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Is an urban waste-to-energy plant a "green" megaproject? The power of narratives in shaping the city: a Danish case study

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ABSTRACT

The role of communication in shaping cities has increased mainly in the last decades due to its relevance to the policymaking process. Even if the scientific debate regarding the Narrative Policy Framework reveals the importance of policy narratives influencing policy outcomes, the relationship between policy and political narratives has often been overlooked. In this paper, we explore this relationship by analysing the policy process of a megaproject case study involving a waste-to-energy plant in Denmark and the intricate process leading to its realisation. The polysemic concept of Smart Cities initially divides the policy arena between proponents of a pro-growth rhetoric focused on market strategy (advocating for a larger plant to expand market scope) and proponents of a pro-green rhetoric embracing sustainability, questioning the adequacy of the plant's size (and highlighting potential negative trade-offs of a big plant). We illustrate how implementing policy ideas relies heavily on constructing narratives that political decision-makers use to advocate for specific policies (policy narratives) presented within a broader institutional discourse in the political arena (political narratives). This study assesses how the polysemic nature of policy ideas influences contemporary social institutions' governance, structure, and operation, posing a challenge for environmental public management in today's cities.

1. Introduction

In the last few decades, the adoption of smart city policy ideas as the foundational concept for the future development of contemporary cities has been growing. This latter concept refers to the willingness to face sustainability and environmental issues through technology's implementation, trying to be at the same time economically valuable and socially inclusive. A 'policy idea that promises a great deal, but so far has delivered modest results', as Glasmeier and Nebiolo pointed out (2016). Turning from a crucial transformation objective into a tool for change, smart city policy ideas have recently become a more flexible concept capable of building, growing, maintaining, or changing the different narratives and their process of changing and adaptation aimed at supporting the strategic actions of the smart city agenda. In this process, the narratives play a crucial role in implementing the evolution of smart city frameworks, either bridging or emphasising the social-technical gap when addressing risk assessment, particularly within environmental policies (Wong and Lockie 2018).

The debate surrounding megaprojects within smart city policies (G. Esposito et al. 2023) has highlighted two main aspects. On the one hand, these projects can constitute environmentally intelligent infrastructures through technological economies of scale that adhere to environmental responsibility. This responsibility is co-produced among the stakeholders involved in the project, including civil society and political decision-makers (Ostrom 1996; Wang et al. 2017). In this debate, the underlying value and logic of action still revolve around growth, remaining anchored to the mainstream capitalist development model (Wilson and Wyly 2023). On the other hand, some seminal studies underscore that the concept of a smart city, as a technology-led urban response to global environmental challenges, may unintentionally adopt aspects of technological determinism. However, ICT has the potential to pave the way for alternative, non-capitalist urban transformations. To achieve sustainable urban development, the degrowth philosophy should actively participate in a critical dialogue with ICT-led urban transformations (March 2018).

As smart city policies are multifaceted and grounded in various value systems, and megaprojects have a significant impact on the territory and population, the central theme becomes the construction of consensus (Crouch and Pizzorno 1977) or the legitimation processes of these infrastructures (Lucciarini and Galdini 2023).

This paper aims to analyse how political actors manage the polysemic rhetorics of smart city policies megaprojects over time (Katz-Rosene 2017) to gain public consensus and prevail over their opponents in

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public debates. The paper aims to contribute to the debate on discursive institutionalism. As Schmidt (2008) conceptualised, discursive institutionalism involves examining how language and public and political discourses shape institutional processes and structures. It explores the role of communication, rhetoric, and narratives in influencing the development and functioning of institutions. In particular, we apply narrative analysis to constructing consensus in a large urban megaproject, specifically a waste-to-energy plant. This complex project aligns with the policy concept of the smart city. It hybridises two discourses: the first is related to competitiveness and economic growth, while the second refers to environmental sustainability and sobriety of the project (which means no bigger size for implementing economies of scale). These themes appeared more antagonistic than integrated (Lima 2020).

We hypothesised that polysemic policy ideas, rooted in functional and competitive values and social and sustainable beliefs, could foster political conflicts and coalition during the project's decision-making process. Polysemy could be considered an asset of the smart city policy ideas, which implies the negotiation between the rational, technological and competitive city (Del Cerro Santamaria 2013) and the less impactful policies rooted in an efficient 'degrowth' strategy (Savini 2021). These two positions entail different systems of values and cultural references. We consider polysemy as a category closely linked to the concept of 'sociological ambivalence' (Merton and E Barber 2002) as the ability to simultaneously hold different ideas crucial for unravelling the dynamics of human agency (Uggla and Bostrom 2018). Analysing the polysemy of the smart city policy ideas could be helpful, especially if we consider it as a tool of political consensus-building in the operation of urban government. How the smart city policy idea is implemented depends mainly on the construction of narratives made by policymakers. By using narratives, they justify pursuing one line of action over another and make that line of action desirable, proposing their chosen path to the electorate through 'policy marketing' (McBeth and Shanahan 2004).

The case of a waste-to-energy plant is exemplary. Among the critical challenges addressed in the European Green Deal, which outlines the key objectives for the sustainable development of the European Union and prioritises the shift from a linear to a circular economy aiming for the decarbonisation of Europe by 2050, waste management stands out. A particularly viable approach is the adoption of the 'waste-to-energy' strategy, which not only tackles the waste problem but also generates energy without relying on fossil fuels (Vukelić et al. 2023). However, inadequate waste handling poses risks to human health and the environment. Given the two positions, the issue of consensus becomes crucial.

This article analyses the Copenhagen case study with its significant example of the complex implementation of a waste-to-energy plant megaproject. It argues that the construction of cross-party coalitions based on the polysemy of the smart city policy idea made the completion of the project possible, thanks to the political narratives aimed at coalition building. Copenhill, the name of the megaproject, was supported by one political faction as an innovative and economically advantageous technological intervention. However, another faction strenuously opposed it because of its negative environmental implications, proportions 'out-of-scale' to the actual needs of the population, and the way the project privileged economic aspects. Analysing the process that led to the plant's completion, our study highlights that this megaproject results from a complex political consensus built following an initial disagreement between the two factions. We hypothesise that the conflict was eventually resolved thanks to the political and policy narratives underlying the polysemic smart city policy idea and its consequent ability to speak to two political constituencies. Based on these premises, we formulate our theoretical predictions regarding how political leaders should navigate the policy subsystem and align their political narratives with crafting compelling policy narratives *through* coalition-building. The paper is divided into three parts. The first section outlines the theoretical debate on the smart city policy idea, pointing out the relatively scarce attention granted to the side of political narrative and public consensus. The second part offers insights into megaprojects as a smart city tool. In the third section, the article gives an insight into the contextual background of the project. It analyses the approval process of Copenhagen's power plant implementation. It argues that cross-party coalitions were constructed based on policy narratives at both micro (public opinion) and meso levels (between political parties and political narratives). These narratives were constructed using the polysemy of the smart city policy idea and, as such, its ability to change over time and appeal to each party's constituency.

2. The polysemy of smart city policies

Smart City's policy idea has fleshed out three policy dilemmas. The first is the capacity to combine economic growth, participation, and social inclusion, reconciling a 'social' city with a 'market' city (OECD 2019). This dilemma, when addressed effectively, holds the promise of a future where urban development is not at the expense of social inclusion. The second is the possibility of integrating local and international dimensions into a positive dialectic to

promote beneficial social capital, skills, and consumption outcomes for different social groups (Andreotti, Le Galès, and Moreno-Fuentes 2015; Joss et al. 2019). This integration, if achieved, could lead to a more harmonious and inclusive urban society. The third dilemma refers to the opportunity to act in the local setting dimension, where a geographic juxtaposition of interests, steered by the state, can lead to a win-win position for the actors involved. In smart city rhetoric, dilemmas can be resolved using 'smart governance'. Smart governance, as formulated by Meijer and Bolivar (2016), is a governance approach that leverages technologies (i.e. social media, online media, City Council debates in streaming) to generate new forms of collaboration, also immaterial and symbolic between citizens and institutions to achieve better outcomes and more inclusive governance processes. It maximises public benefit and reduces negative externalities, particularly those tied to environmental and sustainability issues. Smart city policies, framed as above, function as versatile policy instruments. This perspective underscores the range of opportunities provided by these policies, which vary based on the interpretations and objectives of local policymakers (Desdemoustier et al. 2019; Margherita et al. 2023). This line of thought demonstrates that diverse interpretations of the smart city concept among policymakers can result in various location-specific ICT solutions and policy goals. For instance, in one city, the focus might be on implementing a comprehensive smart grid system to optimise energy consumption, while in another, the emphasis could be on developing a robust data analytics platform to improve urban planning. Within this body of literature, researchers have previously utilised the narrative policy framework to highlight the essential role of narrative work by policymakers in influential government positions in shaping smart city policies (F. Esposito, Taffoni, and De Paolis 2021). In the scientific debate, the relevance of narratives in political and public discourses, especially in complex and multifaceted policy fields that are potentially conflictual, has seminal examples. Hajer (1995) pointed out the 'communicative miracle', stressing how different storytelling influences and orients how the policy process will proceed. The social constructivism of public issues – in Hajer's analysis of environmental policies – has been developed by different actors and indicates how policymakers come to terms with social challenges.

The 'Essex school's' authors (Howarth, Norval, and Stavrakakis 2000) analysed how public discourses could be developed using an 'empty signifier', where policymakers choose generic words and avoid policy issues framing and defining, aiming at maximising their elbow room and the policy process. In our case, the smart city polysemic policy idea finds justification in opposing value systems: neoliberal and entrepreneurial and, simultaneously, sustainable and 'green'

public investment strategy. In this context, *polysemy* represents a potential for public management in contemporary cities and increasingly characterises contemporary social institutions' governance, structure, and functioning. It refers to the multiple, often contradictory, meanings that can be attributed to a single term or concept. Although urban development driven by the application of information communication technologies is the dominant approach for city growth, efficiency, and prosperity (R. Hollands 2015), today, dissenting positions have been surfacing both in policy debate and disciplinary thinking (Cardullo and Kitchin 2019; R. G. Hollands 2008; Marvin, Luque-Ayala, and McFarlane 2016; Sennett 2012; Vanolo 2014). The 'doing more with less' model also involves a logic of action representing two main strategies: integrating the actors involved in the process and integrating the policy areas of the implemented policies. Both strategies aim to systematise and optimise the use of resources and are part of the processes usually identified as institutional change. Such mechanisms modify the existing institutional system and, in cases where they involve switching from old to new setups, actors and policies define them as institutional bricolage (Streeck and Thelen 2005). On the one hand, this new configuration entails a mismatch between existing institutional structures and the policies designed to deal with the 'new urban issues' that smart city policies address.

On the other hand, however, it reveals the ability of rule-makers to reinterpret systems of rules and involve other actors in decision-making processes by creating new institutional setups based on existing ones (Anderson and Pontusson 2007). It also shows how some formal and informal actors can carve out spaces and open themselves up to dialogue and collaboration in pursuing common goals. Within a given institutional system, public actors can 'orchestrate' (Abbot and Bernstein 2015) the network between the various actors involved in smart city projects. Political-administrative organisations can 'orchestrate' in an instrumental sense because they negotiate over spaces and skills with the other actors concerning both smart policy design and the individual actors' political resources. One of the available policy tools that flesh out innovation, competitiveness, and iconisation is that of megaprojects.

3. Smart city as complex megaprojects

The concept of smart city is not without its challenges. It is akin to complex megaprojects, embodying intricate urban developments that integrate advanced technologies to enhance the efficiency, sustainability, and quality of urban life (Caragliu, Del Bo, and Nijkamp 2011). This multifaceted initiative involves the integration of ICT to manage and optimise various aspects of

urban living, such as transportation, energy, and communication infrastructure (Anthopoulos 2017). The complexity of smart city projects arises from the need to navigate through diverse domains, including urban planning, technology integration, and public engagement (Caragliu, Del Bo, and Nijkamp 2011). The success of these projects hinges on effective collaboration among stakeholders, including government bodies, private enterprises, and the community (Nam and Pardo 2011). Megaprojects stand out as one of the most widely discussed projects. In this article, we delve into a compelling case study, offering a nuanced understanding of how cross-party coalitions can be built depending on the polysemic rhetoric of the smart city. Such projects have dominated entire planning seasons, sometimes with mixed outcomes. Whyte et al. (2015) identify several positive aspects of implementing megaprojects and many problematic points. Moreover, given the intense financial investments, delays, citizens' resistance, and political disagreements in building megaprojects, they are often perceived as threatening local life. Such constructions are often oversized and underutilised; cities commonly abandon them, especially if they are plagued by inefficient management. The ambiguity of megaprojects, caught between desirability and ineffectiveness, offers a valuable opportunity to explore the rhetoric and narratives local political classes use to promote or oppose these projects.

As part of smart city and social innovation strategies, megaprojects are considered natural agents of change. Megaprojects have become central to the urban agenda of re-evaluating a city's position. Such projects are thus characterised by extreme complexity, substantial risks, long duration, and intense impact on the community, economy, technological development, and the environment of the region or even the country as a whole, features that give rise to challenges at various stages of project implementation and management (Zhai, Xin, and Cheng 2009, 99). As a strategic tool in the smart city toolbox, megaprojects create new links for collaboration and learning among actors and establish future relationships and new development pathways. As Esposito, Terlizzi and Crutzen (2020) highlight, the complexity of megaprojects derives from the fact that they require high levels of inter-organisational cooperation across geographical, cultural, institutional, and political boundaries (Scott, Levitt, and Orr 2011). Megaprojects, however, have not been exempt from public dissent, as evidenced by frequent protests. This dissent, scholars specialising in urban governance argue, indicates an emerging 'post-political' condition, denoting a perceived deficiency in democratic politics. Some critics, such as Beveridge and Koch (2017), caution against adopting this perspective, labelling it a 'post-political-trap.' They advocate for further research to delve into these

dynamics' complexities, suggesting a need for a more nuanced understanding of the socio-political landscape in which these megaprojects unfold and the role of public dissent in shaping this landscape. The discourse surrounding megaproject protests intertwines with consensus-building in urban governance. While megaprojects may be initiated to foster urban growth and prosperity, more public consensus must be reached to avoid tensions. Achieving consensus becomes challenging as it requires a delicate balance between the interests of various stakeholders, including government authorities, private investors, and the affected communities.

Scholars have examined the dynamics of megaprojects, protests, and consensus-building within urban governance. Insights from urban studies and political science highlight the need for inclusive decision-making processes that consider the diverse perspectives of the local population (G. Esposito et al. 2023; Flyvbjerg 2014; Innes 1995; Lucciarini and Galdini 2023). This emphasis on inclusivity underscores the importance of understanding and addressing the protesters' concerns to foster a more collaborative and sustainable approach to urban development (Beveridge and Koch 2017). These factors define smart megaprojects in smart cities using the vast data available to urban governments. However, planners use such data and criteria in politically oriented ways to consolidate and broaden political consensus on the one hand and build networks of power (i.e. economics and lobbying) intensely on the other. In the case of megaprojects, management and implementation are caught up with political factors, as the case study we present here demonstrates.

4. Methodology and data

This article offers an assessment of the process surrounding the construction of a waste-to-energy plant in Copenhagen and its contribution to the city's evolution as a smart city. It is based on an individual case study and multiple sources and adopts the specific criteria suggested in recent literature on narratives of megaprojects (Flyvbjerg 2014; Seergeva and Ninan 2023; Seergeva and Winch 2021; Shenhar and Holzmann 2017). Our analysis seeks to map the different narratives (policy and political) proposed by two local political coalitions, one in favour and the other against the construction of a waste-to-energy power plant -named Copenhill- reconstructing the process that led these two opposing positions to converge. To chart this process, we have used the Narrative Policy Framework (Jones and McBeth 2010), an approach that attributes a central role to policy narratives in the policy process. The Narrative Policy Framework has proven instrumental in understanding megaprojects' intricate dynamics and decision-making

processes. Studies employing the Narrative Policy Framework shed light on the influential role of narrative construction by policymakers in shaping the discourse surrounding megaprojects and steering their implementation (F. Esposito, Taffoni, and De Paolis 2021).

Given the 'persuasive' capacity of such narratives, the Narrative Policy Framework considers them a reliable research object for unearthing consistent elements in strategies and logic of action (Shanahan, McBeth, and Hathaway 2011). Recent studies show that at the micro-level of analysis, narratives influence individual attitudes and, by extension, aggregate public opinion. At a meso-level, it is possible to observe how policy narratives can promote policy change and outcomes through influences over coalition composition. We investigate the *meso* level to understand the political narratives. Shanahan, Mcbeth and Hathaway (2011) elaborate on the distinction between political narratives and policy narratives, stating that while political narratives serve as persuasive stories to achieve a political objective, policy narratives aim to achieve a specific policy outcome, often conveying a moral message. We propose to investigate the presence of various political narrative strategies that seek to broaden or restrict the policy subsystem, addressing ideological concerns and identities that can hinder or facilitate policy learning across different coalitions.

Political narratives are 'grand' stories that political leaders tell directly to the public and the electorate. Their primary goal is political consensus (Capano, Galanti, and Barbato 2023). Through a qualitative analysis of relevant documents, articles, and reports, we understand how policymakers and stakeholders are oriented regarding the values and beliefs of the narratives (policy narratives). We investigate to what extent narratives are strategic by political actors in their attempt to influence the coalition, contribute to change, and affirm the policy process (political narratives).

Based on these theories, we have identified the plots of the divergent narratives deployed by political factions in the case of Copenhill and tracked the process through which these narratives converged so that the project could be approved. In our case study, this methodology helps us recognize the contrasting narratives (pro-green, pro-growth) put forward by the two parties to build public consensus. We can track how actors could use these narratives to construct a cross-party coalition because they were congruent with the values promoted by both the pro-growth alliance and the pro-green one. This polysemy helped bring about a convergence of views around Copenhill.

The investigation was based on a wide range of secondary sources, such as:

Table 1. Sources used for narrative policy analysis.

Type of source	Names of sources
Media Dossier and Reports (journal/data)	Affold 2/2010
	Berlingske Tidende 7/2012
	Ingen oren 4/2012
	Bloomberg 22/2018
	Energy Supply 6/201
Public Communications of stakeholders	TEA 3/2011
	TEA 11/2011
	TEA 9/2012
	HOFOR 2018
Official Reports and background material	ARC 2012
	CEVEA 2017
	TEA 2011
Municipal City Council communication	City Council 11/2011
	City Council 12/2011
	City Council 4/2012
	City Council 2/2017
	Climate Plan 2012

TEA: Technical and Environmental Administration; HOFOR: Hovedstadsområdets Forsyningsselskab.

(1) Technical reports by the actors tasked with assessing the feasibility of the project;
(2) Online newspaper articles reporting on the course of events;
(3) Materials on this subject published on the Copenhagen City Council website, such as transcribed interviews with political actors collected during the discussion process and after its realization;
(4) Ad hoc studies and analyses of the project approval process.

A comprehensive list of the sources utilized can be found in Table 1.

5. Copenhill, from design to approval

Copenhagen is the largest city in Denmark, with almost 2 million people living in its greater metropolitan area. Once an industrial city, the capital has become highly advanced in knowledge, business, technology, and quality of life. 2014 Copenhagen was awarded the prestigious World Smart Cities Award in Barcelona for the 'Copenhagen Connecting' concept. It is also a cultural centre with many universities and numerous research institutes. Copenhagen aims to become the world's first zero-emissions capital by 2025. National and local governments have vigorously supported these ambitious targets and encouraged the development of innovative and efficient solutions in transport, waste collection and disposal, water management, heating, and the promotion and use of alternative and renewable energy sources. The case of Copenhill is emblematic of the trajectory through which Smart Copenhagen has been constructed, and many people see it as the symbol of this process and an iconic piece of architecture. The Copenhagen project won a call for tenders launched in 2009 by ARC, the public energy company (Amager

Resource-center). ARC is an inter-municipality organization involving five cities (Dragør et al. and the City of Copenhagen), each with a representative sitting on the board. Representatives of the city councils are also part of the company board, with all the cities fielding one representative except for Copenhagen, which has two. This system, in which inter-municipal public and non-profit companies are the leading players in multi-energy management, results from Denmark's national energy plan since the 1970s to set up its public heating supply system. In 2009, ARC called for projects to design a new waste-to-energy plant to replace the previous one. The winning proposal, submitted by the Bjarke Ingels Group (BIG), is 'hedonistic sustainability': the power plant and the waste-to-energy complex incorporate a ski slope on the complex's rooftop. The centrepiece of Copenhill is the waste incineration facility, designed to convert municipal solid waste into energy. What sets this project apart is a striking artificial ski slope on the roof, creating a unique blend of utility and leisure. The Amager Resource Center addresses waste management needs and contributes significantly in its narratives to Copenhagen's commitment to carbon neutrality.

The ski slope, known as the Copenhill Slope, beyond skiing, offers panoramic views of the city, encouraging community engagement and promoting environmental stewardship. Additionally, Copenhill features a climbing wall and hiking trails, making it a multifunctional urban space that encourages physical activity and social interaction (Nordestgaard and Arndt 2019).

Copenhill's architectural and functional brilliance aligns with Denmark's emphasis on sustainability, renewable energy, and public well-being. The project reflects a paradigm shift in how cities approach infrastructure development by transforming a waste-to-energy plant into an urban recreational hub. In the first phase of constructing the power plant, ARC requested a loan guarantee of 3.95 billion DKK. These approximately 330 million euros had to be approved by each city council of the partner cities. The request was presented to the city councils in January 2011 and approved in October 2012. Copenhagen was the last

city council to approve this project and the site of a wide-ranging national debate. The request split the Copenhagen' city council in two, leading to the formation of two distinct coalitions, a 'pro-growth' one in favour of the power plant and a 'pro-green' one opposed to it (see Fig. 1). This division reflects the project's complex political and policy narratives, with various stakeholders advocating for different outcomes based on their priorities and beliefs. At the national level, political support for the coalition in favour of Copenhill came from the Social Democratic finance minister Corydon, trade unions, and industrialists who emphasized the economic and job-creation advantages of the project. The coalition opposed the power plant and was supported by the environment minister Auken from the Socialist People's Party, a large group of environmental associations, and the TEA, The City of Copenhagen's Technical and Environmental Administration.

In the autumn of 2011, the latter drafted a highly critical report on the feasibility of the waste to energy power plant: according to TEA calculations, the amount of waste production was insufficient to power the plant and disadvantageous for the Environment. After receiving this report, the Copenhagen city council temporarily suspended debates about the financing of ARC while the newly-elected centre-left national government took office on 15 September. The divide between the two coalitions' positions was initially even deeper (Pedersen 2011). The first step toward possible reconciliation was made at a meeting between TEA and ARC members. The critical turning point was redesigning the incinerator with a smaller waste capacity. This redesign resolved the disputes by balancing the needs of the public company that wanted to increase capacity and the guarantor of the energy plan in Copenhagen, which wanted to keep the plant small. A lengthy communications series in national and local newspapers (see media sources in data and media section) reported this encounter between the two coalitions. Prominent representatives of the two factions praised the project's ability to overcome disagreements to improve quality of life and
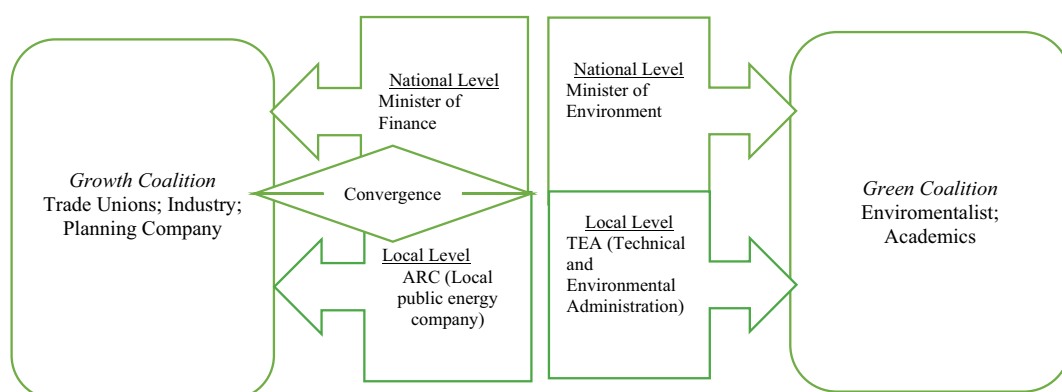

Figure 1. Initial coalition of interest in the Copenhill case. Source: Authors' elaboration on Kohl and Andersen (2022)

Table 2. Adopting Mishler's model of narrative analysis in the Copenhill case.

Steps	Methods	Categories
1. Reference and temporal order	A) Reconstructing the told from the telling **Narratives and Actors**: TEA was against the plant for its exaggerate size "Copenhill will be an economic disaster and jeopardize the city's goal to become carbon neutral" (Press release, see Kohl and Andersen 2022) B) Imposing a told from the telling **Narratives and Actors**: ARC and Local Mayor promote a big waste to energy plant: "The plant will be one of the world's most environmentally-friendly incineration plants and will provide a showcase for Danish green technology. It will contribute to export and green, sustainable growth" (Press release see Kohl 2018 and Bredsdorff 2012)	Until 2011: A) By each faction in media Dossier, the effort is to reconstruct the "told" (i.e. Communications of stakeholders and technical reports) and tune it with their position pro-growth or pro-green After 2011: B) In media Dossier and Reports and in Communications of stakeholders have developed a kind of "imposition" of the excellent impact of the waste to energy, reconstructing a positive narrative over the negatives spread in the past
2. Textual coherence and structure	– Textual "poetics": figuration, tropes and style – Discourse linguistic **Narratives and Actors**: Before 2011 Technical documents (TEA, ARC) considering pros and cons; After 2011 meta-discourse: the waste to energy is "a crystal clear example of hedonistic sustainability – that a sustainable city is not only better for the environment – it is also more enjoyable for the lives of its citizens" (Press release BIG)	*In stakeholder's Communication*: Until 2011 – Technical style and cost/benefit projection; scientific discourse After 2011 – Focus on the immaterial benefit of the waste to energy; ideological discourse.
3. Narratives functions	A) Narrative and culture: myths, rituals, performance B) Storytelling in interactional and institutional contexts C) the politics of narrative: power, conflict and resistance **Narratives and Actors**: TEA changes the comments on the technical reports: Copenhill turns into a sustainable plant	*Context and consequences*: (A) Until 2011: growth and green as antagonist After 2011: growth and green as two objectives to pursued jointly (B) Until 2011: opponents parties After 2011: fruitful coalition for a greater good (C) Until 2011: ConflictAfter 2011: Coalition

Source: Authors' elaboration on Mishler (1995).

ensure a more effective energy supply, emphasizing that the megaproject reflected both business interests and environmental concerns. The climate of 'war' (Kohl 2019) that had characterized the political debate during 2011 and in the first months of 2012 turned into a consensus around Copenhill. The consensus-building was driven by statements from the mayor of Copenhagen in support of the power plant, as well as by agreement among citizens expressed through social media platforms and other media sources. Additionally, it was supported by alignment with the national carbon-free programCitizens were attracted to the project by its 'hedonistic' dimension, combining social, environmental, developmental, leisure-time, and sports aspects.

However, despite her initial opposition, the minister for the environment found her party's rejection of her stance so firm that she was compelled to change her position. She resigned from her political position, as she was not fully aligned with the 'new' belief in the fleshing-out narrative growth-and-green.

6. Discussion on the building of cross party-coalitions through smart city polysemic values

This section focuses on how actors adopt policy beliefs from other actors to form and maintain coalitions. In such a temporal network, learning about policy beliefs matters in complementary ways: We focus on innovation in cross-party coalitions through bridging relationships.

We begin by adopting Mishler's model of narrative analysis to synoptically examine three primary

narrative aspects: time, texts, and functions. Subsequently, we delve into *micro* and *meso* levels using the narrative policy framework to enhance our understanding of political and policy narratives. As Table 2 shows, we reconstruct the temporal order, dating to 2011, the boundary between the separation and fleshing out of the political positions (step 1 in Table 2), which corresponds to a shift from a technical approach to an ideological one (step 2 in Table 2), and the consequences of the narratives in the passage from conflict to the coalition (step 3 in Table 2).

Using Mishler's model allows us to explore alterations and blends in narratives by concentrating on three essential aspects: the connection between temporal sequences of events and their narrative portrayal, the coherence and structure of the text, and how these are accomplished through narrative techniques, and the psychological, cultural, and social contexts and roles of narratives. This form of analysis enables us to focus on narratives and pinpoint pivotal moments in storytelling. Additionally, integrating the narrative policy framework aids in recognizing, arranging, and comprehending concepts and their interconnections within the policy process.

6.1. The meso-level of the narrative policy framework

Coalitions are formed on a two-fold foundation: on the one hand, trust in familiar actors and, on the other hand, trust in the congruence of one's belief system combined with the transitive nature of other actors'

belief systems. However, the meeting point between coalitions depends not only on the existence of a minimum level of trust between actors but also on minimising the risk of adopting incompatible political beliefs by facilitating some congruence among such beliefs. Actors only adopt other actors' political beliefs if 'those other actors have a minimum degree of belief congruence with the focal actor' (Leifeld and Brandenberger 2019). In our case, each coalition members could perceive this compatibility thanks partly to the crucial role played by the tuning between the Copenhagen city council and the national policy. Copenhill is seemed to contribute positively to the city's carbon neutrality plan, strongly promoted at the national level. This process helped form new advocacy coalitions through two mutually reinforcing rather than exclusive mechanisms, using policy and political narratives rooted in the polysemic of the smart city idea.

6.2. The micro-level of the narrative policy framework

The first of these mechanisms is cross-cultural fertilisation, which occurs through the reinterpretation and systematisation of different cultural and value-oriented constructs among previously separate social groups. The second is the consolidation of the community through a community-building process stemming from recognising common interests. This consolidation can happen whether such interests are based on a cultural narrative or a more politically interested one (or something in between). The primary outcome of this process is the construction of cross-party coalitions through which state and market actors can more easily carry out projects via PPP (public-private-partnership) cross-collaboration, recognising that the contours and configuration of such groups tend to change from project to project (Foss, Klein, and Bjørnskov 2018). In the case presented here, the polysemy of smart culture favoured this complex process. The pro-growth and pro-green coalitions recognised themselves in the same artefact: the Copenhill megaproject. Both coalitions could maintain their expressed values and basic underlying assumptions precisely thanks to the smart culture paradigm's ability to flesh out various dilemmas, as outlined at the beginning of this paper.

The political discourse was also based on two modes of communication, following Schmidt's (2008) scheme: 'coordinating discourse' and 'communicative discourse' between political actors and the public. While coordinating discourse consists of ideas, narratives, notions, and frames that political actors exchange during policymaking, communicative discourse involves political actors' presentation of political ideas. This latter model seeks to convince the public of the appropriateness and necessity of the ideas in question. In the case of Copenhill, while maintaining each coalition's emphasis on the area most significant for its constituency, the megaproject achieved broad consensus by becoming a symbol of sustainable development and a more 'global' Copenhagen. The debate around the megaproject represented a 'focusing event' (Kingdon 2003), an element of the agenda-setting process in which some issues gain and others lose attention among policymakers and the public. Involving and empowering citizens about specific collective urban issues, such as Copenhill, also entails learning and social cooperation (De Lange and De Waal 2013).
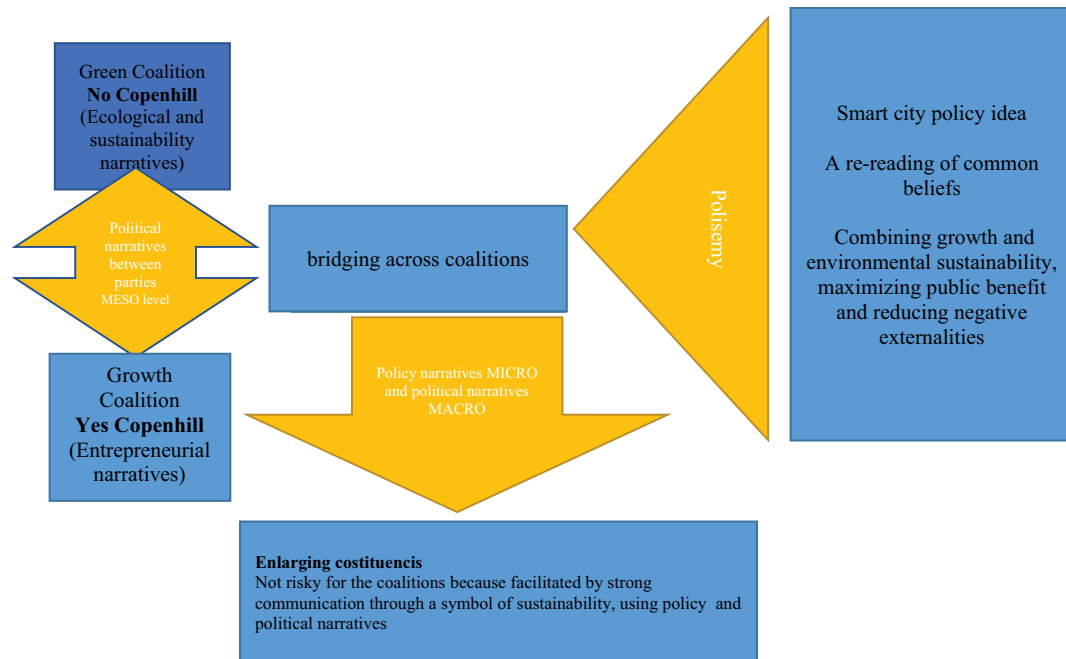
6.3. The cross-party coalition-building process

The polysemy of the smart city policy idea in public policy discourse made it possible to include the pro-green rhetoric in the pro-growth one. In this case, the combination prioritised growth and development rhetoric and sidelined ecological concerns in the urban agenda and imagery built around the megaproject. The building was recognised in Time Magazine's Top 50 most inspired ideas, innovations, and Revolutions of 2011. This agreement was achieved by integrating the values at the foundations of the two coalitions and highlighting the common aspects easily understood by citizens through the iconic image of the waste to energy plant.

Academics have used the analysis of political narratives as a methodology to understand the process of urban policy implementation, in particular, how key actors exercise power. This process is mapped in Diagram 1, which is defined as building a cross-party coalition.

The organizational processes of the Copenhagen Smart City initiatives have entailed creating complex relationships among different stakeholders. However, the local government, particularly the mayor of Copenhagen, has played a pivotal and instrumental role in steering these initiatives. Acting as a broker (Burt 1992), the mayor has effectively mediated between the two coalitions and engaged with the citizenry, underscoring the significance of key stakeholders in such projects.

The action net is not just about setting up physical and virtual spaces for citizens and stakeholders to exchange ideas and collaborate. It also has a dual aim: to build the legitimacy of the public actor and construct collective goods, aligning with the 'green' narrative of the smart city, and to create attractive investment opportunities, in line with the 'market' narrative of the smart city. This balanced approach underscores the comprehensive nature of the smart city initiatives.

Diagram 1. The cross-party coalition-building process through political and policy narratives. Source: Authors' elaboration

7. Conclusion

The Copenhill project initially divides the policy arena between proponents of a pro-growth rhetoric focused on market strategy – advocating for a larger plant to expand market scope – and proponents of a pro-green rhetoric embracing sustainability, questioning the adequacy of the plant's size – and highlighting potential negative trade-offs of a big plant. Often regarded as an external element, the uncertainty surrounding concepts has been perceived as an assumed element crucial to the strategic actions of actors (Lucciarini and Galdini 2023). Communication is increasingly important in shaping cities due to its relevance in policymaking. The narrative policy framework reveals how policy and political narratives influence policy outcomes in the scientific debate. Through qualitative analysis, we explore the trajectory through which such narratives work and evolve with a twofold perspective.

On the one hand, we highlight 'polysemy', a term referring to the existence of multiple meanings, as one explanatory element through which various and conflicting interpretations are disseminated among a diverse array of actors. We demonstrate how this polysemy operates within political and policy narratives, particularly in facilitating cross-coalition building. By considering polysemy as a tool to address smart city actions and establish political consensus, we illustrate how implementing policy ideas relies heavily on constructing narratives that political decision-makers use to advocate for specific policies (policy narratives) presented within a broader institutional discourse in the political arena (political narratives). In doing so, we aim to contribute to the institutional discursive debate,

stressing the relationship between policy and political narratives, a relation often overlooked.

On the other hand, the choice of the case study aims to stress the link between discursive analysis and environmental policy. While discourse analysis has become established as a framework for policy analysis, environmental policy discourses have also evolved over the past two decades (Leipold et al. 2019); ecological modernization discourses remain prominent but are continually reinterpreted, such as through the emergence of 'green', 'circular', or 'bio-economy' discourses (Bugge, Hansen, and Klitkou 2016). The Copenhagen waste-to-energy gained broad acceptance, becoming a symbol of sustainable development and a more 'global' city. Both political parties reconfigured the green and market policy narratives. They came together to make a unified coalition, thus determining the policy outcomes, where local and national programs converge in promoting political narratives rooted in the sustainability quality associated with Copenhill. This study assesses how the polysemic nature of policy ideas influences contemporary social institutions' governance, structure, and operation, posing a challenge for environmental public management in today's cities.

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