Discursive framings of low-carbon urban transitions: the contested geographies of 'satellite settlements' in the Czech Republic

Abstract

The discursive and representational aspects of the multiple political, economic and cultural challenges associated with low-carbon urban transitions remain insufficiently explored in the academic literature. This is particularly true in the post-communist states of Eastern and Central Europe (ECE), which have been undergoing an additional transition of their own – from a centrally-planned to a market-based economy. This paper, therefore, explores the manner in which climate change and sustainability narratives have been implicated in the development of 'satellite settlements' – a specific form of sprawl present in the Czech Republic. Much of the paper is focused on investigating the discursive framings of such areas by relevant state policies and the national media in this country. We have detected several key themes and discursive shifts in the representation of satellite settlements, which may be connected to wider interactions among the dynamics of post-communist and low-carbon urban transition.

Keywords: low-carbon transitions, climate change, cities, discourse, Eastern and Central Europe

Introduction

The multiple mechanisms through which identity narratives and regimes of urban governance are implicated in the framing of climate change mitigation policies across the world are gaining increasing attention in the academic literature. There is a growing realization that low carbon transitions cannot be divorced from the sphere of the political (Swyngedouw, 2010), particularly in relation to processes of identity-building, dissent and citizenship (Davidson, 2010; Bouzarovski and Bassin, 2011). Scholarship in this field has focused on the nature of the power dynamics and ideologies implicated in the rise of 'carbon control' (While et al., 2010) as well as the systems of signification utilized in the propagation of climate change mitigation technologies (Boykoff, 2007; Weingart, 2010). This adds to the wider body of work on climate change mitigation and energy sustainability in cities, where it has often been emphasized that socio-technical change at the urban scale is predicated upon the functioning of multiple and often conflicting decision-making portfolios (Bulkeley et al., 2011).

However, mainstream theorizations of urban energy transitions have rarely communicated with the literature on the discursive production of climate change mitigation policies. It remains unclear how narratives of decarbonization, in particular, are implicated in the rise of governance frameworks in cities. This is particularly true in the case of regions that have undergone or are currently undergoing non-climate change mitigation-related processes of systemic transformation; the present 'transition' to a low carbon economy has rarely incorporated knowledge about the experience of such 'other' processes of transition. There is evidence to suggest that the dynamics of path dependency, embeddedness and evolutionary change (Sýkora 2008; Sýkora and Bouzarovski, 2012) in such contexts may yield important insights into the kinds of policy challenges and systemic

lock-ins that may be faced by decision-makers attempting to bring about climate change mitigation-related transitions.

The post-communist states of Eastern and Central Europe provide a particularly relevant subject of study in this regard, thanks to the rapid political, economic and social transformations that they have experienced in the past 20 years, accompanied by a simultaneous hybridization of regimes and institutions. These states have undergone multiple transitions – including one from a centrally planned economy to a market based one, and another from a centralized and inefficient energy regime to a more sustainable and less carbon-intensive one. The situation in the Czech Republic, in particular, is emblematic of such processes – in terms of both the far-reaching nature of its economic reforms, and the extent to which it has transformed its energy sector. Its capital Prague stands out as being at the heart of one of Europe's highest per-capita-GDP regions (Horak, 2007).

This paper, therefore, explores the different ways in which political, cultural or ideological interests expressed in the form of policy-oriented narratives at different scales might have influenced contemporary socio-spatial trends in post-communist cities. We focus on the phenomenon of 'satellite settlements': exurban residential developments which emerged as a result of the unbridled process of suburbanization and residential sprawl that engulfed the Czech Republic since the fall of communism in the early 1990s (Sýkora and Ouředníček, 2007). Having anecdotally observed a marked shift in the public perception of these phenomena during recent years, the primary aim of the paper is to investigate the manner in which climate change and sustainability discourses have been implicated in the development of satellite settlements.

The empirical explorations that we undertake in the paper are predicated upon the tenets of critical discourse analysis, which posit that 'discourse is an irreducible part of reality' (Fairclough, 1999, p. 72). Commonly understood as a system of statements and practices that defines meaning and reasoning (Hall, 1997), discourse is a central component of the initiation and articulation of socio-spatial change. The power entanglements embedded within, and arising out of, spatial discourses and representations create dynamic territorialities that are infused with a mixture of knowledge and ideology (Lefebvre, 2001).

The wider purpose of the paper is to scrutinize the extent to which lessons learned from the post-communist transformation can also be extended to low carbon transitions as such. Having concluded that the transition experience of post-communist cities is rarely invoked in discussions about the political decisions and policy steps associated with other urban transitions, we argue that the knowledge about the discursive production of path-dependency, lock-in and path shaping – processes which are evident in many Eastern and Central European cities over the past twenty years (Grabher and Stark, 1998) – can also be used in theorizing the movement towards a low-carbon urban and regional system. Considering that geographers have widely insisted on the use of the concept 'transformation' to encapsulate post-communist restructuring (Smith and Pickles, 1998), we ask whether there should be an equivalent move to challenge the conceptual foundations of current low-carbon socio-technical transitions.

Methodologically, the paper is based on a survey of regulatory acts and policy documents, as well as 22 expert and decision-maker interviews undertaken in 2011 (including representatives of a range of NGOs, private companies and state institutions). We have also analysed 158 news articles from three leading Czech daily newspapers, selected based on the presence of the words 'satellite settlements' and 'suburbanization' in their headlines or body text. Insights from critical discourse analysis have been used to explore the rhetoric that has been used to describe the meanings and practices associated with satellite settlements. Developing further the distinction among 'social practice', 'discursive practice' and 'text' formulated by Fairclough (1992), we wish to explore the embeddedness of the analysed texts within 'systems of production, distribution and consumption' (Rogers-Hayden et al., 2011, p. 135) which are themselves contingent upon 'the larger historical, political and social context' (ibid).

Understanding post-communist suburbanization

The political, economic and environmental dimensions of contemporary post-communist urban transformations have been widely studied by social scientists. Much is known about the policies that shaped the rise of the specific urban imprint of the centrally planned economy. They stemmed from the almost complete dominance of the state in planning and implementing urban development, coupled with the lack of a functioning housing market (Kostelecký and Čermák, 2004). Without wishing to reiterate these arguments and findings further (but see, for example, Sailer-Fliege, 1999; Stanilov 2007; Brade et al., 2009) it is important to point out that central planning bestowed ECE cities with a specific territorial distribution of built structures, cultural expectations and economic activities. For example, housing policies were primarily focused on the spatially concentrated construction of large housing estates – generally on the outskirts of inner cities – which attracted the bulk of state investment during communism, accompanied by the disinvestment in historic inner city areas.

The legacies of this spatial order became apparent after the fall of communism, when it influenced the rise of new patterns of socio-spatial differentiation. In most ECE states, the post-communist transformation was marked by the liberalization of real estate and land prices, alongside the privatization and restitution of the housing stock (Sýkora and Šimoníčková, 1994). However, as pointed out by Young and Light (2001), the post-communist transition was not just a series of political and economic reforms: it also included changes to culture and identity practices. Shifts in the economic and social fabric of everyday life were associated with the rise of a new set of expectations and aspirations. Many of these transformations occurred under the influence of an emergent set of spatial narratives and discourses that conceptualized the working class inhabitants of inner city areas as passive and 'feckless' (Stenning, 2005). Such framings often suggested that built-up inner-city districts and communist housing estates faced the danger of stagnation, even possibly becoming 'slums' of the twenty-first century (Szelényi, 1996). At the same time, suburban and individual family living was being portrayed by developers, real estate agents and media advertisements as a 'dream', offering an escape from the socially mixed and crowded conditions of the inner city (Nuissl and Rink, 2005). The notion of returning to a natural environment unspoilt by the ideological and industrial legacies of communism was also present here, alongside the presumed cleanliness and peacefulness offered by the suburbs. Such representations conveniently chimed in with the ethic of

individualism, entrepreneurship and self-reliance that permeated the neoliberal economic policies advocated by most ECE governments.

In this context, it should be pointed out that the collapse of communism in ECE brought about a new wave of environmental awareness and public recognition of the importance of sustainable development. This was, in part, a reaction to the legacies of environmental pollution produced by decades of central planning, particularly in cities (Hoffman and Musil, 2009). Yet the economic crisis of the 1990s meant that achieving economic growth and creation of jobs took precedence over issues of environmental sustainability. It was frequently pointed out that the successful implementation of environmental policies and regulation would be hindered by the desire to move towards a free market, especially in terms of governing the spatial distribution of human population movements, settlement patterns, and economic activities (Musil, 1992). This is despite the fact that environmental movements had been gathering momentum throughout ECE since the mid-1980s (Sarre and Jehlicka, 2007), and there was a general expectation in 1990 that the post-communist transition would lead to the improvement of urban environmental conditions.

As the post-communist transformation progressed, the environmental implications of suburbanization dynamics gradually started to gain the attention of the public and experts alike. It was pointed out that sprawl is present in areas where the quality of environmental amenities is high (Nuissl and Rink, 2005) which itself suggested that suburbanization was leading to the deterioration of attractive physical environments at the urban outskirts. Indeed, Ott (2001) has argued that the ability to own a car – thus becoming more mobile post-1989 – was a key aspect in the growth of suburban and exurban settlements.

The last decade has seen the rise of gentrification and reurbanization in many ECE cities, as a complementary process to suburbanization (Buzar et al., 2007). Despite the existence of a significant body of academic research into the diverse dimensions of post-communist urban change – including the social and spatial imprints of suburbanization – a number of questions remain unanswered. Very little is known about the manner in which ideological, discursive and political imaginations of urban development have been implicated in the production of post-communist suburban cityscapes. The need for undertaking context-sensitive research in this domain is particularly prescient in light of the findings by authors such as Ürge-Vorsatz et al. (2006) who have emphasized the immense reductions in energy intensity achieved by many ECE countries during the post-communist transition. Such authors have identified the disproportionately high use of public transport, the existence of compact settlement patterns and the extensive development of district heating networks – all of which can be attributed, in part to the nature of land-use planning and allocation before 1990 – as some of the 'positive' environmental legacies inherited by postcommunist countries in their energy use patterns.

The outcomes of recent scholarship in the field inevitably raise the question as to whether ECE's experience of deep structural reforms in the movement from a one-party, centrally-planned economy to a politically pluralized market democracy can also be useful in formulating the policies necessary to move towards a low-carbon system of production and consumption elsewhere in the world (noting, nevertheless, that various authors – such as Stenning and Hörschelmann, 2008 and Smith and

Timár, 2011 – have questioned the utility of universalizing accounts of post-communist transformations). More specifically for the region, it remains unclear to what extent processes such as suburbanization and sprawl are decreasing the environmental sustainability of energy use, particularly in light of the transport and land-use legacies recognized by Ürge-Vorsatz et al. (2006).

Multiple transitions in the Czech urban and energy system

The twin challenges of carbon reduction and post-communist restructuring have occupied a key space in the polity of the Czech Republic: a country that has generally been considered as a leading 'reformer' in the ECE context, due to achieving a swift and relatively effective transformation of its economy along neoliberal lines in the early 1990s. As such, the Czech Republic has diverged from its neighbours to the east – particularly Former Soviet Union republics – which have retained much more clientelistic and state-driven systems of control over economic and political relations, while resembling the EU member states in Central Europe and the Baltics.

In spatial terms, the establishment of a market-based system in the allocation of land has heralded the gradual disintegration of the communist urban development model. These processes have led to dynamics of population deconcentration and outmigration from inner city areas, accompanied by the emergence of residential sprawl at the urban outskirts. They have been further fuelled by the increasing commercialization of urban cores as a result of the privatization and restitution of the housing stock (Sýkora, 1999). Such developments have been particularly pronounced in Prague – one of the most prominent capital cities in Central Europe, and a central gateway for foreign investment entering the region (Drbohlav and Sýkora, 1997). Thus, the population in the 'suburban zone' of Prague increased from 140,000 to 210,000 between 1991 and 2010, even though the population of the city itself increased by only 40,000 people during the same period (Stanilov and Sýkora, 2012). Between 1989 and 2008, the total amount of land covered by single-family housing in the suburban zone increased by 2,592 hectares, as opposed to 521 hectares in the city itself (ibid).

Expert accounts of the rise of suburbanization and exurban sprawl in the Czech Republic argue that this phenomenon was also supported by the extensive decentralization policies pursued at the start of the post-communist transformation process. The reforms undertaken during that time resulted in the granting of a significant amount of authority to local governments over a range of spatial and economic management issues (Horak, 2007). As a result of this process, municipalities are now responsible for schooling, public transport, roads, sewerage and water purification, as well as the governance of healthcare facilities and emergency services. Local governments also have the power to own real estate and administer their own budget; they collect taxes in order to help carry out these responsibilities (Lacina and Vajdová, 2000). As a result, local authorities have been keen to attract the construction of satellite settlements by relaxing planning regulations in the areas that fall under their remit.

The Czech Republic's political determination to move towards more effective local government is also evidenced by the fact that Prague was one of the first ECE cities to revise the plan inherited from communism. Following the implementation of a range

of revisions to this document in 1994, the city adopted a new master plan in 1999 (Sýkora, 2006). Being a zoning plan, this document only described the territorial boundaries of various urban functions, rather than the specific objects that would be located in it. It determined which areas that would be dedicated to parks and recreation spaces, residential housing, commercial developments, transportation arteries and other public infrastructure projects. Although the plan was anticipated by investors and local governments for a long time, its adoption was far from smooth. A range of NGOs and other civil groups were loudly opposed to it, citing concerns over the plan's prioritization of automobility over other means of transport (it did little to discourage the construction and use of urban motorways skirting the historic core of the city) as well as the lack of transparency and public engagement in its formulation:

'Not only were citizens effectively prevented from participating in developing the zoning plan, but the city's bureaucrats in essence made decisions regarding the city's future that should have been left to the city councillors elected for this purpose' (Beckmann, 1999, p. 3).

The importance of regulating the process of suburbanization is accentuated by the expansion of non-residential sprawl at the urban outskirts, often in the form of large retail centres in the immediate proximity of key transport nodes; warehousing, distribution and even industrial uses are also present (Sýkora and Ouředníček, 2007). As for residential sprawl, even though the availability of public transport links was initially thought to be of crucial importance in determining the locations of its settlement patters, more recent research has indicated that this might not be the case (Stanilov and Sýkora, 2012).

Planning issues aside, it should also be pointed out that the Czech Republic has developed an extensive policy framework to move towards more efficient energy consumption practices. These have resulted in significant improvements of the intensity of energy use, especially in residential buildings (see Ürge Vorsatz et al., 2006). The country's energy sector was radically reformed in the early 1990s, when most of the energy industry was removed from state control by unbundling and privatizing utility companies, while liberalizing energy markets. The current legal framework in this domain is largely a result of the State Energy Policy, adopted in 2004. One of the key legislative components of the Czech energy sector is the Energy Management Act, which set the standards for energy efficiency and energy auditing obligations. Climate change issues are mainly the subject of the Climate Protection Policy and the Act on the Promotion of Production of Electricity from Renewable Energy Sources, which entered into force in 2005.

Policies in this realm are, in part, a result of the Czech Republic's Kyoto commitments, otherwise ratified in 2001. They have been extensively supported by the EU accession process, which has driven the implementation of various national standards, legislative provisions and state-sponsored programmes in order to meet the requirements of energy efficiency and building performance directives. As a result, the state has offered a wide array of energy efficiency support instruments, supporting the insulation of individual and collective apartment buildings, the replacement of household appliances and heating systems, and the implementation of small scale renewable energy initiatives (IEA, 2005). Funding for energy saving projects has been sourced via the operational programmes of the Ministry of Trade and Industry, as well

as the Ministry for the Environment; in turn, these have often been funded by the European Regional Development Fund and the Cohesion Fund.

The structure of the housing stock has also aided the implementation of large-scale energy efficiency programmes. As pointed out by a key planning expert in the country:

'Possibly two thirds of the stock in Prague have been insulated ... The decrease of energy consumption especially in winter is very dramatic, I estimate that it could be as much as 40 per cent' (Interview held on the 31st of January 2011).

It is also worth noting that the Czech Republic also has an advanced framework of local energy strategies and plans. Their development was foreseen by the 2000 Energy Management Law, with the aim of serving as a basis for the planning of municipal energy infrastructure and services – particularly in the domain of energy savings and consumption – and integrating spatial and energy policies at the local level. The legislators' intention was to create a series of mutually complementary frameworks that would resonate each other at different levels of governance, while operating via a range of policy approaches and frameworks. In the case of Prague, a Master Energy Strategy has been in existence since 2003. Its main declared aims include the 'insurance of reliable, good quality and financially accessible energy services by strengthening the existence of an effective competitive environment, while contributing to the development of the city' and the 'limitation of the negative environmental impacts of energy consumption' (Hlavní Město Praha, 2006). The Strategy's central priorities include 'the establishment of principles of urban energy development in a transparent and non-discriminatory manner for investors and consumers alike' and 'connect requirements and practices in the construction of new, and the reconstruction of existing, energy sources' (ibid). Other primary concerns refer to 'achieving savings in the construction, transport and use of energy' and 'increasing the use of renewable energy sources'.

The creation of such an elaborate policy framework to guide the sustainability of energy policies in Prague – and the Czech Republic more widely – is a good indicator of the increased awareness about sustainable development among policy-makers and the public alike. While the link between urban form and energy use has still not been made in the relevant energy planning documents, it is worth noting the prioritization of sustainable transport, urban compactness and controlling suburbanization in the new Master Plan. At the same time, the presentation of all such frameworks is accompanied by a strong emphasis on transparency and inclusiveness. In their entirety, these trends signal a discursive and ideological shift from the policies and approaches of the early 1990s.

To summarize, therefore, post-communist developments in the Czech Republic exemplify many of the urban trends seen in ECE states that have joined the EU: extensive suburbanization, deconcentration and land-use deregulation against the background of far-reaching market reforms, and the establishment of numerous policies – operating at a range of spatial scales and sites of governance – to support the movement towards more sustainable patterns of energy consumption.

Media rhetoric in support of exurban and suburban development: key themes

As was pointed out above, our explorations of the discourses used to frame the climate change-related dimensions of suburbanization in the Czech Republic were aided by an investigation of the content of 158 news articles in three of the most widely circulated Czech daily newspapers. It should be emphasized that this is just a sample of all suburbanization- and satellite community-related material in the given publications, as we observed that other terms (such as 'village additions' and 'urban flight') are being increasingly employed to describe such phenomena. Still, it was felt that the procedure that we adopted would help us form a standardized and comprehensive overview of the language and ideas that are used to describe exurban sprawl in public discourses at the national scale, given the pervasive nature of the 'satellite settlements' concept, alongside the term 'suburbanization'.

The overwhelming majority of the surveyed articles (a total of 115, or 73 per cent) were published in the centre-right *Mladá Fronta Dnes*; we found a further 37 (23 per cent) in *Lidové Noviny*, whose political and ideological orientation is considered to be similar. The search of the more economically-focused *Hospodářské Noviny* only produced 6 relevant articles (4 per cent). Despite often consisting of fact-based reporting, many of the surveyed articles featured the voices of those implicated in, or affected by, the construction of satellite settlements. Most of the coverage was concentrated in several distinctive 'clusters' throughout 2007 and 2009, as well as 2005 (see Figure 1).

Insert Figure 1 about here.

The articles did not, broadly speaking, editorialize or take an overtly biased stance towards the issue; they often provided general statistical information about sociospatial trends and house prices, or reported on developments associated with areas where satellite settlements either have or are about to appear. Nevertheless, judging from the nature of the commentary accompanying the reporting, or the balance of provs. anti-satellite settlement quotes in the articles, we concluded that approximately 36 per cent of the articles were generally negatively inclined towards the phenomenon, while 22 per cent represented it in a positive light. At the same time, 41 per cent of the sampled coverage took an overall neutral or balanced viewpoint. News items that took a more critical tone were more represented in recent years (see Figure 2). Articles featuring quotes by local officials dominated the sample, followed closely by experts and local residents (see Figure 3); other groups, such as business people and NGO activists received significantly less coverage. Experts and scientists were most often cited within articles that took a negative stance, followed by local residents and officials; the reverse was found to exist in the case of positively-inclined items (see Figure 3).

Insert Figure 2 about here.

Insert Figure 3 about here.

Overall, we identified nine key themes in the articles (see Figure 4). Within the discourse explaining the rise of satellite settlements, the suggestion that they allow local residents to 'live closer to nature' dominated the corpus, followed by

explanations that attributed their expansion to the need for housing which 'avoided the congestion of the city', while lowering construction costs. Some of the arguments that were used within the rhetoric favourable to satellite settlements were outlined by a demographic expert who was quoted within an otherwise fairly neutral article:

'People are looking for better living, closer to nature and a more picturesque environment. They are attracted by cheaper land and can afford it partly because they are now more mobile ... These are mainly people with a better education and higher incomes ...' (*Mladá Fronta Dnes*, 21st of September 2007).

Insert Figure 4 about here.

In a significant part of the sample (particularly the more recent coverage) we detected articles that were positively inclined towards the broader process of suburbanization, despite portraying satellite settlements in a negative light. The same arguments that were employed in the support of exurban sprawl during the 1990s were also present in this discourse. The only difference is that they were accompanied by an insistence that new developments are of a suburban rather than an exurban character, by being accommodated within the boundaries of the existing settlement framework:

'The surroundings of the project will offer a landscaped area, located amidst peaceful countryside and nature ... The project plot is just next to the Horoušany municipality and thus the new buildings and their necessary installations are part of the already existing municipal infrastructure.' (*Mladá Fronta Dnes*, 30th of April 2010).

In line with the movement towards 'sustainable' suburbanization, the recent media rhetoric also stressed the future connectivity of out-of-town housing with public transport infrastructures:

'The route of the planned line D will not have to end at the borders of the capital. Planners are thinking that it might lead to central Bohemia, and connect the metropolis with the new satellite towns that are emerging around Prague' (*Mladá Fronta Dnes*, 22nd of September 2010).

Articles from the earlier part of the sample were much more overtly supportive towards the dynamics of exurbanization, sometimes even purposely emphasizing the ability to access public transport links, however tenuous, in some of the newly-built developments:

'A satellite settlement with family houses is growing west of Prague ... The buses number 308 and 311 connect the settlement with Prague's metro line B in Zličín' (*Mladá Fronta Dnes*, 13th of July 2005).

We also observed an attempt to employ energy sustainability arguments in favour of suburbanization. Several articles underlined that some of the new settlements would use the latest renewable energy technologies, while being built to high energy efficiency standards. The construction of satellite settlements was thus represented as a step towards moving in the direction of zero-carbon and energy self-sufficient

communities. One report cited the mayor of a municipality interested in such measures:

'We are going to prepare a strategy for the usage of renewable energy sources – such as solar and bio-gas – together with a marketing study for their preparation, revision and additions' (*Mladá Fronta Dnes*, 5th of September, 2005).

Most of the narratives aiming to interpret the proliferation of satellite settlements attributed this phenomenon to the fact that municipalities around large cities — especially Prague — were keen to attract urban development and local inhabitants in order to increase their tax base. The mayor of a village in the south of the country was quoted in the following manner:

'Our municipality is dying. Once there were 1200 inhabitants, today we have 650 ... We have to make efforts to develop Rozstání, there is no other option' (*Mladá Fronta Dnes*, 6th of January 2009).

Many local officials complained that municipalities failed to gain tangible benefits from exurban developments in situations where their inhabitants maintained their previous addresses as primary places of residents:

'Officially our municipality numbers around 1100 inhabitants, but I believe that the real number of people living here is around 1500 or 1600. It is the same everywhere, and that is why the suburban areas suffer' (*Mladá Fronta Dnes*, 24th of October 2010).

When exploring the temporal distribution of local authority quotes in favour of satellite settlements, we observed that positively-inclined quotes almost disappeared in recent years. They were replaced with increasing – albeit varying on a yearly basis – number of local authority voices against satellite settlements.

Discursive contestations of satellite settlements

The overall critical mood towards satellite settlements that we detected in the interviews with decision makers and experts was reflected in the changing tone of the coverage: a significantly greater number of articles in 2009 (constituting 53 per cent out of the total published in that year) were characterized by a predominantly negative tone, in contrast with a yearly average of 35 per cent in previous years (see Figure 1). Academic and policy experts constituted one of the most vocal constituency in the selected press's portrayals of satellite settlements. The presence of this group was particularly visible in critical discourses towards such areas, particularly in settings emphasizing the lack of organic growth and urban functions in them (this was one of the key themes detected in the corpus – see Figure 3). An editorial piece written by a well-known architect exclaimed that:

'Experience has shown that architects and urban planners an increasingly minor role in these developments. Local councillors, developers and technical consultants have a much stronger say' (*Mladá Fronta Dnes*, 1st of September 2006)

Environmental and spatial planning problems were among the most common reasons for the experts' disapproval. Especially prominent were concerns centring on the lack of public transport infrastructure and services in satellite settlements, and their residents' need to rely on cars. An architect was quoted as follows:

'Because only a few satellite settlements are connected with the public transport network, their residents drive cars all the time and thus have bigger negative impacts on the environment than the city people who use the metro' (*Lidové Noviny*, 11th of December 2009).

The views of officials whose remit was affected by suburbanization or exurban sprawl were also quoted on this context. The director of a protected area at the boundaries of a proposed satellite community was quoted as saying that:

'There is no nursery or school in the Bubovice municipality, there is a lack of a water supply system, as well as a wastewater treatment system. There is not even sufficient energy input' (*Mladá Fronta Dnes*, 5th of February 2005).

In 11 per cent of the corpus, we also detected dissatisfaction being voiced over a range of local participation issues; incoming populations did not feel that they were being adequately listened to by local officials:

'Who should we complain to? The authorities don't take us seriously' (*Mladá Fronta Dnes*, 28th of June 2005).

Even though much of the coverage centred on the locational and residential advantages offered by satellite settlements – in addition to the new local governance issues raised by them – environmental themes were also present in the surveyed articles. In particular, and as noted above, the various socio-spatial and economic problems arising from the overreliance on automobiles and the lack of public transport access were a common feature of the reporting. Some of the more recent articles even branded living in a communist housing estate as 'environmentally sustainable', while alluding to climate change and global responsibility (*Lidové Noviny*, 9th of December 2009). The availability of public transport, lower heating costs in compact structures and the higher density of habitation were singled out in this regard. The surveyed articles also emphasized some of the additional environmental impacts of exurban sprawl (a theme present in 14 per cent of the articles – see Figure 3), which may influence local adaptive capacity to the adverse impacts of climate change:

'The construction is mainly "eating into" agricultural land ... landscape fragmentation does not only have negative impacts on animals ... the barriers can stop or at least suppress the spread of diseases or fires' (*Lidové Noviny*, 15th of December 2009).

The poor energy efficiency of some of the housing in satellite settlements was the least significant issue in the textual corpus (see Figure 3). This confirmed the statements made by our interviewees, who thought that thermal efficiency standards were poorly respected in much of the initial build:

'A big part of the houses built by developers in the satellite settlements are very energy demanding, often built with poor quality' (*Mladá Fronta Dnes*, 7th of April 2006).

Overall, the surveyed coverage did not paint a uniformly supportive picture for the construction of satellite settlements in the Czech Republic. The numerous controversies and difficulties resulting from the expansion of this phenomenon were frequently underlined and explored by the press, despite the fact that a positive slant could be detected throughout the reporting. This was particularly true in 2005, which may have been the tail end of the favourable coverage that was associated with the expansion of exurban sprawl in the 1990s. It doubtless affected the way in which residents from both the suburbs and city centre perceived satellite living throughout the 1990s.

Conclusion

The limited extent of the data we have gathered makes it difficult to establish a direct causal link between the emergence of particular cultural aspirations and values in the rhetoric used by the media and the expert public, on the one hand, and the expansion of satellite settlements, on the other. Nevertheless, we have noted the growing importance of environmental concerns in the framing of these phenomena, and the key roles of local actors in their rise during the post-communist transition. Such contingencies might have contributed to the recent crystallization of a visibly critical attitude towards satellite settlements among the expert public and the media alike. This discursive shift means that the phenomenon is no longer represented in a generally favourable light in the press, especially in terms of its environmental dimensions. Even though the underlying values that led to the emergence of satellite settlements in the first place are still present, they are now often being packaged within a narrative that attempts to accommodate their climate change implications within a newly-found concern about the environment, by emphasizing the high energy efficiency of new homes, their reliance on renewable energy, and the proximity to public transport links.

Following the approach developed by Rogers Hayden et al. (2011), it is possible to place six of the discursive themes we identified (exurban municipalities attempting to attract population and funding, the developments represent suburban rather than exurban expansion, they allow their inhabitants to live closer to 'nature' and avoid the congestion of the city, while offering lower building costs) in the 'hegemonic' discourse implicated in the rise of this phenomenon, with the remaining six (mainly linked to the lack of services and local participation in the areas, as well as their negative environmental impacts) in what can be termed a 'counter-hegemonic' discourse. Even though the latter is more represented in the study sample than the former, our consideration of institutional and political contexts led us to place the hegemonic discourse in the category of activities pursued by institutionally powerful actors: in particular, municipalities and developers operating at the fringe of metropolitan areas, which have been deeply involved in the production of satellite settlements. The existence 'discourse coalition' (Bulkeley, 2000) between these actors and the national press, it can be argued, helped drive exurban sprawl in the 1990s. The realization that satellite settlements are forcing Czech cities and regions into an

infrastructural and social lock-in might have contributed to a shift in both the discourse used in the context of such phenomena, and the declarative goals of national policy frameworks. Yet it remains unclear to what extent the stronger focus on environmental sustainability will translate into real-life action, given that the underlying values that drove the population deconcentration process have not changed.

In a broader sense, exploring the relationship between climate change-related discourses and post-communist suburbanization has emphasized the key role played by local authorities in voicing narratives that can mould urban and regional policy decisions at critical economic and political junctures. Extrapolating these experiences from the post-communist transformation to wider low-carbon and energy transitions suggests that change is most effectively enacted not by experts, but rather local people and municipal governments. At the same time, however, the multiple frictions that have characterized the urban restructuring process in ECE, coupled with the diversity of reform outcomes and paths, challenge the unitary logic of low carbon transitions as such. It has become evident that post-communist urban restructuring does not follow a single or predetermined path of change in relation to low carbon concerns: it is a the v. change th. erests. contested and messy process, in which the versatility of language and narrative can mask the key actors' unwillingness to change the political-economic fundamentals of government policies and business interests.

Acknowledgements:

To be added.

Figure captions:

- Figure 1: Temporal distribution of the articles in the sample (n=158)
- Figure 2: Temporal distribution of news articles judged to be inclined favourably towards satellite settlements (light shading) vs. those with predominantly critical coverage (dark shading) (n=92)
- Figure 3: Proportions of articles citing key interest groups, disaggregated by the tone of coverage (light shading = favourable coverage; dark shading = critical coverage; note that there might be overlaps among groups; n=158)
- Figure 4: Proportions of articles featuring one of the nine discursive themes identified within the textual corpus (note that there might be overlaps among categories; n=158)

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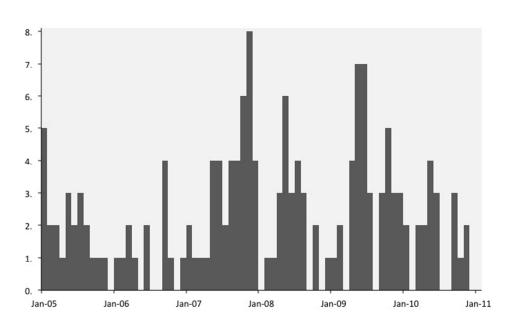


Figure 1: Temporal distribution of the articles in the sample (n=158) $242 \times 148 \text{mm}$ (72 x 72 DPI)

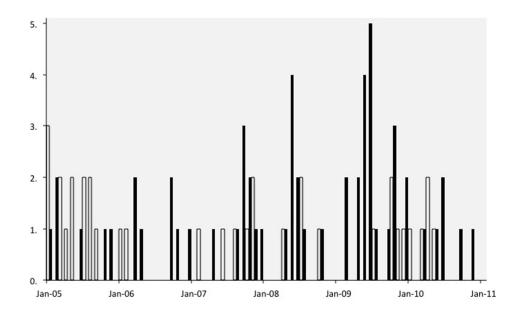


Figure 2: Temporal distribution of news articles judged to be inclined favourably towards satellite settlements (light shading) vs. those with predominantly critical coverage (dark shading) (n=92) $242x148mm \; (72 \; x \; 72 \; DPI)$

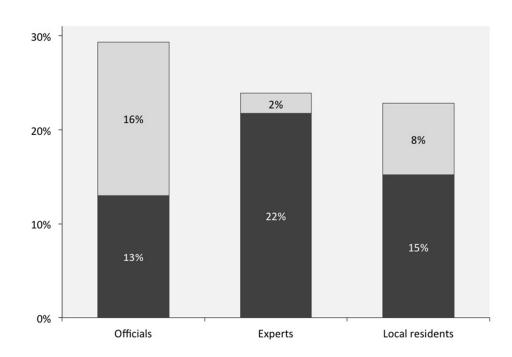


Figure 3: Proportions of articles citing key interest groups, disaggregated by the tone of coverage (light shading = favourable coverage; dark shading = critical coverage; note that there might be overlaps among groups; n=158) $284 \times 203 \text{mm} (72 \times 72 \text{ DPI})$

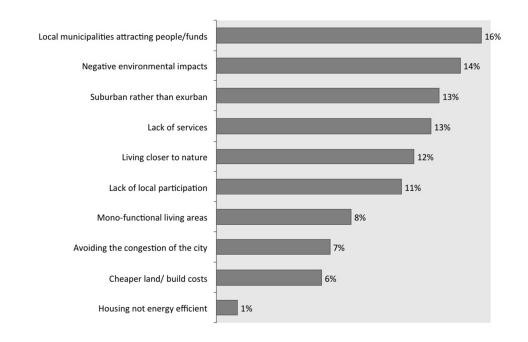


Figure 4: Proportions of articles featuring one of the nine discursive themes identified within the textual corpus (note that there might be overlaps among categories; n=158) $350 \times 236 mm (72 \times 72 DPI)$