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# Planning for Shrinkage: Paradox or Paradigm

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**ABSTRACT** *A great number of contributions regarding shrinking cities correspond to generic discourses on urban problems, which cover planning policies with approaches and strategies developed in somewhat diverse or even very different urban contexts. The debate on shrinkage is still feeble and fragmented. Perhaps this is owing to the character of shrinkage or its relative novelty. An explicit, unequivocal, and comprehensive theoretical debate and framework on the topic of planning for shrinkage is lacking. This entails a previous reflection about what shrinkage means or should mean, the role of urban and regional planning, and the contradictions of planning for shrinkage, which cause the paradox of planning for shrinkage. How can planning deal with shrinkage? What should policies for shrinkage look like? Is planning for shrinkage, planning for population decrease? Is it managing population decrease? Is it business as usual: planning to resume growth? What does managing shrinkage mean? The paper presents a theoretical debate and some preliminary conclusions addressing these questions.*

## 1. Introduction

This paper focuses on shrinkage as a path of urban development, together with growth, slow growth and stabilization, aiming at contributing to the translation of practice into the theory of shrinkage.

In contrast to the profusion of research about urban growth and its different patterns, there is no “theory of shrinkage” (Hager & Shenkel, 2000 referred to by Rink & Kabisch, 2009). Rink and Kabisch add that even the “concept of shrinkage” has to be developed as a real concept to overcome its current focus on a collection of symptoms. The literature on shrinkage is not clear about what place shrinkage occupies in urban development. It is often confusing, because whereas, for instance, population growth naturally leads to urban growth, population decrease does not immediately lead to urban shrinkage. It is not fortuitous that the expression “population decline” is more commonly

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used than simply “decrease”. It carries the negative weight of a symptom of an undesirable disease: urban shrinkage. Thus, even if exceptions exist, the correspondence between the population trend—decrease—and the logical spatial development—shrinkage—is avoided or postponed.

We argue that shrinkage should stand shoulder-to-shoulder with growth as a pattern of urban development. One of the first principles taught to urban and regional planning students is that growth is not, on its own, a synonym for development. Urban growth can merely mean horizontal or vertical expansion, while urban development means progress, evolution, qualitative leap, transition from one state to another, so that the following is always more advanced than the previous one. Therefore, we consider that urban development may have different overall trends—growth, slow growth, stabilization and shrinkage. On the other hand, different spatial configurations such as compactness, dispersion, sprawl (see arguments from Siedentop & Fina, 2008), and/or polycentrism, can occur in parallel with, and shape, each of the above trends.

The aim of this paper is to critically discuss, through a literature review and against a background of generalized social and economic uncertainties, particularly in Europe, whether planning for shrinkage is in fact a paradox or a new paradigm.

## **2. The Meaning of Shrinkage**

It is reasonable to say that the expression “shrinking cities” first appeared in the research carried out in the US by Rybczynski and Linneman (1996). Rybczynski and Linneman describe these shrinking cities, the cities that have declined, as vertical cities, while the growing ones are, in their viewpoint, best thought of as horizontal cities. The authors state these two prototypes differ radically with respect to infrastructure, amenities, and housing stock. The vertical city, according to the authors, evolved during the industrial era and has highways, mass transportation, and rail systems to link the suburbs to the city centre. Its population density is high, typically more than 10,000 persons per square mile. Its amenities include large public parks. The vertical city is known for downtown offices, manufacturing, and shopping and cultural activities. In general, around half of its housing stock was built prior to 1939. It mostly comprises row houses, walk-up flats, and apartment buildings that were located to allow walking to work and play.

In contrast, the horizontal city which evolved after World War II is not simply a new or updated version of the vertical prototype; it is a different kind of city. The authors admittedly generalize that the horizontal city seems to have provided a kind of life that the majority of the Americans wilfully chose, in spite of their romantic image of the old vertical city. Their idea of shrinking cities is closely related to suburbanization and sprawl, and it is focused on the specificities of the Northern American cities. Today, shrinkage is not merely a matter of suburbanization, it goes further beyond.

There is some resemblance between the concept of shrinking cities and the concept of forgotten cities proposed by Hoyt and Leroux (2007). However, although the latter fit in the former, the opposite is not quite valid. Forgotten cities are described as cities whose citizens once supplied the world with clothing, machinery, and material luxuries. These (Northern American) cities underwent wrenching economic restructuring and other challenges that led them to become instead national leaders in unemployment, devaluation of housing stock, and crime. The authors identify perennial challenges facing forgotten cities that tend to be implicitly understood but rarely articulated, such as: a lack of civic engage-

ment and institutions, inadequate governing capacity, and a chronically negative collective mindset.

Hoyt and Leroux (2007) define forgotten cities by the following three criteria: (1) old cities with an industrial history, meaning they had a population of more than 5000 inhabitants by 1880; (2) small cities with between 15,000 and 150,000 residents according to the 2000 US Census; and (3) poor cities with a median household income of less than \$35,000 according to the 2000 US Census.<sup>1</sup> In their report, Hoyt and Leroux state that, unlike global cities and “comeback” cities, forgotten cities did not reap the benefits of a robust national economy in the late 1990s. Despite the fact that their needs are greater, they have only recently received attention from scholars and policy-makers, similarly to shrinking cities.

The authors found similarities in the shared experiences of these cities, which can be described by five elements, or “slides”, of decline. They recognize that these categories, while not linear stages, frequently begin with “shock”, often characterized by plant closings, and culminate in “shame”, what happens when the cities’ residents themselves have internalized the perception of failure. The elements of decline, following dominance, also include slippage, self-destruction and stigmatization. The size concept of this criterion in particular distances it from a sound shrinking city definition.

The causes and characteristics of shrinking cities are as manifold as cities in general (Rieniets, 2005). Even though (urban) shrinkage does not follow a homogenous pattern, we try to abridge the most important characteristics found in the literature to describe them. In a broad and common sense, a shrinking city is a city that is losing population. Shrinkage is used, first and foremost, as a synonym of declining population, or at least as a synonym of a group of varied trends which underlie the change that originates population decrease. When defining shrinking cities, shrinkage is, as a rule, considered a synonym of decline or decay, rather than the antonym (development pattern) of growth—our view—as mentioned earlier. As such the definitions of shrinking cities, usually, have a tragic and derogatory character.

The majority of the authors seem to recognize the demographic characteristics of population decline and /or ageing (see Sousa, 2010). In the literature, the quantitative aspect obviously differs widely from country to country, according to their specific context, rate of urbanization and established urban hierarchies. Shrinking cities as referred to in the atlas of the Shrinking Cities (SC) Project are cities that have temporarily or permanently lost a significant number of their inhabitants. In the SC Project (2006), population losses are considered to be significant if they amount to a total of at least 10% or more than 1% annually; and apply to the administrative municipal districts, even if these lie within growing agglomerations.<sup>2</sup> In their research on the trajectories of European cities, Turok and Mykhnenko (2007) considered declining cities were those with a rate of population change below their national average (i.e. relative decline); as opposed to growing cities which were those with a rate of population change above their national average (i.e. relative growth).

Turok and Mykhnenko (2007) used population as the main indicator of city trajectories partly for reasons of data availability and consistency with previous research, but also because population is a useful indicator of changing urban conditions, although obviously it does not provide a full picture of urban change. Even though the demographic component remains essential in the shrinkage diagnoses, the richness of the concept of shrinking cities goes beyond general population decline. Based on the previous SC

Project broad definition, Wiechmann (2006) proposes the following definition of shrinking city: a densely populated urban area with a minimum population of 10,000 residents that has faced a population loss in large parts of it for more than 2 years, and is undergoing economic transformations with some symptoms of a structural crisis.

More comprehensively, the twenty-first century shrinkage can be characterized as a global, structural, and multidimensional phenomenon concomitant with visible declining population, declining economy and declining national or international importance (alone or combined), which can affect regions, metropolitan areas, cities, or just parts of them (Bontje, 2001; Pallagst, 2005). Though, as noted earlier, it can also affect small towns and rural areas (Herz, 2006; Martinez-Fernandez & Wu, 2007; Troeger-Weiß & Domhardt, 2007; Vargas-Hernández, 2007; Beetz *et al.*, 2008). Bourne and Simmons (2003) associate shrinkage with those regions and urban areas left behind, which in contrast to thriving ones, face a number of problems: declining and aging populations, a shrinking employment base and a truncated revenue flow. In addition, according to Oswalt (2005), shrinking cities are the places where the losers of the so-called globalized economy live.

These cities are also different from small cities: the change in quantity entails a change in quality and an impact on everyday life (Ebers, 2005). Furthermore, these cities fail to fulfil Wirth's (1938) three criteria, which suggests that, for sociological purposes, a city is a relatively large, dense and permanent settlement of heterogeneous individuals. Perhaps for this reason, shrinkage is usually accompanied by a projection of an image of decline (Beauregard, 2005) and of potential loss of this traditional notion of urbanity. In spatial terms, it manifests itself through doughnut patterns (in the centre) or its reverse (in the suburbs) and mosaic or perforation patterns (mixed type). In other words, shrinkage might not represent a homogenous phenomenon in a territory. Some parts can even grow slightly, while others stagnate or shrink, although the latter situations have to prevail and/or to be manifest. In sum, we consider shrinkage as population decrease in a certain territory, due to various reasons alone or combined, that may or may not have started to spatially shrink. Shrinking cities are the ones experiencing this process.

### 3. Consequences of Population Decline

It is important to identify the consequences of population decline present in the literature and the alleged characteristics of shrinkage that happen when positive planning action is nonexistent or mostly growth-oriented; it is important to be aware of them because these may well be future topics and action fields for planning research and practice. To begin with, a plummeting population density is one of the most obvious consequences of population decline, and in this case an ineluctable characteristic of shrinkage, with several effects. These consequences are presented below.

For Ferrari and Roberts (2004), the dynamics of the built-up environment are a crucial aspect of the shrinkage concept, and both the number of vacant dwellings and the amount of derelict land are vital when considering this issue in Britain. Ahrens (2005) anticipates there will be ever-increasing empty housing in shrinkage situations<sup>3</sup> in Germany. Nevin *et al.* (2004) argue that there is a shrinking housing market in the UK which exposes problems of obsolescence of property types; a declining target market; vacancy of properties and land; and a general hollowing-out of the inner city, eroding the viability and sustain-

ability of neighbourhoods and the services that support them,<sup>4</sup> as we discuss later. Still, the problem is not exclusive to the cities' centre, and perforation can and does take place everywhere in a city-region, or in the territory.

From Herz's (2006) viewpoint, demographic trends indicate a long-term decline in population and employment all over Europe, particularly in rural areas and smaller towns, but also in some quarters in larger cities; and eventually this decline will lead to perforated areas. Some of these spatial consequences of population decrease can turn out to be opportunities for planners. General falling property prices and a slack housing market can lead to less pressure on investments and space consumption and unexpectedly low property prices in inner city (Ahrens, 2005), or other sought-after, locations.

In the German context, Mäding (2004) explored the thesis of a demographically determined, generalized local government financial crisis taking in account not only revenues, but expenditures as well. According to Mäding, it is not enough to consider the impacts of demographic change—decline—on the revenues side. The author's arguments, on the revenues side, are the following: growth in productivity can be expected, "per capita" public and municipal revenues are likely to increase; and demographically determined income disparities between local authorities can be levelled by financial equalization.

On the other hand, Mäding (2004) finds that the danger on the expenditure side has four components: (1) persistence of expenditures in the event of a dwindling population; (2) rising "per capita" expenditures due to the effects of demographic structural change; (3) supplementary spending due to the effects of internal migration; (4) and, finally, additional spending in pursuit of an "excessive" attractiveness policy in "cut-throat" competition for residents. The latter presents a danger indirectly connected with population decline: for a given total population, each individual can only win at the cost of others.<sup>5</sup>

Ahrens (2005) also believes that a smaller tax base and declining tax revenues will not facilitate the financing of adjustments due to population losses, such as the adjustment of oversized facilities; and the structures' renewal in Germany. First, empty housing and vacant lots lead to oversized social, transportation and technical infrastructure; and second, with declining densities, unit and transaction costs of public services will progressively increase. Thus, with shrinkage, planners and operators of utility technical infrastructures are confronted with this completely new situation: less money for over dimensioned and underutilized infrastructure.

Also in Germany, Koziol (2004) stresses that, as population declines and consumption drops, many technical infrastructure systems will be used below capacity and malfunctions will begin to increase. Hence, a situation of shrinkage is prone to hamper efficient operation and generate follow-up costs. First, the important basic investment in utility lines for drinking water supply, sewage disposal, electricity, district heating, and other services, are reflected in long-term effective fixed costs, the key component of charges and prices (between 50% and 80%), for provision of those same services. Second, depending on the urban redevelopment/downsizing strategy adopted, high direct costs are incurred in scaling down, diverting, and relocating service lines, for adapting pumping and distribution stations, etc., while indirect costs arise from apportioning existing fixed costs among a smaller number of consumers. Finally, passing on the full direct and indirect costs of infrastructure adaptation to the consumer is not even feasible for legal and political reasons (Koziol, 2004).

Herz (2006) also deals with the impact of shrinking cities on buried infrastructure. According to the author, the likelihood for densification around centres and along axes

of infrastructure is small, and in addition new building activities will continue on a smaller scale. Nevertheless, although parts of buried infrastructures will become oversized, a few of them even obsolete, most of them will still be necessary in the context of the distribution network. Herz believes that this process of shrinking demand for infrastructural services is accentuated by the decline of demand “per capita”, due to the need for more economical and efficient use of resources in harmony with the goals of sustainability. Therefore, the specific costs of the provision of infrastructural services increase, driven also by the need for infrastructure rehabilitation which, on the other hand, provides an opportunity for downsizing the system and adapting it in a sustainable way to the emerging pattern of demand.

Referring mostly to Germany, several other authors (Moss, 2003, 2008; Schiller & Siedentop, 2006; Schiller, 2007) recognize the technical and economic problems prompted by the combination of expanding networks and declining consumption and the challenge of preserving cost efficient infrastructure supply in shrinking cities. For instance, Moss (2003) identifies disused industrial sites—brownfields—as “cold-spots” of infrastructure systems. Ahrens (2005) argues that infrastructure and social services financial burdens will increase due to fewer taxpayers, simultaneously reducing the available budget of private households for mobility.

Ahrens explains the difficulty in estimating precisely the consequences of demographic changes due to different influences on transportation demand. Some of the different effects can accelerate, but some can also compensate for each other. Nevertheless, significant traffic reductions in areas with large population losses can lead to: (1) lower volumes especially during peak hours, reduced lanes and width of streets; (2) less traffic in side streets to avoid congested major streets; (3) extension of zones with traffic-quietening; (4) better supply for parking; (5) reduced maintenance cost for transportation seats, service areas and other similar infrastructures; (6) renewed car driving among former public transportation users (because of available parking places and less congestion). Besides, the author is sure there will be a noticeably lower demand for public transportation, but argues it is still not possible to make exact mid-term and long-term projections.

On the basis of empirical studies, Strohmeier and Bader (2004) show that disadvantaged population groups—the poor, the old, and foreigners<sup>6</sup>—will in future predominate in the urban landscape, and will concentrate in certain urban areas in which social problems cumulate. The causes lay both in selective migration, especially out-migration by the German middle classes to the suburbs, and in the ageing of the population. The authors find polarizing tendencies within cities; what the urban sociologists call segregation, meaning the degree of unequal distribution of the resident population over the territory in terms of social status characteristics (social status of residential areas), of family form life styles (family status).

This fact is considered quite upsetting, namely because “Districts with Special Development Needs” will proliferate, sparking off an urgent need for action to avoid further gaps in urban society. This is a challenge for the shrinking cities. In turn, the predominance of disadvantaged population groups entails declining purchasing power and accumulating social problems. Taking the examples of the Czech Republic, Finland, Germany and Spain, Hollbach-Grömig and Trapp (2006) state that population decrease affects labour markets because skilled labour, an important location factor, becomes scarce in these territories. The former and the latter usually can bring about an increasing crime incidence,

although some authors argue that growing cities are more likely to attract crime perpetrators and have higher crime rates than shrinking cities.

Adding to the aforesaid characteristics, decreasing population and declining population heterogeneity can lead to the death of social life and the public sphere, which constitutes the main source of creativity and innovation, creating a sweeping knowledge and cultural void. The generalized decay described above has an evident effect in the image of a territory. If, as Beauregard (2005) asserts from a North American perspective, civic elites everywhere have become obsessed with the image that their cities project to the world, then the way the city is perceived has to be considered. Beauregard finds that images of renewal and decline are unequal in their narrative valence. While images of renewal/growth expand narrative options, decline shrinks possibilities. Renewal and growth relate to affluence and accomplishment and practically unlimited opportunities for achieving and finding happiness.

Decline is not able, and even shrinkage has not been able, to appeal to positive narratives. Moreover, harsh daily routines and pauperization do not leave space and time for anything else but exhaustion, negativism, and collapse. Based on the German situation, Borries and Böttger (2004) believe the real problems in shrinking cities are a lack of motivation, hopelessness and sadness, that is to say the mental maps or psychological conditions. However, despite all, Delken (2008) shows that, for those who choose to stay, living in a German shrinking city does not lead to less life satisfaction. Beauregard concludes by reflecting briefly on the limits of images in helping us to understand the city: “While we can see the consequences of disinvestment and abandonment and the results of large, capital investments (...); the dynamics behind these images, the dynamics that produce them, are hidden from view”.

All of these aspects, if not dealt with, can lead to even greater population loss, increasingly sharpening the spiral of decline, not shrinkage. In our opinion, although they should not be taken carelessly, these characteristics of shrinkage are not fatal or failure determinant. Planning should work towards their optimization, as we argue next.

#### **4. Approaches and Strategies to Deal with Shrinkage**

The contributions on the approaches and strategies (and recommendations) available in the planning literature are very diverse in: perception; scientific depth; and shrinkage specificity/context. In this debate, the renewal mechanisms and fields of action of planning are central themes. Although seldom so much internal, top-down and lateral innovative effort—competitions, prototypes, building exhibitions and urban research—has been dedicated by the planning profession in so little time (particularly in some countries such as the US and Germany), Jessen (2006) states that it is still early to assess planning’s role in dealing with shrinkage. Jessen finds it noteworthy that urban structure and development models and parameters are used with an opposite function: shrinkage. Nonetheless, Hollander (2007) argues that planners have but few potent techniques to address shrinkage, contrarily to growth; an argument we engage to support throughout the present section.

We will differentiate between reaction and adaptation in planning to demonstrate that reasoning. Reaction happens whenever the response involves merely approaches, and strategies (and recommendations) to reverse shrinkage and resume growth. Adaptation is when these seek to adapt/optimize to consequences of shrinkage, rather than to end it. Oswalt (2008) identifies five fields of action in conditions of shrinkage mostly with an



adaptive character—(i) deconstructing; (ii) revaluating; (iii) reorganizing; and (iv) imagining—in giving shape to urban space and formulates corresponding urban concepts that outline conceptual models.

#### 4.1 Approaches

Many of the approaches to shrinkage are well-known topics of the planning literature and are growth-oriented; the following four are illustrations. Culture, creativity and creative industries, for instance, are seen as playing a role in reacting to and reinventing shrinking cities in the context of the new economy (Brown *et al.*, 2004; Aber, 2006). Aber's assumption is that economic recovery will arrive through culture-led regeneration, integrating economic development, cultural development, and urban design to attract and retain the creative population segment. Brown *et al.* (2004) state that music and "local music industries" have gained importance; nevertheless, the authors find that the integration of the business of culture into a wider cultural policy is a key to success. This approach is, on the one hand, very broad and on the other hand, has a very narrow context of application.

Strohmeier and Bader (2004), Sucato (2006) and Vargas-Hernández (2006, 2007) emphasize the role of community involvement in shrinkage. In Germany, Strohmeier and Bader suggest forms of participation that appeal to individual utility through short-term/low-input do-it-yourself projects, establishing networks and saving costs. Sucato argues that community involvement can help to stabilize deprived urban areas and hold back additional polarization, and motivate functional cohesion of these areas, as it did in Germany, more specifically in North Rhine-Westphalia. Also in the Mexican context, Vargas-Hernández (2006, 2007) believes in the significance of formulation and implementation of integrated policies to minimize social and environmental impacts in revitalization. Moraes (2006) argues that income inequality, increase of poverty and the exclusion process of the Latin-American urbanization are key points for understanding shrinkage in that area. Urban management tools such as: sale of building potential, transfer or sale of building rights, public-private partnerships, priority zoning, density zoning, and building enforcement can contribute to re-democratization of urban land use and reversion of the degradation and shrinkage process of old industrial areas. This approach has been just as underlined in growing cities.

For Martinez-Fernandez and Wu (2006, 2007), innovation might have a major role to play in the transformation processes of Australian shrinking cities, particularly regional innovation systems. From the authors' point of view, a shrinking area can be seen as an intellectual asset for the development of knowledge networks, together with research and education institutions, scientists, industry associations, and community and government organizations. This can facilitate the flow of knowledge among different stakeholders in the city, the connection to other international networks through its more international participants and ultimately could enrich the regional innovation system. Shrinking areas can develop into learning environments to hold innovation, creativity and vitality; key factors to keep competitive. Bearing in mind the example of Silicon Valley, Hancock (2007) agrees the creative edge is a competitive advantage for these cities in the global economy. However, we should add that this is somehow valid for any city.

Audirac (2002, 2005, 2007) explores the widely debated link between information and communications technology (ICT), urban form, and shrinkage, using the US as a reference. Audirac asserts that, if on the one hand, synergies between ICT and our car, truck, and aeroplane society may be a thrust behind well-established urban decentralization and deconcentration trends, on the other hand, the slow-food movement and other slow-world activities could be alternative anti-globalization utopias with the potential to occur in shrinking cities. The author adds that regeneration schemes that revert unused infrastructure and vacant lands to green open space could become carbon credit sellers in greenhouse gas cap-and-trade programmes—a rather fresh and positive viewpoint.

Finally, the role of housing policy and integrated regeneration in shrinking cities is the focus of authors such as Bontje (2004), Liebmann and Robischon (2006) and Wiechmann (2008b). The biggest contribution to adaptation to the consequences of shrinkage and planned shrinkage has been done on the matter of surplus of buildings and spaces (Wiechmann, 2008a, 2008b) in Germany. For the most part, housing policy has corresponded to demolition of flats, in vacant or underused buildings, to stabilize the housing market, and improvement of the more stable housing quarters, to adjust it to the population size. The vacant lots are turned into parks or squares and owner-occupancy is then stimulated to strengthen ties between people and space. These authors agree that, bearing in mind the complexity of the phenomenon, housing policy is insufficient in the absence of integrated city-wide urban development strategies.

#### 4.2 *Strategies*

Regarding in particular the financial aspects, it will be difficult to attract private investments to shrinking cities for obvious reasons of the likely difficulties of securing safe payback mechanisms. In addition, the smaller tax base and declining tax revenues, call for both a reaction and an adaptation-oriented finance strategy. In Germany, the first stands for what Mäding (2004) calls a “child (and family) friendly community” and a “foreigner-friendly community”. Furthermore, it entails competition, spending more (i) on new land for residential use; (ii) home ownership; (iii) revitalized neighbourhoods; (iv) attractive infrastructures and green spaces; (v) sports, business or culture events—overall, an integrated local policy, setting realistic spending priorities without losing sight of demographically determined fiscal risks. In the US, Rybczynski and Linneman (1999) consider regional government as an adaptation strategy, meaning that whenever regions’ areas as a whole are expanding, linking shrinking cities to growing suburbs or other thriving areas could provide the former with access to financial resources available for the latter; otherwise, taxes should be lowered to attract population—which in the end does not differ from a growth-oriented perspective.

In the North American context, in relation to surplus of spaces and buildings, Schilling (2008) presents four vacant property strategies: (1) develop a regional real property information system, (2) institute a comprehensive code enforcement approach, (3) establish a multi-purpose land bank authority or programme and green infrastructure initiative to right-size the city’s most distressed neighbourhoods, (4) create a holistic policy framework for the redevelopment of greyfields and brownfields throughout the entire region. Schilling proposes a Living Laboratory that incubates policy innovation and pilot projects that create new models of urban regeneration, such as: coordination and integration of economic development and community revitalization resources; performance-based regulatory

standards; revitalization authorities; right-sizing through green infrastructure; green business attraction strategy. The author states that a national organization could facilitate and manage this network of Living Labs to share model practices and collaboratively solve problems, and cohesively and comprehensively manage this right-sizing initiative. Merit should be given to this type of adaptation strategy, especially directed to shrinking cities' problems.

Hayashi and Sugiyama (2003) suggest a specific adaptation strategy for Japanese cities: de-suburbanization and social capitalization (Kato *et al.*, 2003) which requires: consensus on future goals for land use; reform of zoning; coordination of building control and taxation; evaluation of social value and social cost of a site; provision of incentives for social capitalization in the real estate market; and transfer development gains to conservation areas. Both Hayashi (2007) and Pallagst (2007) propose a shift from smart growth to a smart shrinking strategy. From a reactive perspective and referring to the UK, Mulligan (2006, 2007) argues that environmental concerns and activism can be catalysts for change, improving a city's image in order to attract new, regenerative investment in conditions of stagnation and retrenchment.

Mace *et al.* (2004) propose, it is reasonable to say, a common adaptive attraction-retention strategy, through which British shrinking cities could keep and become magnets for the young and the family builders. The university base; the physical environment and transports are considered the key for this strategy. The only setback may be to combine both qualities that attract the young graduates and couples. To counter this risk, cities must pursue conscious policies in: urban regeneration; education; transport; and security. In view of that, to achieve these policy objectives, cities need to acquire and use universal key policy levers such as: physical redevelopment powers; flexible housing subsidies; and discretionary spending powers.

Finally, according to several authors, urban and rural shrinkage should be addressed at the regional scale, standing for an integrated regional development strategy concept in shrinkage circumstances (e.g. Strohmeier & Bader, 2004; Jessen, 2006; Pallagst, 2007; Troeger-Weiß & Domhardt, 2007). Only at this scale, the authors believe, can duplicate investment be prevented, in making more efficient use of public finance in adapting the technical and social infrastructure to changing demand, and competing for population and jobs, avoiding greater landscape consumption. Strohmeier and Bader advocate that opportunities can only be exploited through an open debate about demographic problems in spatial planning and development policy, identifying and taking account of local impacts, and finding regionally differentiated solutions. This point of view is also not new and not exclusive to shrinkage.

Recommendations for over dimensioned and underutilized technical and transportation infrastructure in Germany are adaptation driven essentially. Koziol (2004) recommends low-cost urban renewal strategies, i.e. economically sustainable ongoing urban redevelopment based on: anticipation; projection; re-usage; extensive downsizing; demolition; long-term advantage; adaptability; regional demand; reasonable dimensioning; and investment optimization. In sum, strategies and measures should be carefully weighed up and urban redevelopment processes comprehensively coordinated and mediated. Ahrens (2005) recommends that age specificities be considered in transportation planning. The author suggests that the focus should be on low-cost soft measures and policies to improve and maintain the existing transportation system and to make it more efficient. In this regard, growth assumptions, future demand and affordability should be re-examined. Guidelines

for an adjusted integrated transportation planning should include: accessibility and safety; quality; consequences and consistency (Holz-Rau & Scheiner, 2004 referred to by Ahrens, 2005), which are in line with a planning for shrinkage perspective.

Rybczynski and Linneman suggest a number of alternative and adaptive uses for vacant lots in the US: parks, playgrounds and recreation sites (commercial or not), etc. through corporate sponsorship (advertising) to provide continuing maintenance; horizontal city, through down-zoning of residential areas, lowering densities and adjusting typologies to current housing demand; de-annexation to private developers, to generate funds through sale, compensating overdue and current maintenance of urban infrastructure and security, enhancing and filling in urban fabric, creating a more viable smaller city; clean up properties through public or private funds, allowing development if the environmental quality of the property markedly improved.

EUROCITIES' (2008) recommendations for EU housing policies, although quite general, are realistic and adaptive, putting emphasis on: aging and its social consequences; increased risk of poverty of older people at the local level; rethinking urban planning and policies, anticipating ("counter-cyclical") approaches; long-term and prospective vision; convergence with sustainability. For cities, increased sharing of information is recommended: development of local monitoring systems; age mainstreaming; fostering communication between cities and between neighbourhoods; building up local knowledge clusters to produce synergies and to keep status track; capitalizing on the resources of publicly financed scientific institutions; deliberating the distinction between population growth and economic development; involving expert groups to give advice, recommendations and develop proposals; using the political arena to support immigrant communities.

In the end, and generally speaking, a great number of contributions regarding shrinking cities recover planning policies with approaches and strategies which were developed in diverse urban contexts. Whether we are speaking of urban regeneration, creative cities or community involvement, just to exemplify, we seem not able to go beyond the corresponding generic discourses cast upon urban problems. Thinking is still feeble and fragmented. Perhaps this is owing to the character of shrinkage. That is to say: despite denial in planning theory, facts have made it inexorable for practitioners who, without a sound theoretical basis, were left to deal with the shrinkage problem in their own way, resorting, in most cases, to the traditional policies of planning for growth.

## **5. Planning and the Doctrine of Growth**

The multi, complex and contradictory picture drawn above is the result of the prevalent canon of growth which is explored in this section.

Over the last three centuries, urban growth became the final goal and apparently the only way forward for spatial development, the centre of urban and regional planning's international debate. Not only theories but also practices of urban and regional development usually tend to emphasize the desirability, or the obligation, of growth. According to Bontje (2004), a review of theory and policy documents can soon lead to the impression that a city or region would be doomed when it does not possess a growing population, a growing economy and/or a growing national or international importance. Leo and Brown (2000) and Bontje (2004) call it "growth obsession". These authors also find

that the possibility that continuous growth is an impossible, and sometimes undesirable, situation for any city or region had been accepted to a very limited extent until recently.

The possibility of decline or even slow growth is admitted, provided it lasts for a short period of time. Bontje (2004) regards the stages of urban development model as the best-known example. This model is based on one phase of international economic development and considers that urbanization is a cyclical process and that decline will, in the end, make way for new growth. Despite the fact that growth has been replaced by urban stagnation and shrinkage processes at many places in the world during the last decades, shrinkage is not a topic of much discussion in most OECD countries where the planning paradigm of growth has dominated the scene for many years (Martinez-Fernandez & Wu, 2006).

According to Rieniets (2005), our understanding of urban planning is closely connected to an assumption of ongoing demographic and economic growth; a result of urbanization associated with industrialization and its demand for urban solutions. Consequently, urban planning has had a quasi causal relationship with urban growth—methods, visions, and values are only envisioned based on the assumption of continuous growth (Rieniets, 2005). Partly this is planning's response to the entrepreneurial world, the economy and the dominant ideology of economic growth, in which economic stagnation leads to shrinkage and death. To be truthful, although economic growth and population growth do not always occur simultaneously or run in parallel, a negative correlation is atypical (Beauregard, 2009). However, a pattern of growth without employment effects (jobless growth) occurs in many cities (Franz, 2004).

Whether it is called declining growth, negative growth, urban decline, urban shrinkage or even slow growth, whether it happens in a region, city or areas of those regions and cities, population decline and what it entails is seldom considered acceptable. Leo and Anderson (2006) assert that for (North American) civic leaders there is no such thing as bad growth and no such thing as too much of it. They find that the widespread impression is that growth is the elixir that cures all ills, and that any city that is not growing rapidly is being "left behind" and is "off the map." The city is seen as a "growth machine" (Logan & Molotch, 1996) and is valued only if it conforms to that image. According to growth machine theory, promoters of growth legitimate their actions with an ideology of value-free growth, with the claim that development is a universal good because growth increases cultural opportunities for residents, expands the tax base, and creates jobs (Troutman, 2004). Notwithstanding, this is not exclusive to North American countries, or even to Western countries.

For many years, the costs and consequences arising from suburbanization were rarely considered. On the contrary, the benefits of suburban growth—increased tax revenue and investment in public services and infrastructure—received the bulk of attention and set the scene for continued suburban growth (Byun & Esparza, 2005). Leo and Anderson (2006) state that previous research on the effects of urban forms on public costs of investment, operation as well as maintenance of network-related technical infrastructure have normally assumed a paradigm of growth. The authors also state that most current studies are intended to show that substantial costs savings can be achieved by increasing urban densities and locating new development near existing built-up areas.

Within administrative systems, traditionally oriented towards growth objectives, shrinkage is generally considered to be intractable and policy-makers and experts are unable to cope with the issue in a positive way (Wiechmann, 2008a). Thus, the main dilemma of dealing with urban shrinkage from a planning perspective is that urban development is

strongly interlinked with growth, leading to its perception as a threat (Banzhaf *et al.*, 2006) or a taboo (Oswalt & Rieniets, 2006), a pathology at the least (Leo & Brown, 2000). The most common reaction towards urban shrinkage, not very often leading to success, used to be maintaining a strategy of economic growth with the aim of regaining population growth in the shortest term possible (Banzhaf *et al.*, 2006).

According to Borries and Böttger (2004), urban shrinkage is often described as a problem of building space, which can be solved, following the traditions of town planning, with building activity. The authors believe that the growth-based discipline of town planning cannot address the phenomenon of urban shrinkage, because it is as much a cultural as a psychological problem. Nonetheless, for town planners, it is primarily a shift away from the paradigm of growth. Neither the paradigm of growth-driven development nor the well-established planning instruments are helpful in a situation of shrinkage (Banzhaf *et al.*, 2006).

From Beauregard's perspective (2003), a focus on urban shrinkage and their consequences would form a counterpoint to the literature on growth. The author refers to shrinking populations as a "stigma," not fitting into the ideal of decision-makers. At this point, we may already conclude that both urban growth and shrinkage have obvious strengths and weaknesses posing opportunities and threats to the achievement of different planning goals and general aspiration. The only ill-equipped bane is growth talk and the policy illusions it conveys (Leo & Anderson, 2006).

## **6. Criticism of Urban Growth**

Despite the instituted planning dogma described earlier, urban growth is not immune to criticism in planning and in society in general; the argument that it is always beneficial is not utterly accurate.

Suburbanization and particularly urban sprawl have been the most targeted issues in this debate. Bithas and Christofakis (2006) recognize that the excesses observed in some of the sizes and densities of cities have been accompanied by the start of severely alarming mal-functions, such as atmospheric pollution; more demand for waste treatment and disposal; traffic congestion; criminality and social alienation. The authors believe that, in the light of these problems, the hypothesis that the marginal social benefits deriving from additional growth of cities are considerably smaller than the respective social costs has now a more convincing ring to it and, consequently, the additional growth of urban systems remains under systematic dispute.

Thirty years ago, van den Berg (1982) already pointed out negative consequences from growth and that it should be feared that they would get worse as the scale of suburbanization became larger, especially problems relating to traffic. Besides traffic congestion and pollution, urban growth is frequently said to be the cause of negative effects such as the loss of outer open spaces for current and future generations (Garcia & Riera, 2003). Khakee and Barbanente (2003) also reinforce the notion that global environmental problems are the result of a combination of population growth and shrinking stock of natural resources.

Chukwuma (1996) asserts that nature and wildlife may tolerate environmental strains only to a limited extent that is not commensurate with pressures exerted by population growth, global economic and technological development. In the author's point of view, a transition to sustainability requires, in the first place, voluntary social restraints on

increasing industrial and population growth. Consequently, one important environmental paradigm asserts that limits should be set to growth, because population growth has been mainly concentrated in urban areas, which have been the conventional nerve centres for trace element pollution.

Moreover, Tietjen (2007) supports that the task of territorial cohesion will become increasingly a question of negotiating growth and decline rather than achieving equal growth in every place. Thus, the author understands development, not as growth, but as a matter of achieving maximum quality of life for a maximum of number of people. Hence, urban shrinkage is considered to challenge both the growth paradigm and the paradigm of spatial equality that have been the guiding principles of urbanism during the welfare state. One particular relevant issue concerns the social consequences of urban growth. Zoning pushes and pulls people through land use, raising property values and thus exacerbating social segregation between rich and poor.

The most serious criticism to urban growth comes about when growth takes the form of sprawled suburbanization.<sup>7</sup> The consequences or more precisely the negative impacts of sprawl have been vastly debated. Despite the fact that there is still no absolute definition of urban sprawl, it is usually portrayed as an inefficient, because resource-wasteful, land-use pattern, which takes in almost every possible development with negative impacts, and is judgementally compared to the compact city “ideal”. There appears to be a broad consensus among planning and urban scholars that urban sprawl is a large and complex, not easily remedied, problem responsible for a number of negative consequences (Howell-Moroney, 2008).

Beside the issues of traffic congestion and environmental degradation identified previously for urban growth in general, urban sprawl is associated with high infrastructure development costs. On the other hand, the higher resource consumption, a consequence of urban sprawl, sets the stage for even greater damage of environmental conditions. According to Dieleman and Wegener (2004), a range of unintentional consequences are brought forward in the literature; the most prominent among these are: (i) deinvestment in urban core areas and central city decline; (ii) reliance on the use of private cars—car-dependence—and therefore the growing number of vehicle miles travelled, road congestion and decline of air quality; and (iii) the loss of open space and scenic areas, agriculturally valuable or environmentally sensitive, in and close with metropolitan regions.

In the inner city, the urban fabric becomes perforated with increasing vacancy, run-down spaces and a generally deteriorated urban environment, characteristics not very different from others which can be identified in shrinking cities (Couch *et al.*, 2005). The poor transportation accessibility and longer trips can, in turn, constitute spatial obstacles in the pursuit of economic opportunities, first and foremost for people relying on public transport. This sometimes-called “ugly” pattern of development is, in addition, considered as the cause of the decline of civic culture, and even obesity. Couch *et al.* (2005) highlight that urban sprawl exhibits combined low levels of eight dimensions: density, continuity, concentration, clustering, centrality, nuclearity, mixed uses and proximity. Almost all, if not all, of these dimensions are concepts which compose the base of the current generally acknowledged best practices in planning.

Nelson and Peterman (2000) note that in the past four decades growth management has been equated with growth control. Growth control seeks to limit growth, while growth management allows growth and seeks to alleviate its impacts, attempting to improve the ordering of development to improve outcomes. Even if only fairly successful, the

authors feel that communities engaged in growth management should out-perform other communities in overall economic output. Since the late 1990s the smart-growth movement emerged in planning theory and practice, driven by the rising concern that the established development pattern—growth and especially urban sprawl—is not in the long-term interest of cities. Nevertheless, urban shrinkage remains a sensitive matter when planning policies are concerned.

## 7. Final Discussion

Throughout this paper, we justified the view that shrinking cities or, in a broader sense, shrinkage, is a particular pattern of urban development, rather than a mere urban problem. As such, shrinkage constitutes an important planning matter that cannot be conveniently analysed in the light of most conventional planning theories and practices. Planning and growth have walked hand-in-hand since the industrial revolution, providing a misleading perception that the former is only justified by the occurrence of the latter. On the contrary, for a long time, there have been signs that urban growth is not limitless and closely correlated with urban development. Recent (and not so recent) events and findings corroborate these statements.

While the number of shrinking cities augment all over the world, making the phenomenon more evident for planners and decision-makers, it manifests the inability of most of the current policies, instruments and tools to deal with it. This can be explained by the fact that the general assumption behind them is growth. Additionally, most of the current planning policies, instruments and tools do not possess enough flexibility to adapt when the paradigm shifts, mainly because shrinkage has never been considered as being part of the equation. Most of the time, the solution found is to maintain growth strategies, with the expectation that in the end people will eventually return.

Another point we tried to make was that urban growth itself is not, in opposition to shrinkage, a perfect pattern or development goal. There have been criticisms towards growth, some emphasizing the inherent unsustainability of this goal, others focusing on some of the detrimental effects of the particular forms that growth seems to privilege, such as suburbanization and sprawl. If we take a look at the consequences of population decline we become aware of how they could be addressed as an opportunity within the context of urban and regional planning. There are apparent motivations to engage in planning for shrinkage when challenged in this way and not only reasons to feel menaced by it, but there is a need for a paradigm change (Jessen, 2006; Kabisch *et al.*, 2006; Audirac, 2007; Cunningham-Sabot & Fol, 2007; Pallagst, 2007; Wiechmann, 2008b; Rink & Kabisch, 2009).

Several authors suggest that population decline, stagnation or slow population growth leading to shrinkage, is not inevitably a problem, as we illustrate below. Generally, it is fair to say that while planning theorists and practitioners were busy trying to find ways to reverse shrinkage in order to get back into the growth pathway, much thought has not been put into shrinkage as a break to rethink planning and perhaps facilitate the solution of unsolved problems. Shrinkage has been an underrepresented topic (Rink & Kabisch, 2009). In addition, particularly in circumstances such as over congestion and overuse of natural resources, shrinkage policies may be necessary, and not only in population decrease circumstances.



Although this is the general attitude, Kabisch *et al.* (2006) argue that managing shrinkage is a chance for reshaping urban spaces and that urban policy-makers should feel challenged, not frustrated, by this type of urban development, which entails the replacement of the paradigm of growth in practice-related thinking and in developing new strategic goals for urban futures. Also in this view, Bourne and Rose (2001) assert that population decline is, thus, only a problem if it limits opportunities, increases unmet expectations, reduces public services and depreciates the quality of everyday life. Ahrens (2005) believes that to break shrinkage's causal chain, new and innovative solutions are needed to manage structural shrinkage processes.

Shrinkage implies (or it can imply) first and foremost a relief in pressures for growth. For instance, as argued by Bourne and Rose (2001), managing it may allow for regions and municipalities to catch up with the demands for new infrastructure and social services, and to address pressing environmental issues. Banzhaf *et al.* (2006) name it counter development, an opportunity to minimize the amount of further land consumption, to develop a different inner structure of a city, and to redevelop urban areas of residential vacancy and urban brownfields creating, for instance, new open spaces or planning densification projects. Reduced population densities can pose an opportunity to reshape from within, from the core out, in cases where central city decline is in place. In situations of random perforation, the loss of open space might be compensated through a strategy of deconstruction/naturalization. In this sense, sinking population density, vacant dwellings and derelict land present themselves as extraordinary changes in circumstances and an opportunity to deconstruct created situations, otherwise unthinkable.

This deconstruction, counter-urbanization or, as we prefer, managing shrinkage can also be an opportunity to restructure the relation between land use and transportation, as the traffic reduction caused by population decline can lead to apparently several (inconvenient, but mostly convenient) changes in transportation demand and supply (see Ahrens, 2005). Rybczynski and Linneman (1999) state that the challenge is clear: "Our cities must be radically redesigned to be both better and smaller".

Pertaining to urban policy, the main conclusion of Couch *et al.* (2005) is that in situations of urban decline it becomes easier for the planning system to control residential sprawl because of a low demand for housing and, therefore, less forceful attempts by developers to seek sites or planning permissions, although this is not linear. Rink and Kabisch (2009) are consistent with this argument, considering that shrinkage opens up a new perspective for the ecological debate, centred on the connection between the reduction of inhabitants and the use of resources or environmental pollution.

Strohmeier and Bader (2004) consider that the reaction to major and long-term demographic developments should not be pessimistic because population decline can be an opportunity as it can: open the way to renewal and modernization (e.g. in competition, in urban development revitalization); offer opportunities for quality improvement (e.g. in the residential environment, for open space quality and local recreation, as well as for neighbouring natural landscapes); and provide an incentive to mobilize the endogenous resources of regions (e.g. new economic sectors and initiatives). Leo and Anderson (2006) are quite realistic, arguing that most cities will not change their rate of growth appreciably, no matter what policies they institute, but that they can tailor their policies to capture the benefits of their slow or rapid rate of growth (and why not shrinkage), while minimizing the constraints.

## 8. Conclusion

The discussion brings us back to the opening title and the question of whether planning for shrinkage is a paradox or a paradigm.

We have demonstrated that, despite its bad reputation, shrinkage does not have only weaknesses; and even those seeming weaknesses open singular opportunities, not available in growth contexts. Conversely, growth has its setbacks, although this is not a popular argument in some arenas, mostly due to the fallacy around planning's role. Growth and shrinkage are not always good, or bad. Thus, we are faced with a false paradox. Planning for shrinkage is not counteracting public interest, but planning for growth is not always aiming at public interest either; it is a conditional process. At the most, the paradox associated with shrinkage is also valid in planning for growth, which, taken to the extreme, can eventually lead to disaster.

From a wider urban and regional planning perspective, shrinkage should signify a paradigm change not only from planning for growth to planning for shrinkage, but planning for development. The visions which underlie planning should excel growth. Therefore, visions of development should comprise growth and shrinkage, and others. The opposing belief has limited planning's action. Moreover, one may plan for shrinkage in conditions of population growth, and one may plan for growth in conditions of population decrease, provided this is the realistic thing to do and bearing in mind the available resources in each case.

As from a classical perspective, planning should be guided by, and continuously adjusted to, an "ideal vision", maximizing positive effects and minimizing negative effects, in a dynamic balance. Obviously, the balance changes with more learning and further knowledge. Planning should be flexible enough to adapt. Unfortunately, so far, it is not quite there.

## Notes

1. There are 150 cities in the US that match these criteria, representing a total of 7.4 million people.
2. This delimitation allows the inclusion of the effects of suburbanization which in many cases has led to the shrinkage of cities with concurrent growth at the periphery. In this connection, the consequences of shrinkage for the inner city can hardly be distinguished from those places whose metropolitan areas are also shrinking.
3. In the new German states, for example, studied by Ahrens, about one million flats are already vacant.
4. Nevin *et al.* (2004) refer to the M62 corridor running between Merseyside and central Manchester and beyond.
5. Mäding (2004) refers to German municipalities already engaged in fierce competition for residents for financial reasons. He believes that as the population as a whole decreases, the tone of that competition will certainly increase.
6. As a result of the differential age structure of the German and non-German populations, most of the population in North Rhine-Westphalia cities will in the near future come from an immigrant background even if no further immigration takes place (Strohmeier & Bader, 2004).
7. Although, in the past, suburbanization and urban sprawl occurred primarily in conditions of growth, partial or selective suburbanization processes can occur in conditions of shrinkage (Müller & Siedentop, 2004; Couch *et al.*, 2005; Hesse, 2006).

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