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Spatial myopia: sustainability, urban politics and Malmö city

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ABSTRACT

When cities in the global north are considered environmental sustainable, this largely depends on how one measures emissions and understands space. Production-based and consumption-based approaches are two different ways of measuring emissions, but they are not simply measuring techniques: they relate also to different interests, they hide and reveal power relations, and they come with very different spatial implications. In this paper, we examine the Swedish city of Malmö, and the city district of Western Harbour in particular, which is often considered an environmental 'role model'. We argue that this reputation depends precisely upon how we understand space and measure emissions. We argue that so-called sustainable cities and city districts in the global north can only be considered environmental role models if one chose to ignore the fact that they completely depend upon emissions being emitted elsewhere, and ignore any relation between affluence and emissions.

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1. Introduction

As problems following from global warming and climate change are escalating, much focus in urban studies has been directed towards how cities can contribute in 'solving' the problems. This is reasonable as a majority of the global population lives in cities and this is where many economic and social activities are located. But how, and to which degree, cities are part of the solutions is a complex matter. It depends to a large degree, of course, on the politics that are conducted in cities, but also – which is the main focus in this paper – how we understand space, which is linked to how we measure emissions.

Concerning how to understand space, there is a tendency to focus on the spatial scale that favours one own interest, and regarding urban policy in the global north this means focusing on emissions from the particular territorial area of one's own city or neighbourhood. As cities have transformed from industrial fordist cities to post-industrial neoliberal cities, the emissions coming from within the city borders have often decreased. To what degree these cities have

become the environmental role models they often present themselves as, depends on how one measures emissions. To measure only the emissions produced in one specific territorial area is called a production-based perspective. However, as cities in the global north are completely dependent upon industrial production elsewhere, we argue in this paper that we also need to include a consumption-based perspective. In such calculations, one calculates the emissions 'caused' by the commodity as belonging to the country/region/city where it is consumed, not where it is produced.

We argue that both ways of measuring emissions should be conducted in order to grasp the broader picture. However, it is not a coincident that cities in the global north tend to use production-based numbers. As this normally shows decreasing emissions, one can legitimise current power relations, and also make the richest people in our cities appear to be the 'most environmentally friendly'. We call this selective view on how to measure emissions in order to serve their own interests, for spatial myopia.

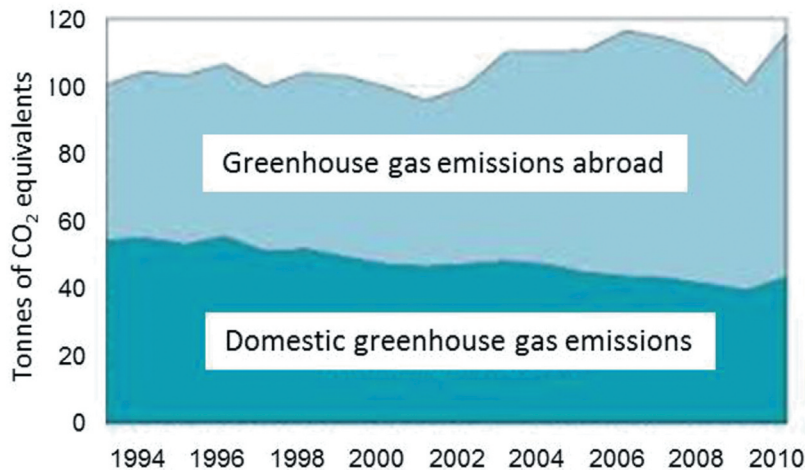


Figure 1. Image of Swedish GHG emissions based on a production perspective and a consumption perspective (Hult and Larsson, 2016).

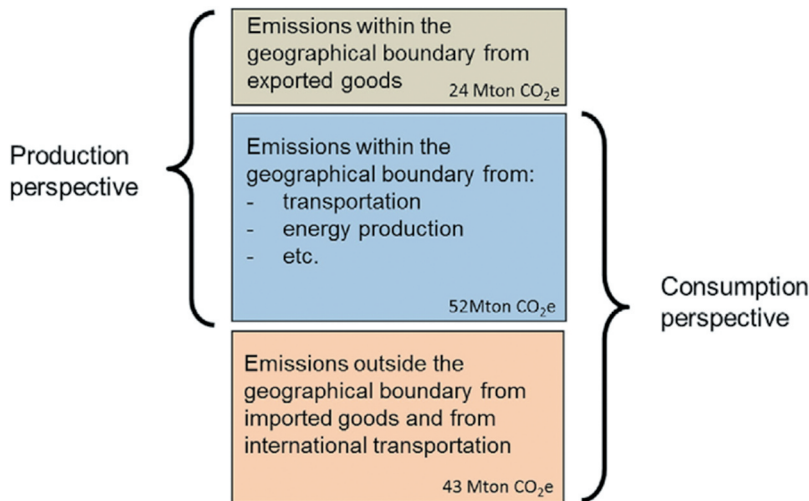


Figure 2. Image of what is included in the production perspective and the consumption perspective of emissions (Hult and Larsson, 2016)

Consumption-based numbers paint a very different – almost opposite – picture. In this paper, we will address consumption perspectives on greenhouse gases (from now: GHG) calculations and ecological footprints as ways of pushing counter-hegemonic perspectives and working towards more just socio-environmental relations in planning practice.

In order to do so, we will examine the Swedish city of Malmö, a city that has managed to gain a reputation as one of the worlds 'greenest' cities. The neighbourhood of Western Harbour is the prime showcase for sustainability in Malmö, and

was built from 2001 and onwards, primarily for the affluent.

We will show how Malmö's reputation as a green and sustainable city depends precisely upon how we understand space and measure emissions. When choosing to understand emissions – and, indirectly, space – in ways that make them appear more sustainable, this also includes, strategically, ignoring global processes. This is what we call spatial myopia.

This paper is based on research that stretches over a decade. Anna Hult has analysed the international

circulation and promotion of Swedish sustainable urbanism (see e.g. Hult 2013; 2015; Hult and Larsson 2015). This work is based on semi-structured interviews with planners in Sweden and in China as well as site visits and analysis of planning documents of best-practice sustainable districts in Sweden as well as those Swedish plans of exported to Chinese eco-cities. Ståle Holgersen has written extensively on the urban transformation of Malmö (see e.g. Holgersen 2014a; 2017; Holgersen and Malm 2015). The work is based on semi-structured interviews with e.g. planners, developers, architects, politicians in Malmö, archive work and document analysis on urban planning and policy documents, as well as numerous relevant interviews outside Malmö, with Swedish state officials, policy makers, managers, developers, and others. The analysis in this paper builds on a combination of these two research tracks. This article proceeds in four sections. In section two we examine the urban political ecological framework, the context we are situated in and ways of measuring emissions. In section three we discuss the case study of Malmö, and in section four we analyse how ways of measuring emissions have direct impact on Malmö. We end the paper with concluding reflections on spatial myopia; on how so-called environmental friendliness depends on how we choose to understand space.

2. Urban ecological footprints

The human influence on the environmental conditions of the planet is clear. Reports from the Intergovernmental Panel on Climate Change (IPCC) show that emissions of GHGs increased by 70% over the period 1970–2004 and today emissions caused by human activity are the highest in history (Bulkeley 2013; IPCC 2014). Assessments of climate change by the IPCC draw on the work of hundreds of researchers from all over the world that state that most probably global temperatures will continue to rise for decades to come, largely due to GHGs produced by human activities. Moreover, there have already been observable effects on the environment due to global warming; glaciers have shrunk, ice on rivers and lakes is breaking up earlier than before and plant and animal ranges have shifted (NASA 2016).

How to measure emissions, how much we need to reduce, and not least how to do this, however, are far more disputed. The European Commission (2010) has

an ambition to reduce emissions of GHGs by 40% by 2030. Others argue this is not enough: Kevin Anderson (2012) argues the already industrialised countries must by 2030 probably reduce emissions by 90%, if we want to have a reasonable chance of reaching the widely acknowledged 2°C target and also give space for Southern development.

If one considers how, why, by whom and where GHG emissions and other environmental damage are produced, and where and by whom the risks of flooding, droughts, storms or exhaustions of natural resources may be felt, a set of processes, actors and possibilities come to mind. It is important to note that global GHG emissions do not arise from some uniform and invisible source, but rather is the product of the ways in which energy is used in our homes and cars and to make the things we consume and the goods we use, and the product of our management of the land and forests. It is these processes, taking place in a highly uneven manner across different national contexts, that create both the existing atmospheric conditions and the so-called ‘common, but differentiated, responsibilities’ for acting on global warming (Bulkeley 2013). Global warming should be considered a global issue, not in the sense that it occurs in the same way across the world, but rather as an issue that has very different histories and geographies, varying across time and space, and with differing implications for economies and societies. It is from this perspective of global warming, as shaped by diverse processes that vary not only between different nation states but also within and across national boundaries, that the city as both a territorial and relational space comes into view.

2.1. Ecological modernisation as dominant discourse

The current dominant and mainstream discourse concerning urban sustainability is ecological modernisation. This is a field within environmental studies that has gained support amongst both academics and decision makers within recent decades (e.g. Spaargaren et al. 2000; Mol et al. 2009). It is viewed as an analytical approach, a theory, a policy strategy and an environmental and political discourse (Hajer 1995; Lidskog and Elander 2012). The theory of ecological modernisation is based on a belief in decoupling of material and economic flows and asserts that economic growth is possible without unsustainable exploitation of natural

resources (Lidskog and Elander 2012). Thus, it assumes that it is possible to have increased economic growth and decreasing carbon dioxide emissions, and that environmental improvement can take place in tandem with economic growth is a key fundamental assumption. At the foundation of the theory is the thought that we do not need a systemic shift in society to solve environmental problems. In this sense, ecological modernisation is closely related to the concepts of 'green industrialism' and 'sustainable growth'. The role of science and technology will be strengthened in solving and preventing environmental problems and market dynamics will be utilised to launch environmental reforms. Through making industrialism and technology green, compound economic growth can continue and the comfortable modern lifestyles of consumption can be maintained.

It is easy to understand the popularity of ecological modernisation in policymaking and environmental politics; it has a very practical character with the focus on problem solving and offers an apparent solution that makes it possible to have increasing economic growth and environmental concern at the same time. Moreover, ecological modernisation does not require any dramatic changes within current economic markets and institutions in society. Thus, politicians do not need to suggest any major changes to people's everyday lives. Politically, therefore, it does not challenge existing power relations. Both Swyngedouw (2010) and Lidskog and Elander (2012) opens the question as to whether sustainability has become a key strategy in sustaining what is known to be unsustainable. Ecological modernisation has become a dominant discourse of sustainability that in many ways is keeping needed socio-environmental change from happening and problematically shadows important issues, such as inequality and uneven geographies.

As the criticism of sustainability dominated by ecological modernisation and corporate interest has grown, more radical concepts of the social production of (urban) nature provide contesting views of urban-nature relationships (Swyngedouw 1997; Keil 2003; Agyeman 2013). Within this body of literature, often associated with environmental justice and political ecology, there is both a strong critical tradition and also an emphasis on pushing counter-hegemonic perspectives. For example, some of this work has found expression in the influential and widely practised ecological footprint analysis (Keil 2003). The concepts of 'ecological

footprint' and 'fair share of environmental space' represent attempts to calculate consumption from a more environmentally just perspective.

Planning researcher Parr (2009) argues that the meteoric rise of the concept of sustainable development is highly likely due to the fact that it can be hijacked for other means. She means that what began as a grassroots movement to promote responsible development has now become a bullet point in corporate eco-branding strategies. In addition, she states that the more popular sustainable development becomes the more commodified it becomes (ibid).

As a critique of the ecological modernisation approach, While et al. (2004) have in a comparative study of the post-industrial transformations of Manchester and Leeds proposed the concept of *sustainability fix* (see also Temenos and Mccann 2012; Rosol et al. 2017). This draws upon Harvey's notion of *spatial fix*, which is a way to conceptualise how capital relocates in space in order to solve economic difficulties (Harvey 2001, see also Jessop 2006). The 'fix' has here a dual significant: both as a quick fix – when, e.g. a drug addict satisfies his burning desire for drugs – and as something being fixed physically: fixing a post in a hole or tying something to a particular place.

While et al. (2004) provides a fruitful framework for how to understand urban sustainable development. But, the word sustainability implies that this fix actually contains some component of real sustainable development – however defined. Which is not necessarily the case for many cities branding themselves as sustainable. When theorising Malmö's transformation, Holgersen and Malm (2015) have therefore suggested the concept of *green fix*. This is 'an attempt to overcome a crisis of capital accumulation in a particular locale' (Holgersen and Malm 2015, p. 227), but does not imply anything more that polices and business strategies are framed as 'green' – which can be anything from actual environmental improvements to pure greenwashing.

The green fix is constituted in an eco-modernist framework. But where eco-modernisation proper argues that sustainability and growth are compatible, the green fix takes this one step further, with a slightly different twist: now sustainability is a means to growth. 'Green' urban developments, as we will see in the case of Malmö, are now mobilised also as strategies for economic growth.

2.2. Cities and urban sustainability

Cities and urban areas have increasingly been understood both as part of the problem with climate change, but lately increasingly also as part of the solution (see Rosol et al. 2017). Geographer Harriet Bulkeley writes that (2013, p. 13): 'Utopian visions of social and technical responses to global warming are often created through different imaginings of the future city'.

In the broad literature that has emerged on sustainable urban planning, much of the focus is on what constitutes successful practice (see, for example, Beatley 2000; Birch and Wachter 2008; Wheeler and Beatley 2014; Fitzgerald 2010; Slavin 2011). Much of this research within urban sustainability is performed through case studies (Krueger and Gibbs 2007a). In this field of literature, researchers are seeking to show, through case studies, how sustainability plays out in different places and under different policies. In this approach, case studies offer a 'pick and mix' set of policies – often in terms of, e.g. bicycle lanes, high-density zoning, transport-orientated development, urban green space preservation – that are seen as 'best-practices' and could be adapted to different local circumstances. Several volumes have been written to present such practical examples of so-called sustainable urban planning (e.g. Beatly and Manning 1997; Pierce and Dale 1999; Beatly 2000; Portney 2003). Within this strand of literature, case studies of urban sustainability range between various scales, pointing out nation states, regions, whole cities or city-districts as best practice. Some cities are more frequently mentioned than others, for example, Portland in the US, Freiburg in Germany and Malmö in Sweden (Krueger and Gibbs 2007a). Krueger and Gibbs (2007a) point out that whole nations have sometimes been identified as best practice examples, for example, the Netherlands and Sweden (or the whole of Scandinavia). In addition, urban scholars Fitzgerald and Lenhart (2016) point out that three of the most celebrated European eco-districts are Hammarby Sjöstad in Stockholm, Western Harbour in Malmö and Vauban in Freiburg.

There is also a growing body of literature critically discussing urban sustainability in terms of 'green-washing' of the waterfront (in Port Adelaide, South Australia; Szili and Rofe 2007); the 'death and revival of green planning' (in Australia and Canada; Bührs 2000); the proliferating experiments in 'eco-cities' (not least

in China; Caprotti 2014a); 'urban environmentalism' (in Malmö; Jamison 2008); 'ecological gentrification' (in Seattle; Dooling 2009); theoretical approaches to 'neoliberal natures' (see, e.g. Bakker 2010) and various discussions on 'nature, metabolism and cities' (see, e.g. Heynen et al. 2006, for an excellent overview, see also Rosol et al. 2017).

What is less analysed in this literature, and what we examine in this paper, is how these so-called best-case examples often are relying on a particular view of space and – related – how we measure emissions. Before we do this through investigating one city that often finds itself on lists of best-cases, the Swedish city of Malmö, we briefly need to outline the two different ways of measuring emissions.

2.3. Sweden: eco-modernisation and two ways to measure GHG emissions

Research has recognised the central position of ecological modernisation within Swedish environmental policy and politics (Lidskog and Elander 2012; Holgersen and Malm 2015). Sweden has been praised for its sustainability efforts and decreasing GHG emissions, but carbon accounting depends on the ways in which carbon can be measured, quantified and statistically aggregated. When nations and urban districts in the global north, like Sweden and Malmö, publicise their low GHG emissions, these emissions are often based on a production perspective including only emissions occurring within their geographical boundary (Naturvårdsverket 2017a, 2017b). When including a consumption-based approach, the numbers look different.

Sweden is often cited as a sustainability success story with low emissions. And when progress is considered to be equivalent to growth in gross domestic product (GDP) and environmental concern is equivalent to calculations of territorial GHG emissions, Sweden is able to show great data.

At the same time the World Wildlife Fund (WWF) has pointed out that the ecological footprint of the average Swede in 2015 was over six global hectares (gha) per person, while the global space available is only 1.7 gha. Moreover, the Swedish footprint per capita has been growing and Sweden has been placed amongst the 10 worst countries on the WWF's global ranking (WWF 2014). WWF (2016, p. 1) states: 'Sweden's ecological footprint needs thus to

reduce considerably to approach a sustainable and fair level'.

Depending on the questions asked, the perspectives highlighted and the way in which numbers are calculated, there may be different ideas of whether or not Sweden can be considered a role model in sustainability.

In contemporary Swedish environmental political debate and the official marketing of Sweden as sustainable, the production perspective is still dominant. This perspective fits very well with the ecological modernisation discourse and is also used to market certain urban districts as ecological, low-carbon districts (e.g. Western Harbour in Malmö and Hammarby Sjöstad in Stockholm). In contrast, the consumption perspective reveals that how people live in these areas entails high GHG emissions. These areas' residents often have relatively high incomes and can afford to fly around the globe and consume substantially. The production perspective enhances the view that we can draw geographical boundaries around nations or urban districts and, based on the emissions produced within these boundaries, judge whether specific countries or districts are sustainable.

If instead a consumption perspective is applied then all emissions attributable to the inhabitants' consumption patterns, no matter where they occur, are included, e.g. emissions from imported goods and air travel. This provides new outlooks on sustainability. From this perspective, Swedish emissions have increased rather than decreased in the last decades. Swedish researchers and the Swedish Environmental Protection Agency propose that the production perspective should be complemented with a consumption perspective to describe more fairly who is responsible for what emissions (Naturvårdsverket 2017a).

Greenhouse gas emissions, based on a consumption perspective, can be calculated from the emissions occurring within a territory, subtracting the part linked to exports and adding the emissions linked to imported goods and international transportation. From this perspective, Swedish consumption caused a total of around 95 million tonnes of GHG emissions in 2003, i.e. about 25% higher than indicated by the production perspective, and the level has since increased (see Hult and Larsson 2015).

The Swedish storyline of decoupling – and the business of 'sustainable urbanism' into which it feeds – is based on a deficient territorial view of space

where emissions only are calculated from a production perspective.

The consumption perspective is needed as it takes account of environmental justice and global responsibility while challenging politics and aspirations for high-consumerist lifestyles. It emphasises the crucial areas of housing, transportation, food, and public spending.

3. Malmö

Malmö's transformation into a post-industrial city, focusing on tourism, culture, congresses, increased office space, and, not least, attracting wealthy tax payers resembles, generally speaking, the history of many western cities. The general transformation from industrial policies standing on a Fordist-Keynesian political economy to a post-industrial urban policy standing on a post-Fordist/neoliberal foundation is so visible in Malmö it is tempting to call it a cliché (for international discussions, see Harvey 1989; Peck and Tickell 2002). There are two aspects with the Malmö case that need mentioning. One is that the transformation happened somewhat later than many other similar cities, and the other is that the transformation, when it came, was very radical (Dannestam 2009; Holgersen 2014a, 2014b).

A few building projects, often also highlighted in the municipal's own narrative, can exemplify the city's transformation: the Malmö University was established in 1998, The Öresund Bridge to Copenhagen opened in 2000, the housing exhibition Bo01 was located in Western Harbour in 2001, as well as new stadiums, a huge shopping mall, Emporia, opened in 2012, and they city also hosted several 'events', from an international sailing race to the Eurovision Song Contest 2013. In 2015, opened *Malmö Live* opened – a combined hotel, conference and concert hall. As the concert hall cost the municipality 1,3 billion SEK, this is the most expansive investment by the municipality ever. But the field of policy that the city would get most international attention for is *ecological sustainability* (Holgersen 2014a, 2017).

Malmö's 'golden years' came after the Second World War. As it was one of Sweden's most important industrial cities and controlled by social democrats (continuously from 1919 to 1985), it has famously been called both Sweden's most 'prosperous region of growth' and the 'Mecca of the Swedish labour

movement' (Billing and Stigendal 1994; Mukhtar-Landgren 2009).

When much industrial activity declined during the 50s and 60s, this was compensated by a growing public sector. But when the decline in the industrial sector continued through the 70s and 80s also in the male-dominated shipbuilding industry, the city not only found itself in an economic and social crisis but also a 'crisis of identity' (Dannestam 2009; Holgersen 2017). The decline of workplaces contributed to economic concerns that were also fuelled by the fact that many well-off residents moved to the richer neighbouring municipalities (Billing 2000, p. 19).

After the shipbuilding closed in 1986, a car factory opened in Western Harbour. But that closed in 1991, and it coincided with closing of several industrial workplaces and also a great financial crisis in Scandinavia. Between 1990 and 1994, 25% of all workplaces disappeared in Malmö (Sernhede and Johansson 2006, p. 35; on the gradual character of these transformations, see Pries 2017). It was in this context that Ilmar Reepalu came to power as chair of the municipal board (equivalent to mayor) in Malmö in 1994. Reepalu was a new kind of social democrat, as an educated architect and engineer he was different from the union-based social democrats that had been governing the city for about 60–70 years. He immediately started a process called 'work of visions'.

3.1. The process of greening Malmö

From the early stages of 'work of visions', it was definitely not clear that it was ecological sustainability that would become the city's most famous field of policy. In the first document published as part of the 'work of vision', the environment is only mentioned in relation to recreational parts (see Malmö Stad 1995). In later documents, the environment is included as one of eight visions, but clearly less important than the main categories: economy, business and education (Malmö Stad 1996). In the Comprehensive Plan 2000, environmental issues, increasingly conceptualised as sustainability, have been given a more proper position, but still remain much less prominent than economic affairs and – considering this is 2000 – a strong regional and European focus (Malmö Stad 2001). In the Comprehensive Plan 2005 (adopted 2006), sustainability – ecological, environment and social – is

brought to the front: now the *prime goal* for physical planning is an 'attractive and sustainable city' (Malmö Stad 2006, p. 98).

During this process, the most important thing that would make the city's reputation 'green' was the planning, building and branding of the housing exhibition 'Bo01 – City of Tomorrow', located at Western Harbour in 2001. As Western Harbour was also the main site for shipbuilding during the golden days of industrial Malmö, the exhibition became very important for transforming Malmö, not only economically and politically but also socially and mentally.

When examining the history of the housing exhibition, and based on interviews with key persons in the process, we see that the 'environmental' part was not at all a part of a larger master plan for the beginning. It was not at all clear during the planning and construction process that it was ecological sustainability that would become the main selling point for Western Harbour. One municipal planner described the first prospectus for the exhibition as 'amazingly fluffy – everything from culture, information technology and welfare to new ways of organizing schools was included. It was really far out' (interview, municipal planner).

The director of city planning argued that the exhibition's main object was to attract taxpayers to the city: the environment and questions of 'energy and other green questions, such as green space factors, green roofs and storm-water management', on the other hand, appeared as a series of afterthoughts (interview, director of city planning). The fact that the area was branded as green, according to the director, was partly an opportunity to demonstrate ideas, partly a matter of urban branding. Another city planner that we have interviewed suggested that 'use of energy' became a central component, as it was a simple and manageable metric that could be applied in various projects (interview, city planner).

'Green' urban policies have in Malmö the function of attracting capital, and practices that look environmentally friendly are promoted as features of the city. The municipality does nothing to 'hide' that sustainable planning and policy are a business strategy, but for the politicians and public officers the green policy is also about saving the climate and environment. Neither did developers we have interviewed have any need to camouflage the fact that the 'green' aspect is primarily a business strategy. One developer argued that having a green profile was:

“purely a business strategy. We think it will be profitable in the long run. It will become easier to get tenants, and easier to sell blocks, and the whole city district will become more valuable, from a business point of view” (interview, real estate developer).

Several developers and project managers have similar arguments, one saying that it is a market-driven process, in which ‘everyone wants to appear as a corporation which takes responsibility’ (interview, real estate developer), another arguing ‘it is not possible to build anything today, unless one takes a clear stance on questions of environment and energy’ (interview, real estate developer). And a third developer argued his company never builds anything that does not qualify for Green Building certification: ‘if you don’t have it, you are not in, you lose out in business’ (interview, real estate developer).

One very important factor behind the greening of Malmö was the Local Investments Money (LIP), a programme for promoting environmentally sustainable projects, and which provided much needed financial support to Bo01 (Dannestam 2009). In dialogue with this state program evolved some visions of creating – according to the director of city planning – ‘the world’s first sustainable city’ (interview, director of city planning). This was a ‘little vaguely expressed in the beginning, but it was filled with content step by step’ (ibid.).

Malmö’s focus on environmental sustainability is also related to a broader political orientation in Sweden, where, for example, the then Prime Minister Göran Persson proposed the ‘Green People’s Home’ in 1996: an eco-modernist re-cast of the post-war ‘People’s Home’. According to Persson a push for environmentally efficient technologies would ‘provide great competitive advantages in these promising markets, in a happy marriage of “ecology, economy and employment”’ (quoted in Lundqvist 2004, p. 1287).

The housing exhibition Bo01 at Western Harbour is today being ‘sold’ by the municipality as an unconditional success. But Jansson (2006) argues that not many new city districts or housing exhibitions have actually been as *infamous* as Bo01. The amount of visitors at the exhibition was low, and the company organising the exhibition, Housing Expo, went bankrupt not long after the exhibition. But the main critique of the exhibition was that the apartments were too expensive – designed for the rich as luxury apartments. This critique also extended far into the social democracy, as neither the then Prime Minister Göran

Persson nor the Municipal and Housing Minister, Malmö Lars-Erik Lövdén, were visitors to Bo01 (Holgersen 2017). There was also a strong critique that the houses were not as energy-efficient as planned and promised.

The perhaps most important single aspect in branding Western Harbour as environmentally sustainable was that the buildings were supposed to use less than 105 kWh/m² annually – ‘including space heating, domestic hot water heating, common electricity and household electricity’ (Bagge 2007, p. 5). However, research from Bagge (2007), Nilsson (2003) and Nilsson and Elmroth (2005) has shown that energy use was much higher than this unambitious target. In the municipality’s own half-way evaluation of the Western Harbour, it is also acknowledged that neither Bo01, nor Flaggskuppet (which was its sequel, often called Bo02) delivered the promised results (Malmö Stad 2011a). This is a problem for the municipality of Malmö, even if we use production-based numbers, and it comes as no surprise that this has been under-communicated by the municipality.

Two things happened, however, that would change the interpretation of the area. One was that the area was used as a leisure activity for the whole city. The other was that Malmö did start to receive international attention.

Some ten years after the exhibition, Malmö had gained a reputation as one of the ‘green’ cities, at least in terms of being one of the cities on the lists of ‘greenest cities’ and winners of awards. Just to take a few examples between 2009 and 2013. Malmö was named 3rd ‘Greenest city in the world’ in 2013 by Mother Nature Network, finalist for the European Green Capital in 2012 and 2013, Earth Hour Capital in 2011 by WWF, 3rd most environmentally friendly city in Europe in 2011 in a study by the Economist Intelligence Unit commissioned by Siemens, and the first winner of the Nordic Sustainability Prize in 2011 by Idébanken. The list of prizes and awards is long, and cannot be described in full here, but it is also worth adding that Malmö was the winner of the Intermodos Prize (as part of Oresund Region) awarded by AEBR in 2011, honoured with a stand at the Urban Best Practices Area at Expo 2010 in China, recipient of the World Habitat Award in 2010, the World Green Building Council’s BEX Award, 2009 (for best master plan, with special compliments to the Western Harbour), etcetera.¹

Malmö's green fix was a response to the challenges that politicians, planners and entrepreneurs faced in the 1990s. The policy developed *ad hoc*, somewhat accidentally and the process was to a large degree fuelled by its own success – not least related to international attention and recognition. The city's deep crisis in the early 1990s opened the path for the entrepreneurial/post-industrial urban development, and the greening of the city came to be the component that attracted most attention in this respect. The dialectic between public politics and private business strategies has constituted the green fix: a dialectic that has worked as a strategy for crisis management: 'in which state and capital have stimulated each other to proceed along the green path to prosperity and profit' (Holgersen and Malm 2015, p. 283).

International recognition, we argue, has been very important for the 'green' to evolve in Malmö. A few years ago, Malmö received around 10.000–12.000 official visitors who wanted to see and learn from the city's work on ecological sustainability at Western Harbour (email communication, public officer, Malmö stad). According to Malmö's coordinator of communication and study visits, the 'visits are part of Malmö's branding work, and every visitor must be seen as a future ambassador for the city' (quoted in Malmö Stad 2011c, p. 30). Visitors are considered important for branding the city and increase competitiveness. According to the CEO of Sustainable Business Hub, a network helping 'clean-tech' companies to increase their competitiveness in the export market: 'it is very important to strengthen the brand of Malmö, so one can attract people from the whole world' (interview, CEO of Sustainable Business Hub). One dilemma is however that this strategy, so important for future revenues, is a direct expenditure from the budget as thousands of visitors are every year guided by staff from the municipality. There have therefore been discussions as to whether one can charge visitors for the guided tour.

3.2. The branding and selling of ecological sustainability

The Malmö narrative is not unique. From the early 21st century there have been very conscious efforts by Swedish government bodies and private companies to brand Swedish urban sustainability, in order to combine export of Swedish clean-tech products and

urban planning services. Ahead of the ONG Earth Summit in Johannesburg, 2002, the Swedish government launched an initiative entitled The Sustainable City, suggesting a specific integrated planning approach as a conceptual framework to support sustainable urban development in low and middle-income countries. In 2007, the semi-government Swedish Trade Council, together with large Swedish private companies, developed the idea of 'the sustainable city' into the more marketable concept of 'The Symbio City'. The initial purpose of the organisation called SymbioCity was to act as a marketing platform for Swedish clean-tech companies. The defined purpose of the 'Symbio City' concept came to serve as a communication platform for dissemination of Swedish environmental technology in close co-linkage with sustainable urban development, including institutional arrangements and planning processes (SIDA and Swedish Government 2010). The urban districts of Western Harbour in Malmö, together with Hammarby Sjöstad in Stockholm, were cited as central flagship projects to demonstrate best practice in sustainable urban development.

Exactly what is being 'sold' or 'exported' is not uncomplicated. Windmills and other physical commodities that can contribute to a green future are obviously manufactured at lower cost in, e.g. China. So what the city of Malmö will specialise in – what the municipality argue is their competitive advantage – is 'systems-thinking'. According to the director of city planning: '[w]e are good at systems. [...] how to integrate parts into a whole, and such things – this is what we're good at' (interview, director of city planning). The municipality is actually trying to export urban planning and urban policy. Backed by SymbioCity, this is the municipality's main focus.

In this branding, governmental bodies and private companies have identified decoupling (of economic growth and environmental damage) as a selling storyline of Swedish urban sustainability, a storyline that has been deliberately linked to urban flagship districts such as Western Harbour in Malmö and Hammarby Sjöstad. In the Swedish urban sustainability imaginary (a term meaning the ways by which society creates for each period in history its particular way of living and of viewing the world) identified in Hult (2013), the storyline of decoupling is black-boxed into a selling image and promoted together with the flagship urban districts of Sweden through, e.g. the platform SymbioCity. However, the

premise on which this Swedish urban sustainable imaginary is built does not hold and also has problematic effects as this imaginary circulates and produces real political effects in urban spaces in Sweden and beyond (Hult 2015; Rapoport and Hult 2017).

4. Discussion and critique: space and sustainability

“We cannot reasonably argue for high environmental quality in the neighbourhood while still insisting on living at a level which necessarily implies polluting the air somewhere else; we need to know how space and time get defined by the quite different material processes which give us our daily sustenance.” (Harvey 1996, p. 233)

Climate change is a global challenge. Concerning especially greenhouse gas emissions, it is common knowledge that the actual impacts on the world’s ecosystems might extend far beyond the site where the emissions actually take place. Indeed, such distant effects are *emblematic* of the main environmental problems in our time. From a global perspective, it does not matter if one locale becomes greener if the emissions are just relocated in space and continue with unaffected strength globally.

“There are mountains of evidence showing that pressures on the environment may be displaced from what appear, at first sight, to be a clean, green locale, towards less visible, far-away places; trade, foreign direct investment and other mechanisms of global exchange may simply re-distribute the ecological burden in space and increase its total extent.” (Holgersen and Malm 2015, p. 284)

The polluting activities from the industrial Malmö did indeed not disappear. Both everyday life and capital accumulation in today’s Malmö are still highly dependent upon much industrial production elsewhere, also activities that previously did take place in the city.

The city’s ecological flagship – Western Harbour – is ironically placed where the world largest shipyards once were located. Without the disappearing of the gritty mega-industry – servant of the oil economy – the ecological flagship could not have found its suitable and attractive location by the waterfront. Shipbuilding never stopped, and the 138 metre tall Kockums Crane – the largest gantry crane in the world when constructed in 1973 – was never demolished and did not simply disappear (Dannestam 2009). It

was sold for 1 USD in 2002 and then moved to the world’s single largest shipyard, Hyundai Heavy shipyard in Ulsan, South Korea, where it still operates today.

Here we simply need to grasp the local and global level – and relations between them – simultaneously. Not being able to – or rather: not wanting to – see global and international aspects for all the local details is forms of spatial myopia. Another example of this is found in the development of Varvstaden, another part of Western Harbour. Varvstaden is currently being constructed and is being built into an eco-city with 1500 apartments, offices for 500 workplaces, restaurants, schools and stores (Malmö Stad 2011b). The project will have a certified ecological profile. One ironic aspect is that the industrial production that was going on at the site until very recently was manufacturing parts for trains and windmills. These are things that need to be produced *somewhere* for a transition to a sustainable future. But from the perspective of eco-city branding what matter is that pollution and noise must be removed *from here*.

Much wealth and prosperity that currently is accumulated by firms and individuals in Malmö in general and Western Harbour in particular, rests on an inflow of commodities from other countries. And fossil fuels are used in most stages in these global activities: from production of ships and commodities to the fuel that brings them to Sweden. Such emissions are not directly visible in Malmö, and this ‘invisibility’ is precisely what makes the branding of Western Harbour as a green paragon possible. Making emissions ‘invisible’ is only possible through a certain spatial view. And how we calculate emissions comes with different spatial implications. Sweden, as a country, is especially interesting in this regard as is aiming at exporting a storyline that says that Sweden is a sustainable role model that has decoupled its economy.

4.1. Measuring urban sustainability: often through production-based numbers

From a production-based perspective to calculate emissions, Sweden does indeed show relatively good numbers. Importantly, Sweden was relatively early in formulating environmental regulations and has a history of setting high political ambitions and targets. Sweden, together with Finland, was first in the world to establish steering environmental taxes on

carbon, in 1991 (Borgnäs 2016). Another main reason for having decreasing territorial CO₂ emissions is due to the integration of infrastructure systems, which is partly also what SymbioCity builds around.

However, these are not at all solely located in the flagship areas like Western Harbour but are rather the result of long-term investments throughout urban areas in Swedish cities. District heating is the most common source of space heating for housing and buildings in Sweden, with 80% of all households heated by this method. The first district heating system in Sweden was built at the end of the 1940s and the breakthrough came at the time of the oil crisis in the 1970s. This was at the same time as the major housing campaign 'Million Programme' was underway in Stockholm, in order to address housing shortage. Those new homes were directly designed and linked to district heating systems. During the time of Social Democrat rule in Sweden and their 'People's Homes' policy in the 1950s and the Million Programme in the 1970s, investments were made in extensive integration of public transport and other infrastructure with land-use planning, an approach manifested in suburbs such as Vällingby or Farsta outside Stockholm, located near subway stations and connected to district heating infrastructure. The high share of public transportation trips in Stockholm today owes much to the foresight of planners in overdimensioning the subway system during the 1940s and 1970s (Metzger and Rader 2013).

The Swedish forestry sector, its heavy basic industry, district heating, the waste incineration industry and public housing together shape a complex and robust energy and heating system which is almost independent of fossil fuel (Borgnäs 2016). Today, there are continuous investments in district heating and biogas in Sweden. These systems suit the specific condition of industries and infrastructure well and have been built over a long period of time, often with other main objectives than purely environmental.

Finally, while early environmental regulations and decades of infrastructure investments have contributed to a decrease in territorial emission levels in the last decades in Sweden, there are other reasons behind the relatively low fossil intensity and GHG emissions (Borgnäs 2016). First of all, due to its specific geographical conditions Sweden, together with Norway, has the largest hydroelectric potential in Europe and almost half (45%) of all electricity production in Sweden today comes from hydroelectric power

stations (The Swedish Energy Agency 2015). This means that a large part of electricity production is already fossil-free. Second, Sweden opted to invest in nuclear powered energy after the oil crisis in the 1970s and today almost 40% of electricity production comes from nuclear power. In addition, renewable energy in the form of wind power and biogas produces around 10% of the electricity (Borgnäs 2016). This means that Sweden has an energy system which releases very little GHG emissions, although it can also be debated how environmentally friendly nuclear power plants and some hydroelectric dams actually are.

Sweden fits well into an imaginary of urban sustainability where decoupling economic growth from CO₂ emissions acts as the main storyline and environmental concern is reduced to territorial calculations of carbon emissions. But to promote this storyline as an achievement to export, that in addition links the idea of achieving decoupling to the famous best-practice urban districts, for example, to the Western Harbour, is not completely justifiable. It is even less justifiable taking into account that the GHG emissions caused by the population of Sweden have increased rather than decreased in the last decades.

4.2. Consumption-based numbers turns the table

The consumption perspective on GHG emissions works as a counter-narrative in the sense that it destabilises the central storyline of Swedish decoupling. As mentioned, if a consumption perspective is applied then all emissions attributable to the inhabitants' consumption patterns, no matter where they occur, are included, for example, emissions from imported goods and air travel. From this perspective, Swedish emissions have increased rather than decreased in the last decades. Thus, the perspective both destabilises Sweden as a nation as having achieved decreased emissions, and highlights the paradox that those well-off conscious consumers that can afford to live in branded sustainable urban districts, such as Western Harbour in Malmö or Hammarby Sjöstad in Stockholm, are symbols of a sustainable lifestyle rather than its reality. Thus, this perspective unpacks some of the problematic relationships that shape uneven socio-environmental relations in the name of urban sustainability.

The consumption perspective is not only another way of calculating GHG emissions. As a strong counter-narrative and a counter-storyline, it provides a generative narrative that stipulates new outlooks on urban sustainability and justifies the need for planning practices that address issues of less resource consumption within and across territorial borders, such as decreased air travel, consumption of ecologically produced food and less material consumption.

A report published in 2012, though based on 2004 data, on carbon dioxide emissions in Sweden and Malmö, exemplifies our argument. Consumption-based emissions in Sweden are around 90% higher than the 'official', production-based figure (SEI 2012). In the city of Malmö, consumption-based accounting gives a figure that is 204% higher than the official emissions figure. With consumption-based figures, Malmö's emissions are 13.4 tonnes per person per year – which is far above the 2 tonnes available for each of us on this planet if we want a 'just and sustainable development at global level in accordance with the so-called two-degree target' (SEI 2012, p. 8, see also Naturvårdsverket 2017b). Thus, the consumption-based figures points in the same direction as ecological footprint measurements that show that the ecological footprint of the average Swede in 2015 was over six global hectares (gha) per person, while the global space available is only 1.7 gha and that the Swedish footprint per capita has been growing. Sweden's ecological footprint and consumption habits need to be reduced considerably to approach a sustainable and fair level (WWF 2014, 2016).

Planning practice and planning research for sustainability have generally focused on facilitating a more eco-friendly life for citizens in terms of their housing, modes of transport, waste flows and use of green space, but generally not trying to influence citizens' consumption of other material goods. (See, for instance, writings on urban sustainability by Wheeler and Beatley (2014), Haas (2012) or Farr (2008)). In relation to urban theory there are two main strands of research that deal with material flows and consumption issues in relation to urban planning practice: First, writings closely related to the field of industrial ecology with a focus on urban metabolism and integrated urban technical systems in terms of waste, water and energy; and second, writings closely related to sociology that address geographies of consumption, consumption culture and

the identity of the city (see Zukin 1991; Mansvelt 2005). Today, concepts of the sharing economy, collaborative consumption and the circular economy are emerging within planning practice, but little research has been done in the planning field in terms of how these concepts translate into physical planning practices. Here is an important field for future research and practice if we strive to move towards more just socio-environmental relations in cities.

4.3. Class and urban space

When applying consumption-based numbers, we not only see that inhabitants and companies in Malmö are responsible for much more emissions than with production-based numbers, we also see that there are differences *within* Malmö.

The Western Harbour was originally built to attract taxpayers, people with money, and 'entrepreneurs' to Malmö. And they succeeded. The average income in Western Harbour is far above the city average. In 2011, the average income in the city as a whole was SEK 195 351, while in Western Harbour it was SEK 279,110. If compared to the poorer areas, like Törnrosen (SEK 117,022), Herrgården (SEK 101 758) or Kryddgården (SEK 94,191), the geographical class dimensions in consumption become apparent. People in Western Harbour also have more cars than average in Malmö (Holgersen 2017). Although we cannot measure exactly how much energy every single individual consumes or where this energy comes from, it is beyond any doubt that affluence correlates closely with consumption of both energy and raw materials.

That those living in affluent areas have generally higher ecological footprints than those living in poorer areas becomes rather ironic all the time that the image of environmental friendliness also is a badge of affluence (cf. Bradley 2009, Vojnovic 2014, p. S42). Being 'sustainable', or living in eco-districts is 'something well-off Swedes cultivate as a class identity, further promoting a lifestyle of high total material throughput' (Holgersen and Malm 2015, p. 285).

Despite claims from advocates of decoupling theory and ecological modernists, economic growth under capitalism has in itself always been realised through increased use of biophysical resources (see, e.g. Jackson 2009; Blauwhof 2012). The ironic part of the green fix is that if the municipality succeeds and does indeed manage to capitalise in direct pecuniary terms from its green policy – one way or the other –

and improves its growth rates, this will most likely also 'ratchet up Malmö's metabolism of energy and raw materials' (Holgersen and Malm 2015, p. 285).

What we define as sustainable urbanism depends upon how we understand space, both internationally and within cities. A consumption-based view on emissions will reveal massive differences between rich and poor city districts, this in sharp contrast to a production-based view that gives us little of that sort.

In this paper, we have seen how differences between production- and consumption-based numbers of measuring emissions are highly spatial. Consumption-based GHG accounting or ecological footprint measurements could work as tools to allow more relational thinking in planning practice, but if so-called environmental role models want to maintain their reputation they will need to see elsewhere.

5. Concluding reflections

Branding cities and city districts as environmental role models are currently coming with selective views on space. So-called environmental "role models" – like we have seen with Western Harbour in Malmö – are completely dependent upon what we call spatial myopia. We can see the spatial myopia from three (inter-related) vantage points.

First, how to measure emissions: We have shown in this paper that choosing production-based, and not consumption-based, approaches to measuring emissions is absolutely crucial for cities that currently seek to brand themselves as 'environmental friendly'.

Second, where to look and what to see: In this paper, we have seen that Swedish cities and city districts that want to promote themselves as environmental friendly need to ignore the fact that they completely depend upon industrial production elsewhere. Selective spatial views are also needed within cities: affluent city districts can only be defined sustainable if we completely ignore, for example, any relations between social class and emissions.

Third, how to understand space: The spatial myopia relates to views on space that authors have called 'absolute', 'territorial', or 'container view' (see, e.g. Lefebvre 1991; Harvey 1996; Massey 2005). Here clear boundaries need to be drawn, and broader geographical contexts ignored.

One important component in Malmö's ecological 'green fix' is – in accordance with the overall policy of

SymbioCity – to try to make money from exporting 'urban sustainability'. Here the two different meanings of Harvey's 'fix' come together, as the green fix travels to reap financial gains from other locales. But with this also the 'territorial' view on space faces challenges. As one (attempt to) export 'urban sustainability', one need to pack space into a container, and then make it travel in space.

Environmental "role models" and 'world greenest cities' are place-specific social constructions. As they need to come with production-based approach to measuring emissions, as well as ignoring affluence, they can easily be placed in the richest countries in the world (which they conventionally are). Now, with exporting 'urban sustainability', the challenge is to make something place-specific *here*, into something that can be exported over *there*. We think this is one of the reasons why the export strategy of Swedish urban sustainability has never really worked (apart from its ideological and discursive merits).

From this, we will conclude that spatial myopia is not a random process. Not seeing 'beyond' certain borders (e.g. city districts, cities, nations) should not be understood as a matter of laziness or incompetence. Spatial myopia is not a question of not being able to see 'far enough'. It should rather be grasped as a strategically chosen view on space that favours ones interests: a socially constructed view on space that enables certain policies. It is not the case that the public officers in Malmö or elsewhere in Sweden are not aware of consumption-based ways of measuring emissions, or that affluence correlates with higher emissions. It is rather the case that they simply need to ignore these facts, otherwise would large parts of the sustainable urbanism discourse fall apart.

If we take the challenge of climate change seriously, we need to understand our policies in terms of *both* production-based and consumption-based numbers, we need to understand space as *both* territorial and relational, and we need to understand the geography of *class* in the city. However, these are more radical statements that they perhaps can appear to be at first sight. It would immediately identify people with money as one major source of the problem, and the lists of environmental "role models" and 'worlds greenest cities' would need to be rewritten.

Note

1. Malmö is also frequently discussed among researchers as some sort of pioneering city (see e.g. Krueger and Gibbs 2007a; Jamison 2008; Kärrholm 2011).

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