialize and express themselves artistically. Another example is a local building that had been destroyed by a fire which became an hall that now houses 37 artist studios. The pond also changed with the creation of two artistic barges, one dedicated to the plastic arts and the other hosting an opera.

The development of the area attracted a film school and a famous business school, INSEEC, which decided to install 5 buildings in the district. Moreover, the bookshop of the MK2 Quai Loire also had a notable influence. Whereas previously there were only two libraries in the 19th district, now there are seven. The two theaters aspire to retain the quarter's original spirit. They collaborate, for example, with several associations to create popular events such as days dedicated to the screening of hip-hop movies and the like.

The establishment of the two movie theaters also had an influence on the economic revival of the district. The energy company Total has set up its head office near the theaters, and around the area, a three-star hotel, a youth hostel, and many restaurants and bars have been established in buildings that were once abandoned.

The United States Approach

Comparisons between Europe and the United States are difficult because they use and employ definitions, statistical frameworks, data, and indicators different from each other. Europe has a more unified set of policies in relation to research and to mobilizing the creative economy. Most American city governments contain an array of agencies whose responsibilities bear on the

cultural economy. These have evolved over many decades, and they vary dramatically from place to place.

Production of official statistical information is extremely decentralized in the United States compared to Europe, and there is no government statistical agency focusing on the US culture sector, either in terms of its economic impact, or in terms of its wider economic importance. The principal official body dealing with culture is the National Endowment for the Arts (NEA).

However, the creative industries clearly comprise an increasingly important part of the U.S. economy as well. For example, in the United States 4.5% of all jobs are to be found in cultural and creative activities (OECD 2005). In addition, according to the U.S. "Americans for the Arts" report of 2005, the number of so-called "art centric businesses" grew in the U.S. by 5.5 % (548,281 to 578,487) as compared to a growth rate of only 3.83% for all U.S. businesses (12.8 million to 13.2 million) (Americans for the Arts 2005).

Case Study: Art + Creativity + Technology in San Jose, California, United States

When San Jose adopted its economic development strategy in 2003, the city adopted an aspiration to be a "Creative Community" that pioneers innovation within and across technology and business, arts and culture, and society. With a variety of partners, including San Jose State University, San Jose aims to become the leading center for the arts and technology in North America.

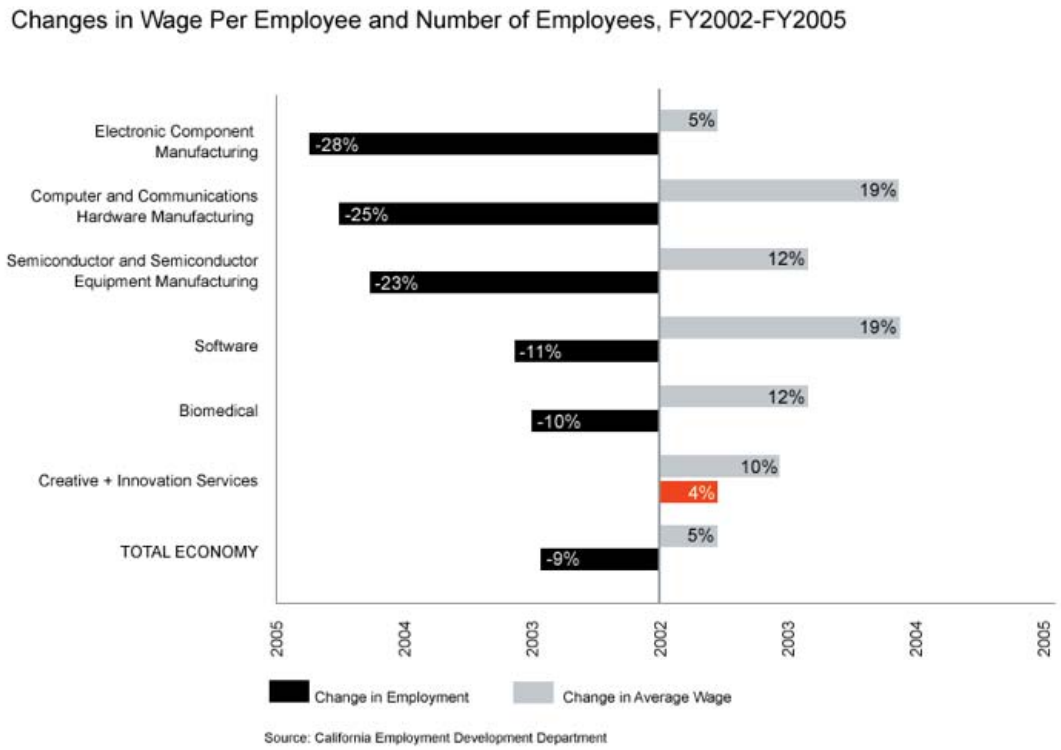
This decision to define the city as a "creative community" is largely due to heightened competition for talent, as well as to more fundamental shifts in the regional economy where more companies value design, the consumer experience, and cross-disciplinary innovation. Specifically, the Silicon Valley – the broader area surrounding San Jose – experienced a turbulent five-year period of shrinkage incorporating economic decline & restructuring , out-migration, and occupational change known as the "bubble burst," that produced both unprecedented job losses but at the same time substantial wage gains. This striking juxtaposition of job loss against wage gain indicated a fundamental shift to higher-skilled occupations.

The collapse of the dot-com bubble highlighted the Silicon Valley's emphasis on arts and ideas as its competitive edge. The valley has long been effective in attracting entrepreneurs and incubating new companies, creating new products and services, and introducing entirely new business models. In the years since the dot-com collapse, Silicon Valley has solidified its position as a global center for creativity in business and technology. The experience in the years 2002 to 2005 offers additional evidence that Silicon Valley's most important competitive edge may well be its "Creative Edge," as shown in figure 3.

Conclusion

Adam Smith wrote in 1776 in *The Wealth of Nations* that corporations breed "negligence and profusion" and "scarce ever fail to do more harm then good." In his days, governments handed out corporate charters rarely and unwillingly. But a century later, as the required scale of enterprise grew, corporations came to the fore. They built railroads, steel mills, refineries, and other businesses of unprecedented size. In so doing, they played an indispensable role in what U.C. Berkeley economist J. Bradford Delong calls a "central fact" in the 20th century economic history: the greatest increase in material wealth ever. (DeLong, 2001). Now, the industrial economy is giving way to the creative economy, and corporations are at another crossroad. Attributes that made them ideal for the 20th century could cripple them in the 21st century. The Darwinian struggle of daily business will be won by those organizations that adapt most successfully to the new world that is unfolding.

Figure 3: Changes in wage per employee and number of employees FY2002-FY2005



At the same time, at no other time in the history of capitalist urbanization have there been so many opportunities to bring economy, culture, community, and place back into harmony, paving the path to sustainable development through a holistic approach to development. The added value of improving the quality of life for people (place making) and of holistic design is to help cities become more sustainable.

The creative economy can bring benefits that extend beyond direct employment and tourist spending. One of the greatest strengths of a vibrant creative community is its ability not only to attract other businesses and encourage neighborhood development but also to empower existing community. Culture helps build community by influencing commercial and residential development, which in turn attracts workers and residents.

To engage in strategies that involve the arts, culture, and the creative sector as a catalyst for urban re-development, the creation of a task force through public and private partnerships becomes a vital and necessary step. Experiences from various countries and case studies show that the most effective cross-organizational partnerships are usually between civic officials, community leaders, and arts representatives.

The cultural and creative sector also has the potential to contribute to a more complex process of urban re-development in shrinking cities. On the one hand, it provides communities with a higher – not always easily measurable – quality of life. On the other hand, it also has the potential to generate material benefits for the economy and society as a whole.

The case studies in this analysis show that cities attempting to re-invent themselves need to find a balance in their investments between image and identity, so that all the pillars of sustainable development can be maintained and enhanced: cultural & creative capital, social capital, and economic capital. In all three cases, investments were made both in hardware – the cultural infrastructure – and in software – the creative networks that stimulate creativity. They show to what extent investments related to the improvement of the city image, although they can produce short term benefit, need to be integrated and balanced with investments aimed at strengthening local identity to be able to produce long term benefits and trigger a more sustainable urban development process.

Last but not least; from the case studies it can also be concluded that creativity as a strategy for urban (re)development is not something that can be simply imported into the city, as Richard Florida might be suggesting. Rather, in order to be successful also in sustainable development terms, it must be organically developed and balanced, not only economically but also socially, in relation to specific urban contexts.

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Cerro de San Pedro: Grassroots Movements in Cooperation and Conflict to Stop a Living Community from Disappearing

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The aim of this paper is to analyze relationships of cooperation and conflict between a mining company, the town of Cerro de San Pedro, social movements, and three levels of government in revitalizing a mining town in the state of San Luis Potosì, Mexico. The presence of a mining company in Cerro de San Pedro has caused a severe social conflict among the inhabitants of the neighboring communities of San Pedro, Soledad, and San Luis, all of whom are concerned with historical heritage, cultural, and environmental issues. The inhabitants of these communities, supported by environmental groups and NGOs, argue that the project will pollute sources of fresh water as well as perturb the environment and the ecology of the region.

At the center of the controversy is the use of cheap and efficient technology that violates federal and state laws. This case demonstrates a lack of sensitivity on the part of foreign mining companies toward the consequences of their activities for communities and environment. This case is also an example of the lack of communication between firms, communities, social movements, and governments in planning, developing, and revitalizing a shrinking colonial town.

Introduction: Evidence of the Mining Towns' Shrinkage in Mexico

Mining was once tremendously important to Mexico's economy. Since prehispanic times, mining has played an important role in the political and economic history of Mexico. Spanish colonizers were attracted by Mexico's rich mines and by the discovery of new ones, and their importance were such that the state of the mining industry was used as an economic indicator. Mining activity was also the incentive for the foundation of new villages and towns far away from the large cities and with difficult access. During colonial times, these new villages and towns were populated and grew until they reached the status of cities. However, during the second half of the last century, the decline of mining activities led to the shrinking of these mining cities to the point of converting them into ghost towns.

Grassroots movements, in relationships of cooperation and conflict between firms, communities, and government, play an important role in stopping living cities from disappearing. This paper describes and analyzes the implications of collective action by grassroots movements in the defense of an old mining town, Cerro de San Pedro, which was disappearing due to the pollution of fresh watersheds by the operations of a mining company. The paper also analyzes the broader effects of this collective action on the neighboring city of San Luis Potosí capital of the state of San Luis Potosí.

The purpose of this paper is to describe and analyze the relationships of cooperation and conflict between grassroots movements, a community, and government in stopping a mining company from contaminating the watersheds, polluting the environment, and destroying the living spaces of the town of Cerro de San Pedro—and from affecting the neighboring city of San Luis Potosí in Mexico.

History of Mining Towns and Cities in Mexico

Discovery of the first mine in 'Nueva España' in 1532 led to giddy exploitation of precious metals all over the territory. By the middle of the sixteenth century, exploitation of prolific seams was the main cause of the emergence of mining towns in the New Spain territory. Most of these became cities of great economic and social importance—among them Pachuca, Hidalgo, and Parral. The exploitation of precious metals had achieved outstanding growth by the end of the sixteenth century, representing more than 80% of total exports from Nueva España (Estrada, 2001). Around the activities of the mining industry emerged other economic activities that provided employment, allowed commercial trade with the metropolis, and gave rise to general prosperity in mining towns and cities.

One of the explanations given for the decay of the Mexican economy in the seventeenth and eighteenth centuries is the decline in mining production. However, there is no economic evidence to prove the hypothesis that mining in Mexico had a profound crisis during the eighteenth century. In fact, production of silver multiplied by four times throughout the eighteenth century. Rather, the decline of the mining industry originated in 1810, and although the cause is debatable, some scholars attribute it to the Mexican independence movement and the lack of stable political and social institutions. More importantly, the consequences of this decline were profound. Because mining activities lost their importance in the mid-eighteenth century, Mexico failed to lead an industrial revolution.

During the second half of the twentieth century, the further decline of the mining activities carried with it a shrinking process among mining cities to the point of converting them into ghost towns. Recent changes in Mexican legislation have liberalized the mining sector, and after the opening of North America Free Trade Agreement (NAFTA), foreign companies have increased investments. From 1986 to 1990, the World Bank granted credits to support structural adjustment. Credit 3359 supported structural adjustment of the mining sector, categorized as B, by eliminating environmental requirements and public hearings (Border Ecology Project, 1994). Under this new set of neoliberal economic policies (which included amendments to Constitutional Article 27, a new agrarian law, a mining law, and a foreign investment law), the so-called 'ejidatarios', originally limited owners of land rights, could change ownership. Investors now could associate with ejidatarios and exploit resources without buying the land. The North American Free Trade Agreement (NAFTA) offered advantages and opportunities for investors. The mining law (1993) and the regulation to the mining law (1999) opened areas that were once

reserved for national investors to foreign capital and defined new rules for the development of national and foreign investments based on the idea that the exploration and exploitation of minerals are activities of public utility. The process of granting mining concessions does not require public hearings, and most of the time, the affected communities are the last ones to know about the project. A mining concession cannot be cancelled for polluting the environment; at the most, a company can be fined.

The Turning Point: From Chaotic Shrinkage to "Planned" Shrinkage

Some of the mining towns in Mexico that were experiencing chaotic shrinkage are now experiencing planned shrinkage that is oriented toward resuscitation and revival through tourism activities. However, some other mining towns are continuing to suffer the exploitation of mines under a more neoliberally oriented planned shrinkage.

Despite the fact that mining is an immediately productive economic activities, it is inherently unsustainable because it not only pollutes the environment but also exhausts entirely nonrenewable resources. In fact, mining stands as one of the major environmental threats to biological diversity, creating enormous quantities of polluted waste, polluting water with toxic substances, and creating serious environmental problems. Regions and towns are financially responsible for rehabilitating mining sites, and these rehabilitation costs are different for urban versus rural communities. In particular, for rural poor and indigenous communities, the costs of rehabilitation are often proportionally larger than the benefits obtained when the mine was in exploitation. These communities are especially vulnerable to the unequal distribution of environmental costs.

Community and Social Movements Involved in the Case of Cerro de San Pedro

The presence of the mining company Minera San Xavier (MSX) in Cerro de San Pedro has caused a severe social conflict among the inhabitants of San Pedro, Soledad, and San Luis and has called the attention of all who are concerned by historical heritage and cultural and environmental issues. The firm argues that its operations would have some benefits: Four million dollars in taxes will be paid to the federation over eight years, and the company would buy materials and provisions from local suppliers. Critics, however, have referred to the company's mining operations as ecocide, citing the contamination of watersheds, pollution of the air, and destruction of historical heritage. The inhabitants of these communities, supported by environmental groups and NGOs, argue that the project will pollute sources of fresh water in addition to perturbing the environment and ecology of the region.

The affected community is the small village of Cerro de San Pedro, where an opposition alliance has formed among diverse civic groups, organizations, and political parties in a coalition called Alianza Ciudadana Opositora a Minera San Xavier, which include more than eighty groups in

total. One of the main citizens' groups opposed to the project, the *Frente Amplio Opositor* (Ample Oppositional Front) has been engaged in a long-running struggle to prevent the destruction of Cerro de San Pedro by a Canadian company that is planning to operate an open-pit gold mine. In addition, the University of San Luis Potosi has conducted an independent review of the environmental impact study. The alliance also counts the support of the Catholic Church and its archbishop.

At the center of the controversy is cheap and efficient technology that uses cyanide and the effect it would have on watersheds, the environment, and human health. The overarching problem is that the profits gained by the town from the company's exploitation are estimated to be low in comparison to the amount of destruction and permanent ecological damage that would result from the mine. The project would entail moving part of the town and its historic buildings, and the people of Cerro de San Pedro do not want to move. But most troubling was the company's unclear plan for the management and disposal of toxins, including cyanide, that are used in gold mining. The technology, called 'lixiviation', consists of piling minerals mixed with cyanide over a platform to produce residual gold. Studies conducted by Minera San Xavier (MSX) to evaluate the amount of water depletion and degree of pollution risk to the watershed of the valley of San Luis have been insufficient and biased. In fact, the proposed mine would destroy the historic remains of the old town and destroy the environment through cyanide leaching, as well as potentially poison the water of San Luis Potosi. Moreover, the subterranean waters of San Luis Potosí and Cerro de San Pedro are in the same geo-hydrological zone. A futher risk factor is that the firm Cambior, which owns MSX, has been involved in two of the most disastrous cyanide spills in mining history (Deza Arroyo, 2006; Zenón/CEICOM, 2006).

Inhabitants of Cerro de San Pedro's community—allied with local and foreign social movements, nongovernmental organizations, and citizens—have been organized and engaged for more than a decade in a legal battle against MSX. The social movements have obtained some important judicial resolutions in different tribunals against the mining company. One of the more important resolutions is from the *Tribunal de Justicia Fiscal y Administrativa* (Fiscal and Administrative Justice Tribunal), which ruled that the environmental permit should never have been granted, even conditionally, from SEMARNAT (Secretary for the Environment and Natural Resources) for the mining operations in Cerro de San Pedro. Thus, after twelve years of legal struggle against MSX, citizens and social movements have been shown to be in the right. Yet paradoxically, authorities—in complete disrespect and contempt of court—have decided to support the company in its continued operations.

The conflict against MSX had resulted in the death of the mayor of Cerro de San Pedro, who opposed granting a municipal permit for the mining operations and was investigating some irregularities of the company. In April 2006, when two activists were informing some tourists about the situation, they were brutally beaten by employees of the firm, who are still going unpunished. Opponents of the company have been arbitrarily beaten by agents of the state government of San Luis Potosì, and these aggressors have to date gone unpunished. Aggressions climaxed in 2007 when two social movement strikes were violently repressed. State police beat

protestors of the *Frente Estatal de Movimientos y Organizaciones Sociales* (Statewide Front of Movements and Social Organizations). Six citizens, five of them younger than 21 years old, were jailed as political prisoners.

Although the local community succeeded in mobilizing a strong campaign around respect for mining laws and protection of its historic heritage, in the end they seem to have been defeated by collusion between a heavy-handed government and the economically powerful mining industry in Cerro de San Pedro.

Final remarks and conclusions

Mining activities are perceived to be the main economic driver in marginalized regions and depressed zones in Mexico. Yet mining concessions granted by the Mexican government are centralized, brief, and do not include public hearings. Consequently, the affected groups and communities lack the opportunity to either react by mobilizing against potential risks and dangers or by negotiating to protect their interests.

The Canadian firm Metallica Resource Incorporated is at the point of destroying part of the environmental, cultural, and historic heritage of the country, despite the fact that there have been three judicial resolutions to halt operations granted by different authorities. Metallica Resource Incorporated violated important norms when it started operations without obtaining a legal permit for construction and operations or authorization to manage and store explosives. Yet the general assumption is that the firm has operated in complicity with the federal, state and local governments. As a consequence, the 'ejidatarios', who have rights to own the land, have been dispossessed. Moreover, environmental and health risks from mining operations threaten side effects for more than one million people living in the localities of Cerro de San Pedro, la Soledad, and San Luis Potosí.

The extraction of gold via open-pit mining and the use of cyanide leads to the destruction of natural environments through a variety of means: irreversible geomorphologic alterations, distortions of watersheds, reduction in the quality of available water, possible accidents in the transport of dangerous substances, irreversible destruction of natural scenery, and the generation of deposits of highly risky pollutants. Together, these side effects combine to form a strong social, cultural, and environmental impact in both the shortterm and in the medium and long terms.

The paradigm of negotiation in the debate over sustainable development and defense of the environment is presented as a model of cooperation and consensus, where, through strong international mobilization, stronger actors (e.g. transnational corporations) are made to compromise with weaker actors (e.g. grassrooots organizations), and where everyone's needs are incorporated into legislation. Indeed, intervention of the international community in support of the public interest and to control forces of the state is common and always welcome by small

local communities. However, the continued lack of sensitivity on the part of foreign mining companies toward the consequences of their activities for local communities and the surrounding environment is evident.

This case also exemplifies the lack of negotiation between firms, communities, new social movements, and government. Most crucially, the government must formulate and implement more sensitive policies to avoid damage to the environment and to the health of the population. Government officials must be made aware that their decisions affect the quality of life for actual and future generations of communities; what they get in exchange is often only a small increment in economic growth and a large increase in the private benefits of a small group of investors.

More informed citizens tend to be more active protestors, as in the case of the students in San Luis. Contact between informed individuals from diverse groups and organizations is critical in fostering the exchange of information and the creation of broad public opinion in favor of mobilizations. To date, however, community participation and involvement in decision-making over community development planning is quite limited by lack of critical information. Moreover, the government is unlikely to fill this information gap as long as there are powerful business interests driving the decision-making process.

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IV Planning and Policy-Making for Shrinking Cities

e = m c2 The Relative City

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Theory

Every city or town has an "energy" level defined by multiple factors, including the number of residents, mix of uses, and workers. From the center city to the suburbs, decisions are made each day that define what that city is and will be. In a city losing population or starting on the long road of gradual growth, city leaders must tackle the question: "Where do you see yourself in 30 years?"

Energy

At its peak, St. Louis, once the fourth largest city in the country, had 856,000 people (1950), miles of neighborhood commercial corridors, an extensive street car system, two major league baseball teams, and an extensive inland port. These characteristics defined the energy of one of the great cities in America.

Today, these characteristics have changed dramatically, the result of rapid "shrinkage" over 45 years. 508,000+ people have gone, equal to 60% of the population; the population density has dropped from 14,400 people per acre to 5,600; there has been a 70% drop in school enrollment; and the current population is equal to what it was in the 1870's.

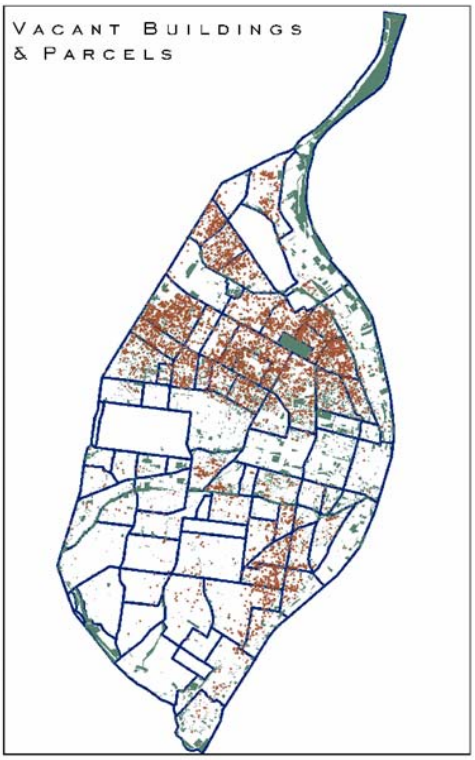
This move was the result of a number of factors: post-World War II prosperity; construction of the interstate highway system; race; cheap, easy-to-develop flat land in the surrounding area; the dramatic rise in automobile ownership; and the fact that St. Louis cannot annex (take over) its suburbs like other cities such as Phoenix, Arizona.

If Einstein was correct that energy can neither be created nor destroyed, the energy that left St. Louis must have migrated elsewhere, and it did. With five interstate highways crossing the small geographic area of 62 sq. miles (25.1 hc), the "energy" left in cars & moved to the suburbs.

Figure 1: Pruit Igoe housing units[1]

Instead of a vibrant, high-energy, high-density center city, St. Louis became an area of disinvestment. In contrast, its suburbs grew dramatically and still do today. In fact, the suburbs of St. Louis are one of the largest consumers of raw land in the country despite only a minor growth in population.

Figure 2: Vacant buildings and parcels in St. Louis[2]



The concentrated energy that once defined a great first-tier city has been dispersed into miles of rolling acres of single family homes in the suburbs. Nodes of commercial and institutional activity like shopping malls and schools dot the landscape. Street life that once defined vibrant

[1] Pruit Igoe, just north of downtown St. Louis, typifies the national public housing fiasco. Built in 1955, destroyed in 1973, it had 3,000 housing units in 33 eleven-story buildings.

[2] At one point, 16 % of the lots in the city that were either vacant land or vacant buildings were owned by the city. Often, people just left their homes and the city became the owner.

mixed-use neighborhood districts stretching for miles has been replaced with people in cars. There are the same number of people--in fact, even more. However, there is very little concentrated energy.

Impacts

The impacts of sprawl are well defined and catalogued. It is worth mentioning, however, that a drop in concentrated energy in a city impacts the competitiveness of its region. It is no coincidence that the sprawl of many cities and the drop in the "magnetism" emanating from the center city go hand in hand. As concentration drops, so do the things that make the city an attractive place for people and investment.

Table 1: e = m c 2—the formula

e = energy
m = mass services/amenities schools, retail recreation, health employment centres
c = concentration of people/density the "square" represents the Importance of concentration in creating higher energy values

Cities, whether they are growing or shrinking, need to define themselves. A simple starting point is to step back and think about what level of energy they want. That energy can be defined by the "m" and "c" variables, representing "mass" and "concentration." Cities do this everyday. Zoning laws dictate that in the suburbs, single family homes dominate the landscape. Homeowner groups band together to prevent intensification of commercial corridors, which offer the best opportunity for increasing density in low-density suburbs. This is a quality of life decision as each city or town defines it.

The best recent example of defining "energy" levels is in the new urbanism movement. Farmland is being plowed under to build stereotypical communities defined by a very distinct "mantra" from density to design. The end result is a community dominated by middle-class, white families with expectations that nothing will change in their new community while they live there.

Mass

Drive into the newer suburbs on any warm and sunny Saturday afternoon and you will stumble across a big, new, fully-equipped recreation center. Families in their SUVs are shuttling children between various programs such as baseball or swimming. For brief periods on the weekends, this is the second most "energized" location in the "burbs," next to the regional shopping mall. Compare this to a commercial corridor in an urban neighborhood, or even to the main street of a smaller town. These areas are almost continually centers of interaction throughout the day, with people walking and interacting along the main street, which is the focal point of the neighborhood.

The suburbs have wonderful recreation centers, schools, and big malls. Yet the population density or "concentration" of people is so low that nothing occurs in large enough numbers to create high levels of sustained interaction. Not that there is anything wrong with this. The suburbs are what they are, and according to their form, they cannot have high energy levels.

As America ages, the challenge becomes: "How are the older suburbs redefined as they decline?" The suburbs are experiencing the same phenomena the city experienced when these now older suburbs first sprang up. People are moving either further away or back to the center city, and the older suburbs are in decline. As cities that have declined begin to redefine themselves, they must assess what level of "energy" or interaction they want to obtain. In the case of St. Louis, city leaders understand that it will be a long time, if ever, before the population reaches the previous high.

A coordinated approach using development tools, as described later, can slowly rebuild the urban marketplace in locations where city leaders would like to see growth. The key is to be strategic and stick to the course of action. For example, Youngstown, Ohio has decided it will not have as many people as it did when the steel industry was booming. They have decided to shrink their city. Large tracts of abandoned land are being turned into urban gardens and parks, rather than targeted for new homes and businesses.

In St. Louis, the planning process has involved identifying and evaluating land use policy. The new plan for the City acknowledges that not all the former commercial corridors stretching for miles will be revived. Many will become residential areas.

Mass alone does not provide for a high energy urban environment. If a city or county wants a low-density suburban environment, decisions are made to establish the parameters to ensure this occurs. In North America, zoning is the primary tool available to elected officials to regulate the number of dwelling units over a specific area.

Figure 3: Commercial redevelopment[3]

A suburban city next to St. Louis recently changed its zoning laws to double the lot size requirement for a house with two units. The minimum floor area requirement was also doubled. This is clearly an effort to prevent the "imaginary threat" that rental units bring "dangerous," low-income people into the community.

More commonly across the United States, we see the traditional suburban model of separation of uses. In contrast, in an urban environment, these boundaries are blended, resulting in mixed uses and greater energy. The humorous image of the land development industry and of the suburbs today is that developers have "discovered" mixed uses and transit-oriented development. This is the new catchword of planning in America, as if they just invented it.

Low energy suburban models continue to drain resources from local, state, and federal governments in road building and other service requirements. As their infrastructure ages, the ability of these small communities to fund upgrades will be in doubt. Financial aid will have to come from the state and federal governments, meaning that city dwellers are helping to pay for the sprawl. Yet these small suburban towns refuse to provide in-kind subsidies to fund urban transit systems.

Concentration 2

Clearly the most important "definer" for a city is its concentration of people, both residents and workers. A downtown with few residents but lots of daytime workers has a sporadic energy level. Think of the many financial districts in cities around the world without any residential uses.

At its zenith throughout the 1940s and early 1950s, St. Louis had a population density of 14,400 people per square mile (5,336 people per hectare). Coupled with people working in over 23,400 businesses, this added up to a city of incredible energy, throughout the day and evening. Today

[3] The former commercial area on the right was the entertainment area in St. Louis in the early 1960's. After decades of vacancy, the area was cleared and reinvented as a mixed density residential area.

those numbers have dropped to 5,700 people per square mile (2,200 per hectare) and 8,150 businesses. Since 2000, both of these numbers have been increasing.

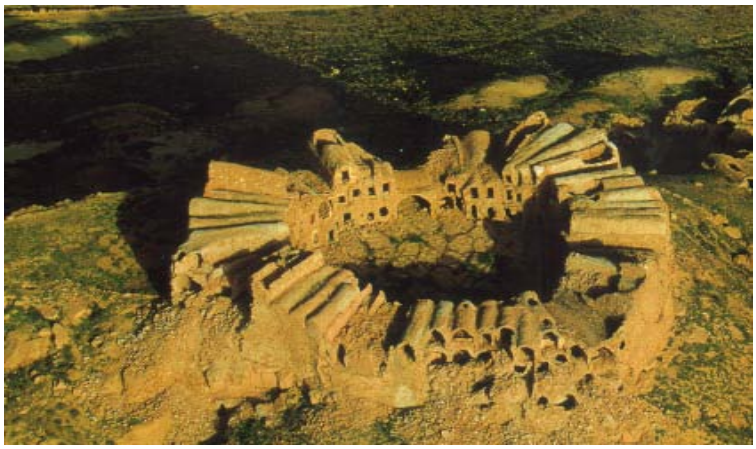
In the suburban area around the city, there are over 2.6 million people, making the region the 18th largest metro area in the country. However, these people are spread out over a wide suburban area, resulting in a density of only 150 persons per acre. There is a lack of concentration in the suburbs and, as a result, a low level of energy in the community.

In the "relative city," population density is the most important factor in sustaining energy and in the efficient utilization of resources. There is nothing new in the word "urbanism," despite the best efforts of many in the United States to believe otherwise. Ancient civilizations were founded on people and commerce being in close proximity, allowing for the exchange of goods and services.

New urbanist communities springing up in farmer's fields are simply "better sprawl." They have higher energy levels than traditional suburbs; however, the cost to the region in providing access and services to these far flung communities is extreme.

Cities that have adopted growth control boundaries, like Portland, do so in the realization that density will increase, resulting in higher energy levels and a greater utilization of resources. By restricting sprawl, higher concentrations of urban life result in increased sustainability.

Figure 4: Ancient settlement (Tunisia)[4]



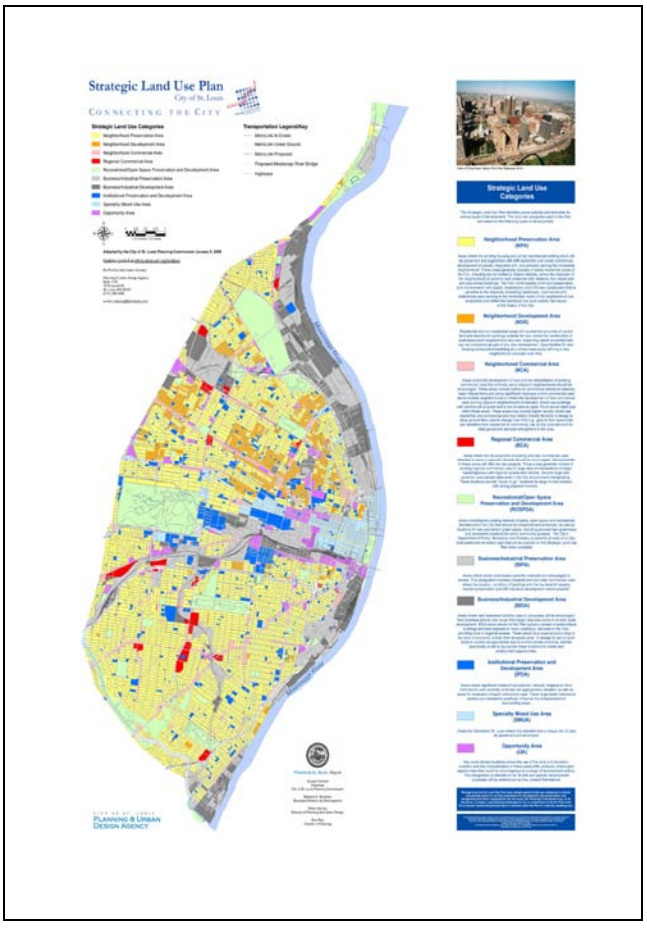
[4] Settlements back in ancient times understand the importance of density in delivery of services, utilization of resources, and common interest goals.

How Do Low Energy Communities Affect Older Urban Areas?

In St. Louis, we know our population is not going to reach the 1950s level of 15,000 people per acre. More single-family homes are replacing houses that had two or four units in them. Small apartment buildings that dominated commercial corridors are not being rebuilt yet. Despite the boom in conversions of historic factories into condominiums, more land will need to be developed into higher-density housing.

We know that washing machines are being made in Mexico, not urban America. In response, St. Louis is incrementally "reenergizing" the city by transforming our land uses, including former urban industrial sites.

Figure 5: Strategic Land Use Plan, City of St. Louis[5]



[5] St. Louis has enacted a land use strategy focusing on reusing land for different purposes. Former commercial areas are being redeveloped for housing, and large factory buildings have been converted into 3,000 new condominiums. The focus is to create growth nodes that will then create energy that requires fewer incentives to keep growing.

It is a slow process, but our mass of new housing, as well as buildings for commercial uses and industrial clients, is slowly recovering. For example, through the use of tax abatement (see below) and historic tax credits, we have seen several thousand new housing units created through the conversion of old abandoned shoe factories. Our increased concentration of population in the downtown has resulted in an increase in the mass of new services.

The Census Bureau predicts that the United States will absorb 100 million people in the next 35 years, largely through growth in the Hispanic community and through immigration. The National Home Builders Association expects thirty to forty percent of the housing stock to be replaced in the first half of this century. The challenge is to increase the level of energy in our communities. As the costs of providing services increase, governments will not be able to afford to provide new services and replace the infrastructure to meet the needs of a dispersed population.

Increased density in the suburbs can occur along the existing major roadways where the density of development is extremely low. Convincing suburbanites that such change will enhance their quality of life will not be easy. Distressed cities can, like St. Louis, focus on increasing density at strategic locations and through infill projects. This will increase economies of scale relative to the utilization of existing infrastructure.

Property taxes are already increasing at high levels in suburban areas. When suburban infrastructure needs rebuilding in a few decades, how will these low-energy communities afford the cost? They will continue to compete for state subsidies, further increasing the proportionate share of tax revenues paid by urban areas who in turn cannot garner support for resources.

While St. Louis accounts for about 15% of state revenue, the rural and suburban vote controls the Missouri state legislature, making it difficult to get support for non-rural items like urban public transit.[6]

Reinventing Your City

Cities that have declined for a long period have the opportunity to reinvent themselves—although some more than others. Youngstown, Ohio is planning for shrinking. Yet in St. Louis, the tactic is not to abandon former built-up areas, but to repopulate them at a lower density.

The market dictates the ability of a city to respond. In the Midwest, the majority of residents still want single-family homes. Cities like St. Louis and Detroit are no longer immigrant destinations for people coming from environments where higher-density living is common.

[6] While hundreds of millions of dollars of taxpayer funds go to build new roads to rural areas and farmers fields to build new low energy sprawl, the St. Louis transit Agency is only receiving $100,000 in state funding

With an infrastructure in place to accommodate 500,000 more people, increasing its use makes sense. The distressed neighborhoods in the city are not concentrated in any one area. Therefore, infrastructure needs to be maintained as it reaches through these neighborhoods to others.

Mayor Francis Slay of St. Louis has developed a comprehensive strategy called a "Strategy for Renewal" to help address the challenge of rebuilding the city. The strategy is based on the following 12 goals.

1. creating opportunities for people to interact and overcome stereotypes
2. building diversity in demographics from ethnicity to income
3. improving the quality and choices in education
4. thinking regionally, paying attention to the over 201 different towns and cities in the St. Louis region
5. creating a healthy environment
6. increasing population density
7. creating economic opportunities built on the city's strengths, including its port
8. improving transportation, including public transit as well as the airport
9. aggressively marketing inner-city neighborhoods
10. building new recreation opportunities
11. leveraging the thousands of historic buildings in the city
12. building "big" capital projects, including the riverfront

These goals all speak to increasing "concentration" of people and services. Through the use of financial tools, the city is directing growth into areas of high abandonment. The strategy is working. New housing is moving deeper into distressed neighborhoods, and thousands of housing units have been created in large factory buildings that were abandoned for decades. Instead of long commercial corridors stretching for miles along main streets, nodes are being created, anchoring neighborhoods. And all this is happening through the use of a multitude of incentives, including the following.

City Owned Land

At one point, the City of St. Louis owned over 16% of the lots in the city. A land bank was created to manage the property, which became a model used around the country. Developers interested in building on the lots applied to the city with proof of their ability to complete the task. Time limits were set to ensure that speculators did not flip the vacant parcels. The purchase of vacant lots is now very competitive in many neighborhoods.

Tax Abatement

When a home or business is rebuilt or improved, property taxes increase. The city can waive the increase for a set time period in exchange for having a distressed property improved. For example, an abandoned home that is rebuilt may have its property taxes frozen for five to ten years at the rate that applied prior to the improvements. This can result in a difference for a homeowner of paying annual property taxes of $800 rather than $3,000 for that five to ten year period.

Historic Tax Credits

Figure 6: Use of Tax Credits in St. Louis [7]

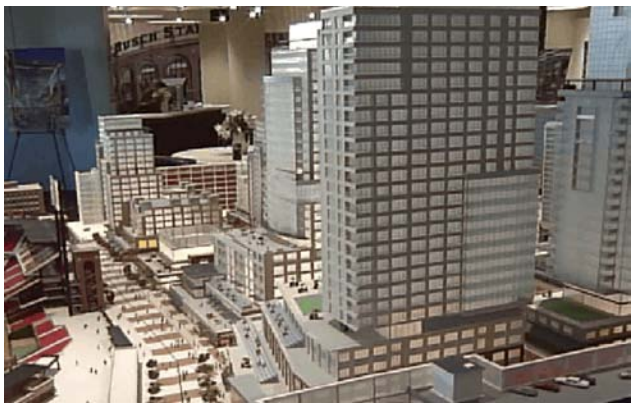
Both the federal and state governments offer tax credits in exchange for restoring historic properties. Most of the several thousand new residential units in the downtown area were created through this program.

The tax credits from the state account for about 25% of the restoration costs, and the federal credit amounts to another 20%. Without this incentive, growth in the city would not be near what it is now.

[7] St. Louis has led the country in the use of federal historic tax credits. These credits coupled with the state level program, have helped created several thousand new housing units. The buildings in the photograph once housed shoe manufacturers or other uses and were either vacant or almost empty less than 6 years ago. Today they are fully occupied by residential and mixed uses.

Tax Increment Financing

Figure 7: Tax increment financing in St. Louis[8]



For larger projects, such as the conversion of an abandoned factory into new uses or a new building, the resulting increase in property taxes can be used to offset some of the cost of the restoration work. The commitment by a city to provide tax increment financing provides an opportunity for a builder to leverage the estimated future revenue stream to secure financial backing for the project.

Brownfield Credits

A major problem for an aging city is leftover contamination from previous industrial uses. The federal government has been instrumental in providing tax credits to encourage the restoration of contaminated property. However, not all property can be cleaned to residential standards, nor should it. Rebuilding a city requires new employment opportunities as well, so some of this property needs to be dedicated to commercial uses. As is so often the case, older industrial areas have a higher proportion of low-skilled workers. By reusing older industrial sites for activities that will not be feasible in the suburbs because of a lack of such workers, cities can slowly rebuild and diversify their employment base.

Many other tools are used, from small business loans to special tax assessments, to provide for new infrastructure, such as sewers and water or new recreation centers. All of these contribute to the amenities of inner-city neighborhoods.

Conclusion

The challenge to America and many other parts of the world is to confront the wasteful use of a finite resource: land. Real-estate developers can no longer drive the process.

The first and most economical step would be a regional policy undertaken as part of a national agenda. Like the historic tax credit program, such policy could ensure that "shrinking" or "rebuilding" cities where the infrastructure already exists would be a priority for both housing and tax policy, to encourage growth in cities that have declined.

[8] This mixed use development adjacent to the new baseball stadium downtown, is made possible through the use of tax increment financing. This incentive allows some of the increased taxes from the project to be used to offset some construction costs. The increased jobs and housing result in a net gain for city revenues.

The cost savings to tax payers would be substantial. For example, the largest housing subsidy that exists is the building of highways. This is one of the driving factors leading to center-city abandonment. Even a portion of these funds could help rebuild distressed neighborhoods and schools.

The 2010 United States census will show a tremendous shift in demographics. Urban centers will continue their resurgence, and sprawl will continue to overtake millions of acres of farmland. The real change from the 2000 Census will be in the inner ring of suburbs. Unless the price of gas makes the outdated homes in the inner rings desirable, these suburbs will become the new "distressed" communities, mimicking the problems associated with urban America over the past five decades.

It is time to reassess public policy and action. The solution lies in the "relative city" and its roots through history. We cannot continue to urbanize at lower densities.

Land Banks as Revitalization Tools: The example of Genesee County and the City of Flint, Michigan

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Introduction

Flint, Michigan is a quintessential shrinking city. Based around not just a single industry but a single corporation, Flint's fortunes still mirror those of General Motors. Like the company, the city peaked in the 1960s with a population reaching nearly 200,000. Currently the population of Flint hovers just below 120,000. During the last twenty years, the issues of property abandonment and vacancy reached a tipping point, when they stopped being symptoms and instead became part of the problem.

Compounding the abandonment problem was the state's tax foreclosure system. Under Michigan's former system of tax foreclosure, abandoned properties were either transferred to private speculators through tax lien sales or became state-owned property through foreclosure. The former system encouraged low-end reuse of tax-reverted land due to the length of time between abandonment and reuse – often more than five years. A series of changes to Michigan law have provided an opportunity for Michigan's counties. The time it takes to foreclose on a property has been cut in half, and clear title can be passed to the county or the state.

Formed in 2002, the Genesee County Land Bank is a leading example of the role land banks can play in preventing tax foreclosure and finding the opportunities in reusing tax-reverted property. The Land Bank provides a series of programs to the community including a Brownfield Redevelopment Plan for the entire inventory of tax-foreclosed property under the control of the Land Bank. This has allowed for financing of demolition, redevelopment projects, and cleanup efforts.

The Land Bank's role continues to evolve. Currently, the Land Bank owns nearly 3,800 properties, of which about 70% is vacant land[2]. The continuing increase in the vacant property

[1] The Genesee Institute was created in 2004 as the research and technical assistance branch of the Genesee County Land Bank. The institute's mission is three-fold: to provide planning assistance within the community, to provide technical assistance to other jurisdictions interested in developing their own land bank, and to initiate research on issues related to vacant properties, stabilizing neighborhoods, urban sprawl, inner city revitalization, and other topics relevant to weak market cities.

[2] While there are many definitions for vacancy and abandonment, in this article, vacant land refers to parcels with no structures.

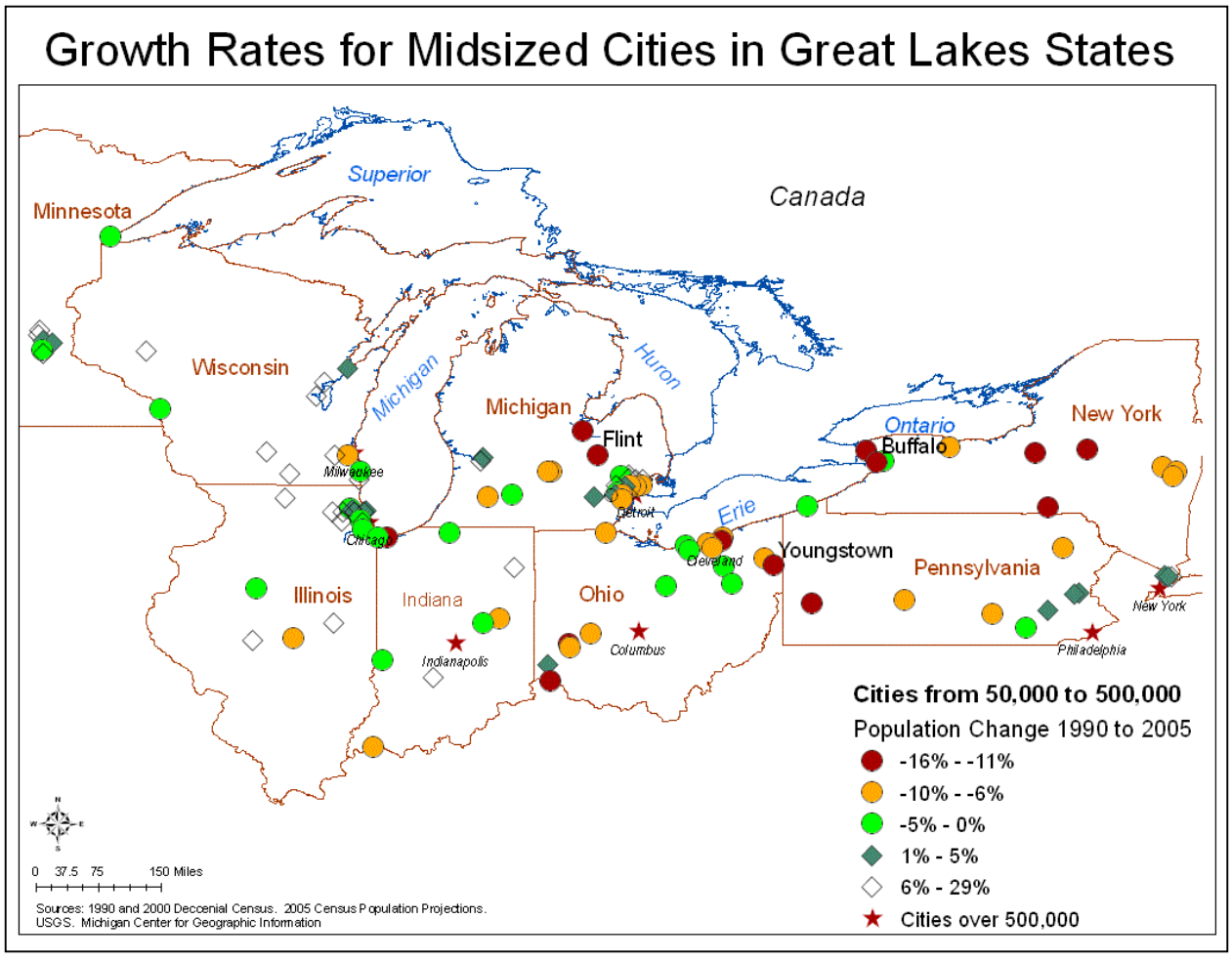
inventory and rising maintenance costs has resulted in development of a "greening" strategy for the Land Bank that will augment the current redevelopment strategy. The goal is to turn an abandoned building or vacant lot from a nuisance into an economic, ecological, and community opportunity.

Boom and Bust

The city's population peaked in 1960 at 196,000 (U.S. Census Bureau, 1990). It was around this time that the city completed its last approved, comprehensive planning effort. The future for Flint looked bright, and the plan prepared for continued growth of the population, projecting up to 250,000 residents in the near future.

This story was repeated with few differences in the majority of mid-sized cities in Great Lakes states. Born under similar circumstances, these cities provided abundant natural resources, excellent land for farming, transportation links, and ready commercial markets, and they eventually grew to become key industrial and manufacturing hubs for the entire United States (Teaford, 1994, 48-71).

Figure 1



Just as their rise has been parallel, so has their decline. While each city has its own story, many factors repeat themselves in these communities, such as dependence upon a single industry, changes in manufacturing (automation in particular), suburbanization and its multiple causes, globalization, and other forces. As a result, many post-industrial cities in Great Lakes States are plagued by population decline and major changes to their built environment.

Figure 1 illustrates recent population trends for mid-sized cities from 1990 to 2005. Cities between 50,000 and 500,000 are more vulnerable than larger cities, as they are less likely to attract immigrants and often have a less diverse economy than their larger counterparts.[3] Of the 114 cities included, 32 percent have what would be considered an acceptable to good growth rate (6 to 29%). Another 14 percent are technically growing, but not at a conventionally acceptable rate (1 to 5%). More than 16 percent are stagnating or declining slightly (0 to 5 %). The largest group of cities – 39 percent – have had more than a 6% decline in population from 1990 to 2005. Topping the list of those with the greatest decline during that period are Saginaw and Flint in Michigan; Gary, Indiana; Cincinnati, Ohio; and Buffalo and Niagara Falls in New York.

Additionally, the eastern Great Lakes cities seem to be struggling more than their western counterparts. With growth rates like these, fiscal problems have followed in many of these areas, whith cities and states supporting an infrastructure much too large for the current population at the same time that there is increased need for social services.

U.S. Census population estimates for metropolitan statistical areas released in April 2007 show that the decline is not over for cities in Great Lakes States. According to this recent data, 63 percent of all MSAs experiencing population decline between 2000 and 2006 are located in Great Lakes states (U.S. Census, 2007).

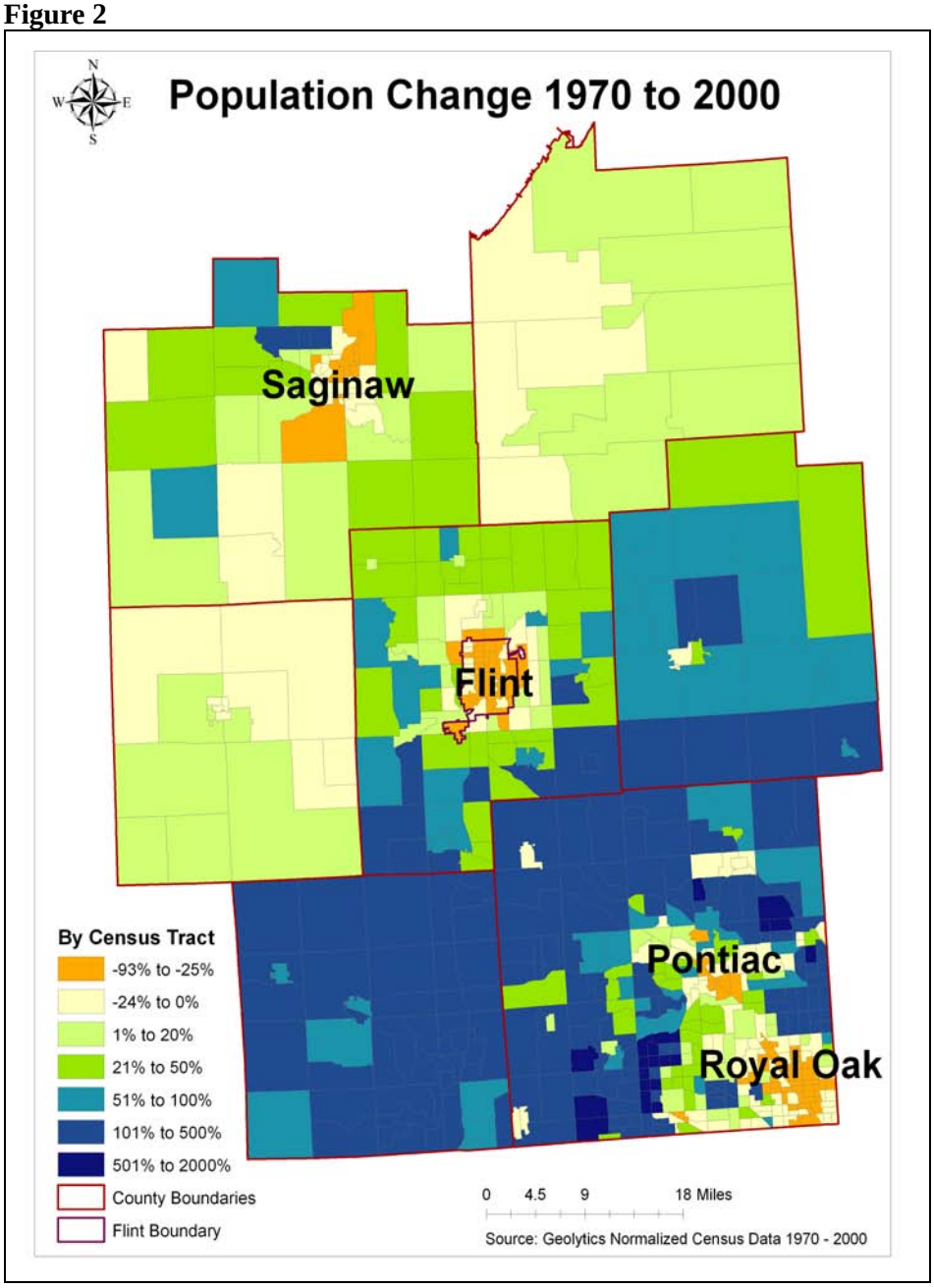
Flint and the Region

Flint's story of decline picks up in the 1970s with major changes at General Motors. Fewer car sales, changes in production (including automation), and development of plants in areas with fewer labor costs led to reductions in the labor force. Ultimately, 60,000 GM jobs left Flint, and the 2005 American Community Survey counts fewer than 112,000 residents within the city limits. For many years, the fate of General Motors has been the fate of Flint. That is not exactly the case for the county. While Flint has steadily lost population over the last 30 to 40 years, Genesee County has experienced little to no population decline. Much of the population of Flint has relocated outside of the city, creating a problem with sprawl. This is not uncommon in this area of mid and southeast Michigan. As you can see in Figure 2, the central cities within all the adjacent counties to Genesee County have lost large percentages of their population, while the out-county

[3] Detroit is the notable exception to the argument that cities in Great Lakes States with a population over 500,000 are faring relatively well. Other cities in this class are Milwaukee, Chicago, Columbus, Indianapolis, Philadelphia, and New York City.

areas, especially in the southeast, have grown exponentially. Flint, like so many other older cities, was unable to annex the adjacent townships or smaller municipalities to capture some of the growth. And the process of depopulation for these central cities is expected to continue.

Figure 2



With such rapid population loss, neighborhoods have borne the brunt of abandonment: arson, dumping in vacant lots, continued patterns of disinvestment, and ultimately, decline. Property abandonment and vacancy have reached the tipping point, and are now more than just a symptom

of disinvestment in many of these communities. Rather, they have become chronic problems. In Flint, more than a quarter of the parcels in the city limits are vacant lots without structures. Within residential areas, 16 percent of these parcels are vacant lots.

Tax Foreclosure System as Part of the Problem

Compounding the abandonment problem was the state's tax foreclosure system. Under Michigan's former system of tax foreclosure, abandoned properties were either transferred to private speculators through tax lien sales or became state-owned property through foreclosure. Under both scenarios, local leaders lacked authority to interrupt the decline of tax-reverted land. In fact, the former system encouraged low-end reuse of tax reverted land due to the length of time between abandonment and reuse – often more than five years.

The system contributed to contagious blight as one property infected the next, as property after property passed through tax foreclosure and rarely resulted in significant redevelopment because the tax lien sales resulted in countless different owners without marketable title. Thousands of properties not sold at a tax lien sale were titled to the state — the "death penalty" for property.

Worst of all, the system was heartless. The former law provided no way for local officials to intervene to help a family facing the loss of their home. A family facing tax foreclosure was at the mercy of a tax lien holder, usually an out-of-state investor with a personal financial interest in the property being foreclosed. Even valuable properties lost in tax foreclosure were destined to tumble through the predictable devolution of use: a family home became a decent rental house, then a dilapidated rental house, then an abandoned house, until the property became a valueless lot scattered among other properties falling through the same pernicious process.

Policy Change

Since the passage of PA 123 in 1999, followed in 2003 by the enactment of the nation's most progressive land banking law, the State of Michigan and county governments have greater authority to gain control of vacant abandoned land. Property is delivered to new ownership much more quickly and typically in far better condition than the former system.

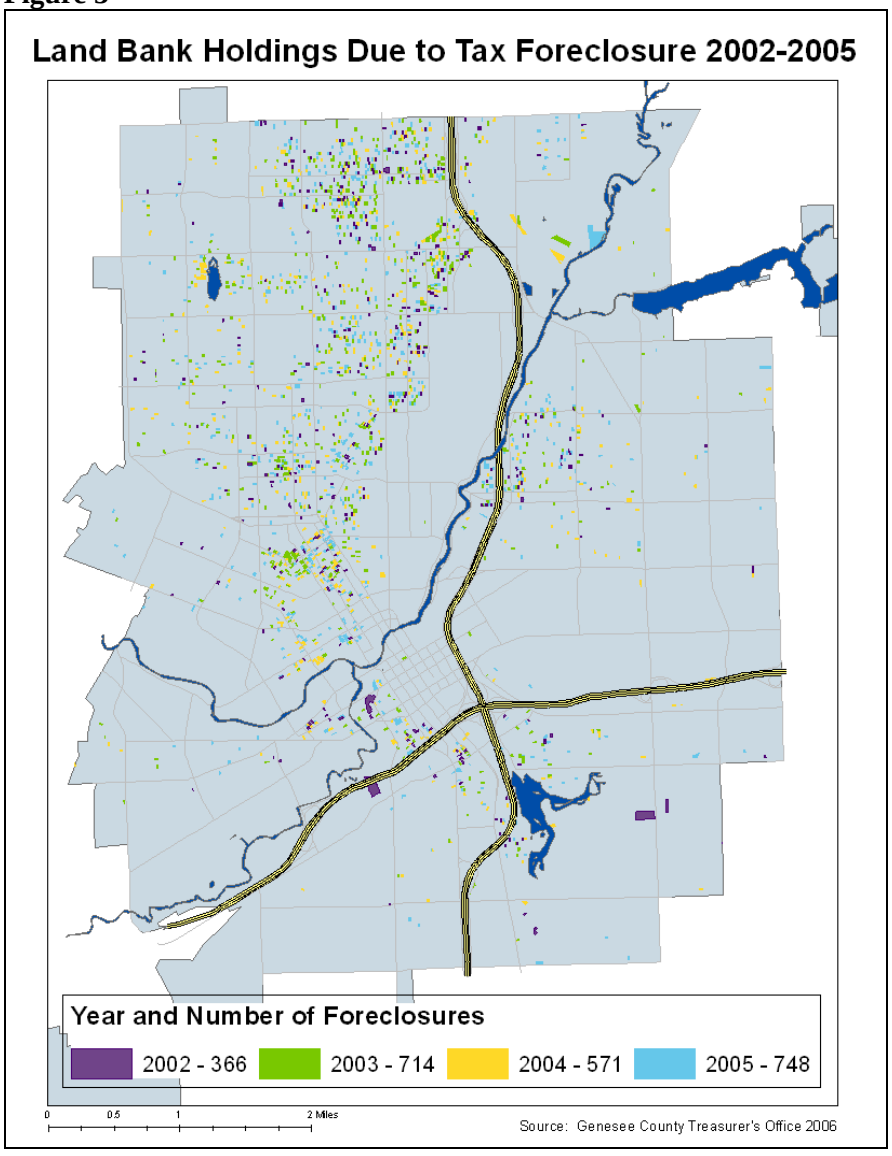
In Flint, however, although the new procedure was a significant improvement, a more aggressive approach would be required to use this new law to its maximum potential in dealing with the high volume of vacant and abandoned land.

With funding from the C.S. Mott Foundation, Genesee County engaged a local consulting team and a number of national partners to develop a more creative approach to use tax foreclosure as a community development tool. This research, with the help of The Brookings Institution, Local Initiatives Support Corporation, ICMA, the Urban Land Institute, and others led to the creation of

the Genesee County Land Bank. The Land Bank is funded with proceeds from the tax foreclosure process, allowing the county to acquire land through foreclosure and determine the best use of land with the community's needs in mind, rather than simply selling the land at auction to the highest bidder with no control of its ultimate use.

In 2003, the Michigan legislature used the work of Genesee County as a model in enacting the most progressive Land Banking law in the nation. The new land bank law, PA 258 of 2003, along with amendments to the Michigan Brownfield Redevelopment Act, has enabled Genesee County to adopt a Brownfield Redevelopment Plan for the entire inventory of tax-foreclosed property under the control of the Land Bank. This plan utilizes a unique Tax Increment Financing (TIF) strategy that has enabled the Land Bank to finance a much more aggressive clean-up and redevelopment plan for Land Bank properties.

Figure 3



The financing relies upon taxes generated by the redevelopment of tax-foreclosed properties to support bond payments funding aggressive demolition, clean up, and rehabilitation of forgotten land. The unique feature of the TIF plan is that the taxes from the entire inventory is cross-collateralized to support clean-up of tax-foreclosed property; the tax captured from more valuable properties supports improvements for all properties, whether or not those properties are ever redeveloped or generate any significant tax collections. By relying upon taxes generated by a county-wide inventory of land through this single TIF plan, the county utilizes the more diverse and stable regional real estate market to support cleanup of the worst neighborhoods in the city.

The Land Bank uses a variety of programs to help prevent tax foreclosure, and when it does receive tax-foreclosed properties, it works to find productive uses that put the properties back on the tax role. In holding land, the Land Bank is able to do some strategic planning around the reuse of the significant number of parcels it holds rather than rely on speculators and landowners to try to profit from neighborhood disinvestment. Land Bank programs include tax-foreclosure prevention, a housing program that includes promoting home ownership, rehabilitating housing in an effort to stabilize local housing markets, a rental program for those properties that come to the land bank with tenants, and a demolition program for the removal of dangerous structures.

A recent hedonic study by the Michigan State University Land Policy Institute measured the effectiveness of land bank interventions. For one, the study shows that abandoned property within 500 feet of a residential unit reduces the sale price for that home by 2.3 percent, while a vacant lot within the same distance has a less detrimental effect (Griswold, 2007).[4] The demolition program and the greening of vacant lots are offering a stabilizing effect to neighborhood property values.

Opportunities of Vacant Land

The Land Bank's role in preventing foreclosure, encouraging home ownership, stabilizing neighborhoods, and redeveloping key properties is still evolving. Between 700 and 1,000 properties are foreclosed on each year and enter into the land bank's "coffers." Currently, the land bank has about 3,800 properties, of which about 70 percent consist of vacant land. While demolishing dangerous buildings helps stabilize blocks and increase property values, the land bank has the financial responsibility of maintaining these properties. Figure 3 illustrates the amount of property remaining in the land bank's jurisdiction from each of the first four foreclosure years it was in operation. While there are specific areas of the city where foreclosure is more likely, no area of the city is immune to it. Dan Kildee, the Genesee County Treasurer, still expects the number of properties to enter foreclosure (and ultimately the size of land bank holdings) to increase, at least over the next few years. The city of Flint still has not been able to reduce the housing stock to such a degree that it meets the threshold of housing that is necessary

[4] This study is now available online at http://www.geneseeinstitute.org/reports/index.html.

for its current population. Until it reaches that point, the land bank will continue to fill with properties, and in particular, with vacant land.

The main opportunity that vacant land brings a community is the promise of redevelopment. As with many other weak market cities of similar size, the economic development community, and in particular the land bank, are looking to jump-start some redevelopment through investing in some key projects, mainly downtown. These projects are primarily funded through public, non-profit, and foundation dollars. At this point, private investment has not worked its way back into Flint, and discussion continues as to when that could happen and where the markets are functioning. Not in dispute are the areas of the city where private investment is not expected to return in the short or long term.

The expected increases in vacant land and the weakness of local building markets has resulted in development of a "greening" strategy for the land bank that will augment the current redevelopment strategy. The greening strategy hopes to build on current programming to engage community groups in maintenance and improvement of vacant lots while seeking out sustainable and enhanced plantings that require a low level of maintenance while still providing appropriate cues of care.

Green Infrastructure

Beyond the land bank's greening strategy, there is also opportunity for developing a more integrated green infrastructure in the City of Flint. This isn't a new idea. Early plans for the city, developed by renowned planner John Nolen in 1920, show extensive greenways along the Flint River as well as connections between some parks and schools (Flint, Michigan City Planning Board, 1920). With today's increased vacancy in the city, there is a renewed opportunity to implement some of these green connections while restoring some of the environmentally sensitive or unique areas of the city that were paved over or otherwise utilized in the service of industry.

The green infrastructure movement is based on the concept that within urban environments, the physical creation, restoration, or conservation of open space in its many forms requires planning and maintenance, as does the infrastructure used to support residential, commercial, or industrial endeavors. Green infrastructure provides for human recreation, animal habitat, ecosystem services like storm water management, as well as pedestrian, bicycle, and other alternative transportation links.

In the case of Flint, a series of criteria will be utilized to determine, within the sections of the city that are not in functioning markets, what sections would be best suited to building green infrastructure, such as the addition or expansion of parks, natural areas, urban farms, community gardens, greenways, or phytoremediation projects. Social criteria considered include low population density, high levels of abandoned or vacant land, and potential to add to pedestrian and bike connections throughout the city. Key environmental considerations include the potential

to treat contaminated land with bioremediation, protection of low-level sites prone to flooding, and protection of headwaters in sub watersheds. The potential to create economic opportunities through entrepreneurial agriculture and horticulture will also be considered.

Conclusion

Flint, Michigan's population decline is not yet over. It will continue to struggle in the future to reinvent itself outside of the shadow of its most important employer, General Motors. In the meantime, the liability of abandonment in the form of abandoned properties, vacant land, and other signs of disinvestment threaten the stability of many of Flint's neighborhoods. The Genesee County Land Bank's interventions have brought greater control over abandoned property in the city and county by placing it into public hands. The Land Bank's commitment to sound housing policy, redevelopment efforts, and tax foreclosure prevention is working to stabilize many residential neighborhoods in the city. Combining their current economic development strategy with a greening strategy for vacant land will provide a more holistic approach to vacant property reuse, turning the presence of an abandoned building or vacant lot into an economic, ecological, and community opportunity.

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Blueprint Buffalo—Using Green Infrastructure to Reclaim America's Shrinking Cities

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Americans find it difficult to embrace the concept of a shrinking city.[1] Whether because of a cultural preference for bigger and better (McMansions, sport utility vehicles, and super-sized fast food) or a lingering sense that it's our manifest destiny to occupy the continent from the Atlantic to the Pacific, politicians and policymakers fear that espousing shrinking city policies would result in voter disapproval and political suicide (Beauregard, 2003). By definition, a successful city grows; therefore, to shrink is to fail.

Failure to address the reality of a substantial and sustained reduction in population can be costly. A forty-year exodus in many Rust Belt cities has left behind thousands of dilapidated homes, abandoned buildings, and vacant lots. Managing vacant and abandoned private property and maintaining surplus public infrastructure are substantial drains on dwindling tax bases (National Vacant Properties Campaign, 2005). A surplus of blighted, vacant properties makes it difficult for most shrinking cities to attract private and public reinvestments (Rybczynski and Linneman 1999). Without a conscious "right-sizing" policy or plan to readjust a shrinking city's physical and built environment to better accommodate existing and projected populations, the surplus of infrastructure and properties will likely persist for years to come, thereby perpetuating dysfunctional economic and housing markets. Without intervention, many of these surplus properties will eventually become blighted as the spiral of decay spreads from block to block (Spelman, 1993). Inevitably, these vacancies will continue to spread outward beyond the city limits.

Even if political leadership has the courage to address such demographic trends head-on, the planning profession and planning literature provide little guidance on how to shrink a city.[2] Planning models primarily focus on managing growth and new development through traditional tools such as comprehensive planning, zoning, subdivision regulations, and urban growth boundaries (Dawkins and Nelson 2003). Planning for shrinkage is fundamentally different from planning for growth (Rybczynski and Linneman 1999). Even classic economic redevelopment strategies are built on a growth model. Neither approach is well suited to addressing the special challenges of private and government disinvestment common to most shrinking cities (Oswalt 2005). Policymakers and community leaders need new approaches to engage residents, property

[1] Recent articles have appeared in the Wall Street Journal (Aeppel, 2007), USA Today (El Nassar, 2006) and Governing (Swope, 2006) discussing the challenges and hesitation by citizens and policymakers to embrace the shrinking cities concepts. Youngstown, Ohio, remains the only city to formally adopt a shrinking city policy as part of their 2010 comprehensive land use.

[2] Friedrich von Borries and Walter Prigge (Oswalt, 2006, pp25-30.) contend there are few working models that demonstrate realistic planning strategies for addressing shrinkage.

owners, and business leaders in a constructive dialogue about right-sizing. How can they acquire, manage, and reuse thousands of vacant properties in a manner that respects private property rights and principles of social equity and fairness? America's shrinking cities desperately need a new strategic policy and planning framework that includes a blend of familiar programs and innovative ideas.

The following article proposes a new right-sizing model that could be broadly deployed to address one of the major economic and social consequences of shrinkage—the decay and blight caused by vacant and abandoned properties. Green infrastructure initiatives, in combination with land banking and community-driven planning, can together form the nucleus of any effort to right-size a shrinking city. Before shrinking cities can effectively grow again, they must first adjust their existing footprints to match current and projected population. Green infrastructure initiatives would make these places once again attractive for reinvestment and rebuilding. While some green uses will be temporary, a substantial number of these vacant properties will remain permanently green.

This article's analysis is based on a regional vacant property policy assessment for the city of Buffalo, New York and for three surrounding suburban communities—Amherst, Tonawanda, and Cheektowaga—conducted by the National Vacant Properties Campaign. (Schilling, Schamess, and Logan, 2006). In early 2005, with funding from the Surdna Foundation, the Campaign issued a national request for proposals (RFP) for vacant property technical assistance. The Buffalo office of the Local Initiative Support Corporation (LISC), the Amherst Industrial Development Agency, and the Institute for Local Governance and Regional Growth at the University of Buffalo, submitted a request for a regional vacant properties assessment. Buffalo was one of seven communities selected from over 50 who responded to the RFP. During the fall of 2006, the Campaign selected a team of five national policy experts and vacant property practitioners from other shrinking cities (Cleveland, New Orleans, and Philadelphia) to conduct two study visits to the region. They interviewed more than 60 individuals, including: local government officials and staff, prosecutors and the courts, private and non-profit developers, financial institutions, community leaders, and residents. The team, with the assistance of graduate students, spent nine months evaluating existing programs and policies and finalizing their analysis and recommendations into two reports—a policy brief and action plan. These reports, ***Blueprint Buffalo,*** proposed a holistic policy framework that includes four key vacant property strategies and four leadership actions for public, private, and nonprofit leaders to address the abandonment crisis in Buffalo and prevent it from spreading into the region's suburbs. Instituting right-sizing and green infrastructure polices and programs was one of the vacant property strategies proposed.

Blueprint Buffalo—Addressing the Challenge of a Footprint too Big for the City's Needs

Buffalo's shrinkage is typical of many post-industrial cities in America. During the 1960s and 1970s, a combination of deindustrialization and out-migration to nearby suburbs signaled the decline of the Queen City. A convergence of factors—some casual, some symptomatic—such as

poverty, racial tensions, property speculation, fiscal instability of local governments, poorly performing schools, and crime have made it nearly impossible for the Buffalo-Niagara region to escape this classic spiral of decay and disinvestment (Schilling, Schamess, and Logan, 2006). One of the major barriers to Buffalo's rebirth is the nearly 40,000 empty homes and vacant lots that exist in the city and in the surrounding Erie County.

Buffalo's sizeable surplus of infrastructure and properties far outweighs the needs of its current population. Although Buffalo's population is less than half of what it once was, the city still has roughly the same footprint of roads, housing, and commercial/industrial buildings. According to the 2005 U.S. Interim Census, only 279,745 residents officially live within the city of Buffalo—a steep decline from its all-time peak population of 580,132 in 1950, and a reduction of 4.2 percent of its population since 2000 (Thomas, 2006). Economic and demographic trends do not project any dramatic influx of new residents on the horizon.

Number of Vacant Properties: Many cities rely on U.S. Census data to quantify current vacancies. Data from the 2000 Census reveal that Buffalo alone has 23,000 vacant housing units, with perhaps another 16,000 within the region. Although Census data categories are not refined enough to distinguish actual abandonment and chronic vacancies from temporarily or seasonally empty residences, it does have an "other vacancies" category that indicates the magnitude of chronic, long-term vacancy problems. The danger signal for a city is a high percentage of overall vacancies combined with a high percentage of "other" vacant properties within overall vacancies (these are units that are neither for rent, for sale, seasonally vacant, nor vacant for typical real-estate reasons). Buffalo received its danger signal in the 2000 Census. That year, 15.7 percent of all housing units were vacant. Of those vacancies, an astonishing 43.7 percent were classified as "other," a rate that exceeded those of other Rust Belt cities such as Cleveland, Detroit, Pittsburgh, and Philadelphia.

Costs of Vacant Properties: No one yet knows the precise number of vacant properties in the region—a fact that itself indicates the hidden costs of managing abandonment. A 2004 report of the Cornell Cooperative Extension of Erie County estimated that in the City of Buffalo alone, there are 13,000 vacant parcels, 4,000 vacant structures and an estimated surplus of 22,290 vacant residential units (Cornell, 2004). Many local officials and nonprofit leaders in the region believe this estimate is conservative—that more vacant properties exist today. Many of these vacant parcels and buildings stay under the radar of local governments until drastic and expensive public measures are needed. Each of these known abandoned residential properties may involve twenty or more city actions and cost taxpayers nearly $12,000 over a five-year period (Cornell, 2004). Nuisance response, inspections, maintenance and mowing, foregone taxes, and eventual demolition costs represent public funds that could be spent on more productive city priorities, from education and health care to housing renovations. Since 1995, Buffalo spent over $30 million to demolish more than 4,500 vacant buildings. The 2007 New York State budget has allocated half of the $10 million requested by the City of Buffalo to aid in the demolition of 3,000 more (Precious, 2006).

Taking aggressive actions to contain and remove the significant blight would establish a healthy foundation for regional reinvestment and help ensure the long-term viability of the city and the region. Once right-sizing strategies that remove blight and decrease the surplus housing stock are put in place, traditional policies for attracting people and investors back to core communities are more likely to succeed.

Right-Sizing Through Land Banking and Green Infrastructure

This right-sizing model relies on a menu of green infrastructure strategies in conjunction with the innovations in the control and management of vacant properties through land banking and perhaps even urban land trusts. No American city has tested this right-sizing model at the scale and in the manner proposed in this article. We contend that green infrastructure, together with land banking and community level planning, can eventually remove one of the greatest barriers to revitalizing shrinking cities—the blight left behind by thousands of vacant and abandoned properties.

Addressing the challenge of right-sizing shrinking cities, however, involves delicate trade-offs with deep implications for city character and the daily lives of its residents. No demolition-redevelopment strategy can proceed in the United States without the humbling reminder of the mistakes made during slum clearance in the 1960s and early 1970s. Crucial concerns for social equity, citizen involvement, and historic preservation must be reflected in any right-sizing effort. "To avoid the mistakes of the past, neighborhoods and citizens must drive land-banking and green infrastructure initiatives in a meaningful way" (Schilling, Schamess, and Logan, 2006).

One of the initial steps is to engage policymakers, civic and business leaders, and community groups in an honest and transparent dialogue about the benefits and tradeoffs of a right-sizing model. While the immediate public health, safety, and economic impacts of vacant properties may make it relatively easy to demonstrate the need to aggressively acquire, assemble, and hold hundreds of vacant and abandoned properties, it is often much more difficult to overcome the attachment of politicians and even planners to the growth model. Moreover, residents may resist replacing the familiar built environment with green. A green-infrastructure initiative can create value in the habitable properties that remain, ultimately attracting investors and residents back to these neighborhoods devastated by decay. However, such an initiative also requires that a considerable number of these sites become pocket parks and open spaces, urban agricultural sites, and community gardens. This shift in policy from attempting to rebuild every property to turning properties into green space naturally raises critical policy and planning questions (ibid):

- How will the communities identify and select target neighborhoods and blighted properties for reclamation?
- How can the city engage the neighborhoods, residents, and property owners in this process?
- How to adjust the infrastructure/population ratio within the city in a fair and socially equitable manner?

- How to acquire, manage, and reuse vacant properties in a more strategic and targeted manner?
- What legal tools and procedures are available to acquire and dispose of these properties (e.g., tax delinquent foreclosure, eminent domain, and land banking)?
- Which properties are ready for immediate reuse, and which should be held for later redevelopment?
- What type of entity can acquire, assemble, and manage multiple parcels and dispose of abandoned properties? How would it be created, funded, and managed?

What is Green Infrastructure? Green infrastructure is a strategically planned and locally managed network of protected green space with multiple purposes and benefits. (Benedict and McMahon, 2006) Green infrastructure can include a wide range of landscapes, such as natural areas, public and private conservation lands, and public and private working lands of conservation value. These landscape hubs can then be linked by a network of trails and greenways.

Principles of green infrastructure also translate well for urban and suburban communities.[3] For more than 30 years, the Pennsylvania Horticultural Society (PHS) has transformed hundreds of vacant lots into neighborhood green spaces, pocket parks and community gardens. Working with the City of Philadelphia's Neighborhood Transformation Initiative, the PHS *Philadelphia Green Program* organizes and empowers community and neighborhood groups to clean, prepare, landscape, and maintain these sites (Bonham, 2002).

By initiating a community-driven green plan, a shrinking city creates an opportunity to work closely with civic leaders, residents, and property owners to identify and select neighborhoods and properties, target the tax-delinquent and seriously blighted properties, and provide incentives for voluntary acquisitions. While green infrastructure might be an interim use (20+ years) for some properties, the weak housing and business markets in most shrinking cities means that dedicated parks, community green spaces and pathways are likely to become permanent elements of the urban landscape. Green infrastructure planning enables the city to prioritize lands it would like to see remain green in perpetuity and to restore natural features of the land—for instance, day-lighting buried streams, restoring floodplains that are currently developed, or revivifying industrial waterfronts as greenways and river walks (Schilling, Schamess, and Logan, 2006).

Arguments for a Green Infrastructure Strategy: In Buffalo, as in most shrinking American cities, recent efforts to acquire and redevelop surplus land will shortly confront the city's surplus of aging housing units, infrastructure, and vacant land. As noted in Buffalo's Facilities and Vacant Land Management Plan (City of Buffalo, 2005), only some surplus properties are good candidates for rehabilitation and immediate redevelopment. Shrinking cities need to acknowledge

[3] Two national organizations, The Conservation Fund (www.conservationfund.org) and The Trust for Public Land (www.tpl.org) employ a strategic planning process that integrates these networks of open space, parks, and greenways into community land-use plans. They use state-of-the-art GIS models to inventory and analyze community data and then design maps that can guide the community's vision for growth and redevelopment along with protecting recreational opportunities, sensitive natural areas, and farmland.

that some abandoned properties will remain undeveloped for decades and would be more profitably converted into a network of greenways, trails, community gardens, pocket parks, and recreational open space. This profit is achieved by the stabilized and improved values of adjacent properties.

Every year, the government invests billons of dollars in traditional types of public infrastructure to attract development and support growth. Green infrastructure has similar benefits, such as stormwater management of nonpoint source pollution and perhaps reduction of urban heat island effects, and may be a better long term investment for shrinking cities (Kloss, 2006).

Green infrastructure can improve the quality of life for residents, provide recreational opportunities, and increase the property values of adjacent homes. A study of Philadelphia's New Kensington neighborhood found that greening vacant lots increased sale prices of homes near the lots by as much as 30 percent. (Wachter, 2004) Cumulatively, Wachter has estimated that these benefits could translate into a $12 million gain in property value for this Philadelphia neighborhood. Using the same methodology, a citywide study of Philadelphia Green's redevelopment strategies found the following green-infrastructure strategies not only enhanced the overall vitality of Philadelphia neighborhoods but also increased the values of adjacent and nearby properties (Wachter and Gillen, 2006). Based on a 2004 median home price of $82,700, properties:

- adjacent to stabilized and greened lots saw a 17% increase in value or $14,059;
- near a new tree planting saw a 9% increase in value or $7,443;
- near streetscape improvements saw 28% increase in value or $23,156.

Implementing the Green Infrastructure Model Through Land Banking and Community Engagement

The predicate of any right-sizing program that converts surplus vacant properties is a special-purpose program or entity that can acquire, manage, and dispose of the land. Over the past thirty years, *land banks* have emerged as powerful tools for converting vacant and abandoned properties into assets for community revitalization (Alexander, 2005). These institutions have special powers to acquire and assemble multiple abandoned properties and then legally transfer the land to responsible nonprofit and private developers for redevelopment. In areas with uncertain real estate markets, land banks take on the initial risk of preparing land. They can help developers establish footholds in transitional neighborhoods, thereby attracting more private investment and creating momentum for revitalization (Brachman, 2005). Some land banks also participate in strategic planning with neighborhood leaders or networks to fulfill community visions for redevelopment.

In the context of a green infrastructure strategy, the land bank would acquire the truly abandoned buildings and tax-delinquent properties and decommission public infrastructure in certain neighborhoods according to community-driven master plans that would more closely align the

city's footprint with its existing population and growth projections. The land bank could also facilitate the transfer of vacant properties into other appropriate uses, including affordable housing and green infrastructure.

A hybrid model: In contrast to traditional land banks, which are driven by community and economic redevelopment objectives, a green infrastructure strategy requires a different framework and investment of public funds and foundation grants. Rather than simply acquiring and preparing abandoned properties for eventual rebuilding by private investors or nonprofit developers, a land bank in a shrinking city should incorporate characteristics of *land trusts.*

Land trusts are local, regional, statewide, or national organizations that protect lands with natural, ecological, recreational, scenic, historic, or productive value (Leigh, 2000). In contrast to land banks, their focus is on managing lands for community uses in perpetuity. Land trusts have also been engaged in smart-growth strategies for protecting farmland and open space from development, and in some places they have been used to preserve housing affordability by retaining ownership of residential lots while selling or leasing the built improvements (Greenstein, 2005).

Countries outside of the United States also have extensive experience using land trusts to redevelop urban lands with green infrastructure on a regional scale, including the Toronto Waterfront Regeneration Trust in Canada and the Groundwork Trust in the United Kingdom (Schilling, 1999). Another successful model adapted from abroad is the Groundwork USA Network, a cooperative program of the National Park Service and the U.S. Environmental Protection Agency to establish and support a network of independent community regeneration organizations. Borrowing from the land trust model in the United Kingdom, Groundwork USA has worked with communities such as Lawrence, Massachusetts and El Paso, Texas to create collaborative programs that redevelop river areas and neighborhoods within and adjacent to national parks.

Shrinking cities should fully explore the dimensions of the urban or community land trust model to oversee its green infrastructure initiative. Such a program could incorporate the strengths of land trusts within the structure and overall management of a land bank. In addition to the flexibility to hold or redevelop land, this hybrid model might allow the land bank to access alternative funding resources in the conservation field (e.g., open space, conservation, and park bonds) that could assist in the acquisition, demolition, and long-term stewardship of green infrastructure.

Collaborative Neighborhood Engagement Processes: Any green infrastructure initiative must be sensitive to neighborhood concerns and perceptions of the social-equity aspects of property acquisition and reuse. As noted above, the history of "blight" removal and displacement of lower-income communities has led to a healthy skepticism of any public program that alters the urban fabric (Fullilove, 2004). A successful green infrastructure strategy must reconcile and align three often conflicting perspectives—the immediate costs and risks of vacant properties, a realistic assessment of future prospects for growth, and residents' goals and interests. A collaborative

process is particularly important in older urban areas, where residents and planners must broadly rethink blight removal, preservation of valued existing assets, housing density, the location and scope of retail development, and the prospects for mixed-income development.

One of the first challenges any right-sizing effort would confront is how to select the neighborhoods and properties. Neighborhood engagement would serve as the foundation for selecting the vacant properties slated for demolition/acquisition and for replacement with the appropriate type and scale of green infrastructure. Such neighborhood-scale plans could evolve into a network of revitalization visions that guide citywide (and perhaps even regional) reinvestment and economic development strategies.

Collaborative planning approaches are critical to successfully engaging citizens in the planning process (Burby, 2003). Consensus-building approaches help establish trust among divergent interests and often result in more effective final agreements (Innes and Booher, 1999). Using such collaborative techniques, residents and planners would engage in a dialogue about the future identity and character of the neighborhood in need of right sizing. They would identify and map community assets and problems in an effort to achieve consensus on community goals and priorities, along with related development and improvement activities to be implemented over a period of years.

A further challenge to be addressed in any civic engagement process is the impact of greening on adjacent property values. In fragile neighborhoods with substantial numbers of renter-occupied homes, even small increases in property values can raise concerns about displacement and gentrification. It is essential to deliberately incorporate programs into greening plans that ensure current residents can capture the increased value and that existing renters will find some support in their desire to remain in place.

Conclusion

"Barn's burnt down; now I can see the moon." — *A Japanese proverb*

The very depth and breadth of Buffalo's challenges present an opportunity to become a national model on right sizing and a living laboratory for policy innovation. Since the *Blueprint's* release, the mayor, city council, civic leaders, and neighborhood residents have been moving towards right sizing as public support continues to grow for a land bank to revitalize the city and stabilize the region. In May 2007, State Representative Sam Hoyt introduced legislation to give Buffalo the legal authority to create the state's first land bank entity. Buffalo's Common Council passed resolutions supporting the land bank and calling for designating the Buffalo-Niagara region as the nation's first Living Laboratory for Revitalization.[4]

[4] The living laboratory was the fourth leadership action set forth in *Blueprint Buffalo* as it calls for the state's new governor in cooperation with the state legislature and federal officials to enact a series of policy innovations modeled after the German International Building Exhibition (IBE) models.

In the fall of 2007, Buffalo Mayor Bryon Brown announced a new city-wide initiative to demolish 5,000 vacant properties in five years, based on the *Blueprint's* insights and recommendations (Belson 2007). United States Senator Hillary Clinton from New York and Congressman Brian Higgins from Buffalo also introduced federal legislation (*The Neighborhood Reclamation and Revitalization Act of 2007*) that would provide cities such as Buffalo with an infusion of federal funds to demolish vacant properties and plan for their reuse.

With respect to green infrastructure, Buffalo will receive a 2007 planning grant from the National Park Service so it can become an official Groundwork USA pilot site. In May 2007, nearly 200 residents and nonprofits came together for a day-long Green and Growing Summit to galvanize citizen actions around revitalizing parks, streets, vacant lots, and the city's waterfront with a myriad of greening strategies. All of these individual actions bring Buffalo closer to a right-sizing model. The next step is to harness this momentum to design, adopt, and integrate a comprehensive green vision for the city and the region.

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Germany's Shrinkage on a Small Town Scale

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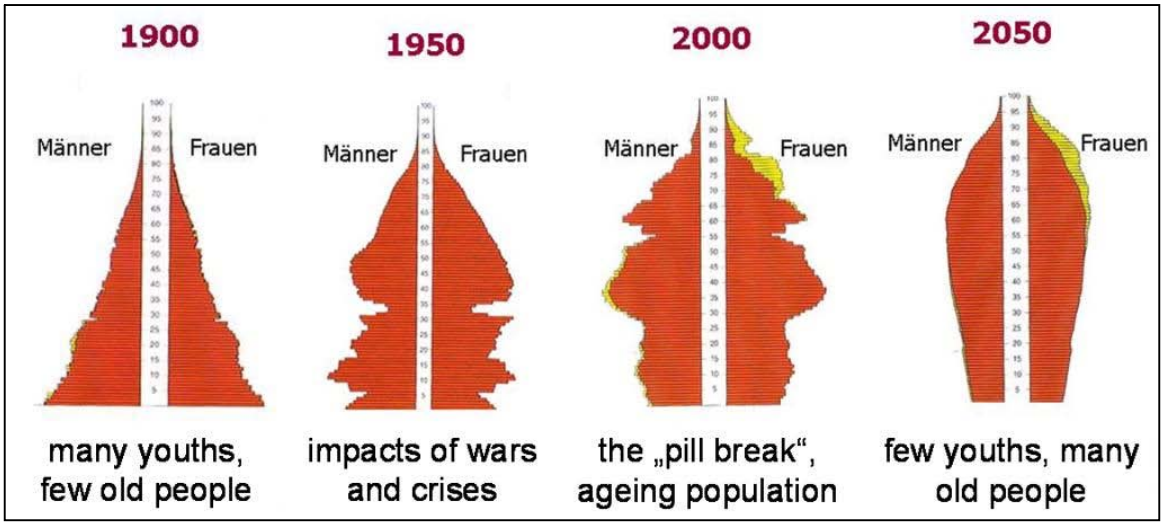
Demographic Change in Germany

Since the 1970s, Germany has faced a declining number of births. Most recently, its birth rate has dropped to 1.35 children per women aged between 20 and 45—significantly below the 2.1 children that would be necessary to maintain the population. Germany is not alone in facing the challenge of a declining birth rate; it belongs to a broader group of European countries facing a similar challenge, such as Italy and Spain (1.3) or Poland (1.24).

The effects of Germany's declining birthrate remained concealed for many years, but they have gradually become apparent in the last decade, with Germany's population declining in number and with individual regions emptying of inhabitants. Accordingly, policies to raise the number of births in Germany have slowly been abandoned, and strategies to cope with a shrinking population have become more important in the last years. Within these strategies, spatial planning plays a major role. It is used both to pursue public aims like decreasing disparity in living conditions and individual economic opportunities, as well as to satisfy the broader social and economic requirements that have emerged from Germany's demographic change.

Figure 1: From the population pyramid to the population urn—demographic development in Germany (Statistisches Landesamt Rheinland-Pfalz:, 10, 11 and 57)

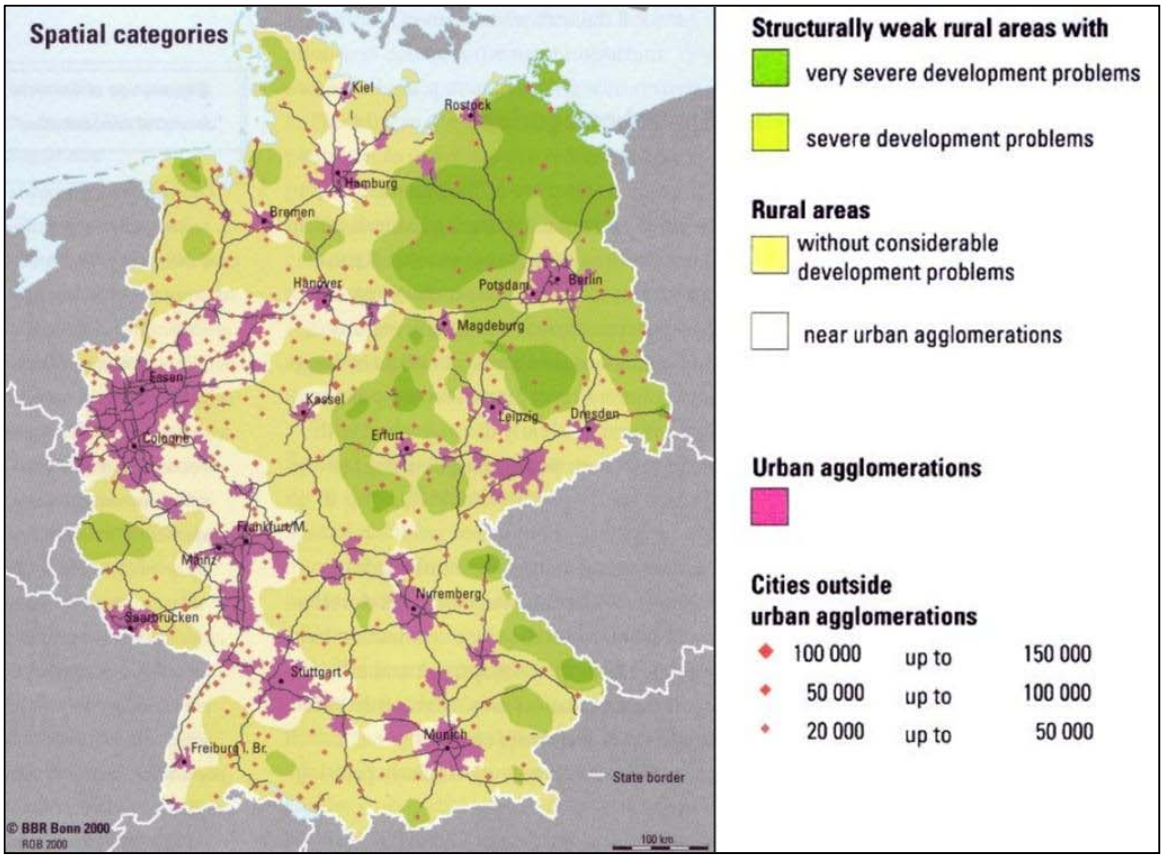


At the same time, change in the German population corresponds not only to an overall decline in the population, but also to the transformation of the "population pyramid" into a "population

urn." These new demographic conditions affect almost every political domain, such as health insurance or fiscal policy.

Demographic change has different consequences in each of the German regions. Germany generally comprises three types of regions: urban agglomerations, rural regions, and structurally weak rural regions. The economically prosperous agglomerations are located mostly in the Southern and Western parts of Germany, while a large part of the Eastern German territory (former GDR) is structurally weak and rural. Understandably, demographic change first and most strongly affects rural areas, where it exacerbates the existing development problems.

Figure 2: Spatial categories in Germany (BBR 2001, 8)



Spatial planning policy of the 1960s introduced the system of "central places" in Germany. Since the 1960s, central places have held important supply and development functions. "Low-order centers" provide the infrastructure and goods to meet basic daily needs, such as elementary schools. "Medium-order centers" provide additional facilities to satisfy more specified needs, such as high schools. Finally, "high-order centers" meet very special demands, such as colleges or universities. Central places are distributed very densely and evenly throughout the German territory, which sets the Federal Republic apart from most other European states, such as France,

which show more centralized settlement structures. The distribution of the central places works according to the so-called concept of "decentralized concentration."[1]

Each state is responsible for determining its own central places as well as their supply functions, which makes it difficult to compare their size and supply across regions. In the state of Rhineland-Palatinate, for instance, the number of inhabitants in "medium-order centers" ranges from 4,000 to 50,000.

Small Towns in Germany—Functions and Challenges[2]

Medium-order centers can be thought of as small towns, and they hold a vital supply function for rural regions by providing the goods and infrastructure for both basic and more specified needs. According to ministry decisions on spatial planning, a medium-order center should be within reach of the entire population by car in half an hour or less.

Medium-order centers are especially endangered by demographic change, as shrinking demand for drinking water makes certain facilities such as water supply works less economical. Their future significance and development depend on their individual circumstances. Small towns situated close to economically prosperous agglomerations benefit from suburbanization effects and are able to compensate or even over-compensate for the natural population development. In contrast, those towns that are situated in peripheral and structurally weak areas have immense difficulties coping with the consequences of demographic change.

Small towns in structurally weak rural regions have been a particular challenge for spatial development in the Federal Republic of Germany for about fifty years. On one hand, these small towns hold an important supply and development function, and on the other hand, they face a lot of problems. Most importantly, they face three basic challenges: the underuse of industrial infrastructure, a low number of jobs, and emigration of the working-age population, which usually moves to more prosperous agglomeration regions. These three problems come together in a vicious circle, which is exacerbated by demographic change. Economic weakness and a low number of jobs cause labor force emigration.[3] This leads to low demand for industrial infrastructure, which prevents both public infrastructure and private supply facilities (e.g. grocery stores) in small towns from working to capacity, eventually causing them to close. As a consequence, towns face the further loss of jobs. Demographic change accelerates the rotation of the vicious circle by increasing the population loss.

Rhineland-Palatinate's development plan, which is currently under discussion, tries to meet the challenges of rural regions through municipal cooperation. Supply facilities are distributed among medium-order centers, in a certain division of labor. Thus, each municipality supplies more than

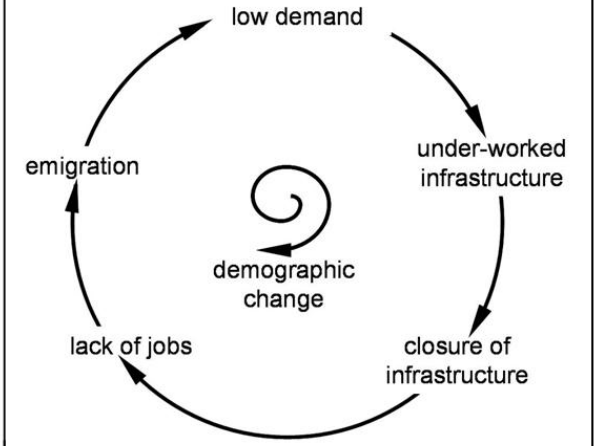
1 For more on this see: ARL (2005): *Handwörterbuch der Raumordnung*, Hannover; topic *decentralized concentration* (page 171-175) and topic *central places* (page 1307 -1314)

2 cf. BBR (2001)

3 Kawka and Sturm (2006) points out the major reasons for inland migration in Germany.

the population in its immediate vicinity. This makes local facilities more economical on the one hand, but on the other hand, access within 30 minutes from any place in the region cannot be guaranteed. This leads us to doubt whether Germany's accessibility standards in terms of fast and direct infrastructure (schools, etc.) are sustainable.

Figure 3: The problems of small towns in Germany (l.), some model calculation results of Rhineland-Palatinate (r.)



	2005	2050
population	4 millions	3 millions
elderly quotient	45	70
death surplus	7000	30 000
nursery children	125 000	72 000
people above 75	300 000	450 000
elementary schools	1000	500

New solutions are therefore necessary. Model calculations predict that Rhineland-Palatinate will lose about one million inhabitants until 2050, which constitutes more than a quarter of its current population. In some rural districts, this will cause a population decline of more than one third. While those small towns defined as medium-order centers are obliged by law to maintain certain facilities through the principle of equivalent living conditions (described in detail in the following section), they must adapt to the challenges of demographic change. The general view in spatial planning is that each municipality has to find its own strategy, which is adapted to the specific conditions each municipality faces. On the other hand, municipal strategies must be supported by complementary regional planning that initiates and implements cooperative solutions.

Spatial Development Strategies

Every spatial development strategy has to comply with three basic planning principles. According to the Federal Spatial Planning Act of 1998, planning must aim at creating equivalent living conditions, initiating and ensuring sustainable development, and satisfying the requirements of competitive economic structures. These principles must be reflected in regional and municipal development plans.

An important goal of this strategy is to maintain the system of central places or decentralized concentration. As shrinking regions are confronted with economic problems in their supply structures, a new basic infrastructure system that guarantees a certain minimum supply of every

region and sub-region needs to be developed. It is also essential that political leaders redefine the term "equivalent living conditions," since it was defined in times of growth.

The new system of central places must therefore be considered a strategy of maintenance rather than of redevelopment. Current minimum standards of accessibility can definitely not be maintained in the future. New spatial planning guidelines must clarify in what time and distances certain functions ought to be accessible, and they must figure out what kind of infrastructure a minimum supply includes. Generally speaking, Germany needs a heterogeneous network of central places combined with clear minimum standards, coordinated to provide infrastructure and supply in rural regions.

In other words, small towns must not be left to their own devices. The success of spatial strategies depends on municipal cooperation, and many strategies have failed in the past due to strong local egoism. Public financial support needs to be bound to the willingness of municipalities to cooperate. In Germany there are many legally defined types of municipal cooperation for different purposes, which allow municipalities to share or allocate functions amongst themselves and to coordinate intermunicipal socio-economic, ecological, or spatial development.

The Federal Spatial Planning Act defines *sustainable development* as development that meets ecological, economic, and social demands without neglecting any of the three. It aims at ensuring a balance between these three poles of the triangle of sustainable development—a metaphor the government uses to highlight its belief that each of the poles are of equal importance. This way of thinking forms the precondition for the second purpose of sustainable development, which is to safeguard the living conditions of future generations. This particularly includes preserving our natural resources. Suburbanization and settlement sprawl are two phenomena that appear mostly in rural regions. This leads to the contradiction that there is a shrinking population on the one hand, but a growth in claims on space on the other hand. This kind of effect, common to many small towns, shows how important sustainability-oriented, long-term development plans are.

For this purpose, regional coordination is required. On a supra-local level, regional planning determines where and to what extent residential areas, industrial areas, or areas for environmental conservation shall be developed. The concept "city of short distances" is closely connected with today's understanding of sustainable development. By offering all the general, urban functions—living, working, supply, education, and recreation—within short geographical distances from each other, traffic is significantly reduced. This concept can be extended to the regional level, which incorporates the town and its environment into a "region of short distances."

Complying with the third planning principle of guaranteeing competitive economic structures includes promoting *international competitiveness*. Germany's system of central places gives it a considerable advantage in global competition compared to other European countries. The decentralized settlement structure in Germany has led to both short and long-distance infrastructure for the efficient provision of goods. If spatial planning succeeds in defining reliable accessibility standards, the system of central places will act as a location advantage for Germany in global competition.

A further important aspect of guaranteeing international competitiveness, as defined by the German state, is the reduction of regional disparities to preserve social stability. This goal requires a further expansion of social and technical infrastructure, such as transportation projects, support for trade and industry, and the support and expansion of universities and research facilities. However, these measures must be formed in reference to the new "equivalence of living conditions" guidelines being formulated for times of shrinking. The basic framework for supply in small cities must be supported and strengthened by specific measures such as those mentioned above, yet these measures must fit with the current conditions that have emerged due to demographic change.

New Spatial Development Concepts for Germany[4]

The Federal Office for Building and Regional Planning has recently elaborated three concepts, which serve as guidelines for every planning level and focus on each of the planning principles described above.[5]

The concept of *"Growth and Innovation"* focuses on metropolitan regions. The idea is to concentrate development resources on increasing economic prosperity and innovation in metropolitan areas, as this strategy might cause the best effects for Germany's political economy. This concept works on the assumption that development effects will spread from metropolitan areas far into their surrounding rural regions.

Critics, however, argue that the degree to which a metropolitan region is capable of enhancing its rural environment in unpredictable, and that this kind of development incentive does not suffice without additional spatial development strategies for small towns situated in peripheral areas.

The concept of *"Maintaining Essential Services"* deals with the principle of equivalent living conditions. The idea is that by figuring out areas in which the population is likely to decrease, increase, or remain stable, planners will be able to pinpoint central places that might be at risk in the future or which need support in order to guarantee equivalent living conditions. This concept is more immediately relevant in the regions that are in a particularly precarious position due to demographic change than in other, more stable regions.

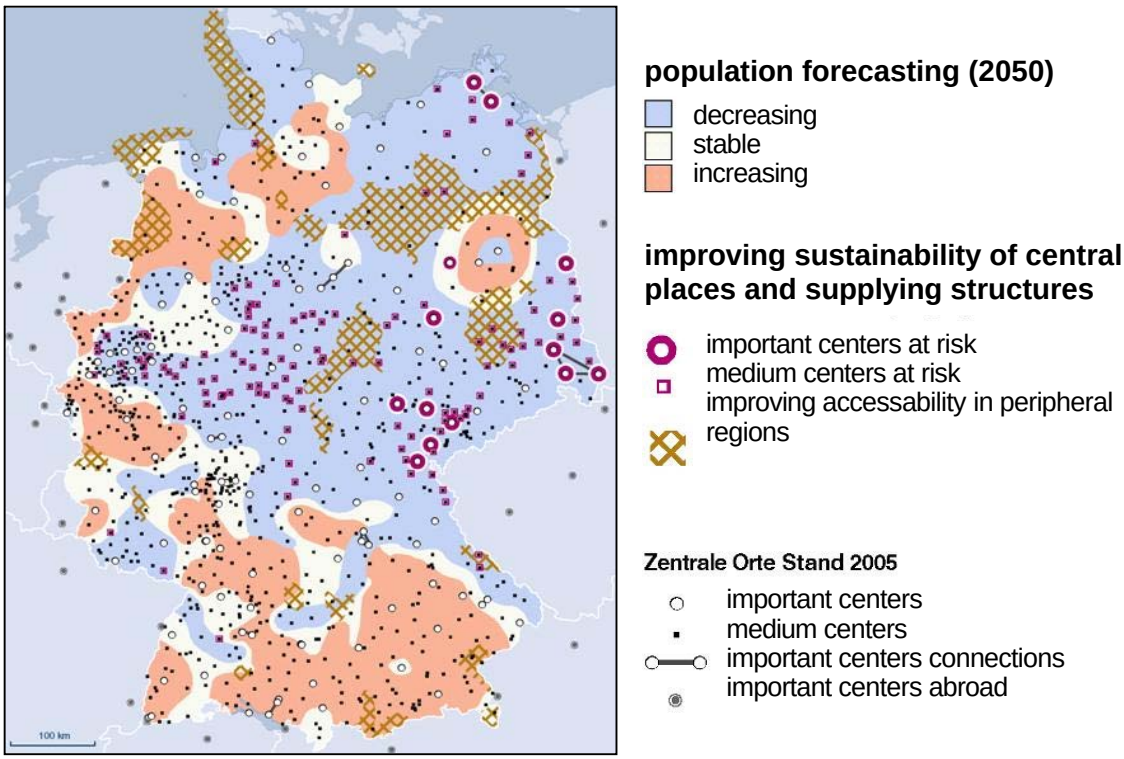
The third concept, *"Preserving Resources—Designing Cultural Regions,"* centers on sustainable development. This concept divides the Federal Republic into different landscape types according to their functions, distinguishing between urban landscapes, rural or agricultural landscapes, water and river landscapes, and marine landscapes. Both regional and local development plans

4 http://www.bbr.bund.de/nn_22518/DE/ForschenBeraten/Raumordnung/RaumentwicklungDeutschland/LeitbilderKonzepte/leitbilderkonzepte__node.html?__nnn=true, last access on 17th of april 2006

5 Ministerkonferenz für Raumordnung, Leitbilder und Handlungsstrategien für die Raumentwicklung in Deutschland, Beschluss vom 30. Juni 2006

must be devised such that they meet the requirements deriving from each landscape type, in order to ensure the supply of future generations with natural resources.

Figure 4: The Concept of 'Maintaining Essential Services' (BBR 2006)



These concepts are not legally binding, so it is still up to the municipalities to interpret how these guidelines fit into their particular situations. However, municipalities can benefit from complying with the concepts, as federal financial support is bound to the fulfillment of the criteria formulated by the concepts.

Conclusions

The major present-day challenge for the development of small towns in Germany is demographic. Devastating changes are expected due to the continued decrease in births, the strong upward shift in median age of the population, and a population that is shrinking overall. In a couple of years, every domain of life will be affected by these demographic changes, and so demographic development will become a key factor in every aspect of municipal development. The impacts of these changes will be most concentrated in structurally weak, peripheral areas.

Although they are shrinking, small towns continue to hold an essential supply function for their rural environment while facing their own structural problems such as the lack of jobs, infrastructure that has fallen into disuse, and emigration. This development forces most German small towns into a vicious circle, which is reinforced by demographic change.

Small towns turn out to have great difficulties in pursuing the three basic aims of spatial planning—equivalent living conditions, sustainable development, and international competitiveness—in periods of shrinking population. At the same time, shrinking endangers both the overall supply and the infrastructural capacity of small towns. It also threatens the broader planning goal of reducing disparities among regions, municipalities, and individual households.

To support small towns in dealing with the threats and opportunities of demographic change, regional development plans are not only helpful but necessary. Only regional development plans are capable of surmounting local limitations and of supporting inter-municipal co-operation. The very complex challenges emerging from demographic change can only be compensated on a regional level, while meeting the requirements formulated in the three national concepts: Growth and Innovation, Safeguarding Living Conditions, and Preserving Resources.

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