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GLOBAL SMART CITY DISCOURSE IN THE MAKING

Epistemic governance approach to smart city rhetoric

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ABSTRACT

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During the past few decades smart cities have started to become established all around the globe. They have risen in all places from Helsinki to Singapore, and from Vienna to Sydney. This study will aim to analyse the existence of the smart cities by exploring the global discourse surrounding them. This will be done through the examination of the tasks and challenges that the ten chosen smart cities have set for themselves. These tasks and challenges are approached as reference points, in other words moral obligations and viewpoints, which the chosen cities need to refer and appeal to in order to present themselves as legitimate and credible smart city actors in the field in which they are active. Drawing on the epistemic governance framework as a theoretical background for this research, this study will explore the global discourse around the chosen cities by focusing on the ground-level rhetoric and the way it acts to underline the credibility and legitimacy of the analysed smart cities.

The empirical data used in this study consists of the websites of the ten chosen smart cities. These websites will be approached as 'virtual documents' that are analysed qualitatively. By applying the method of critical discourse analysis, as designed by Norman Fairclough, to these documents, this study will aim to analyse the tasks and challenges set by the chosen cities for themselves and thus examine the limits set for them by the global discourse. Through this method, what was found was that particularly the tasks but also the challenges were widely shared among the examined smart cities. These results could be argued to show that while there is no definite definition for what smart cities are or what they should do, the surrounding global discourse around them could be claimed to be notably unified. The ten chosen smart cities seemed to appeal and refer to notably similar reference points in their quest to come across as legitimate and credible smart cities.

Based on these results one could make the argument that instead of the readymade models diffusing, as is argued by the world polity theorists, it is the global discourse that is diffusing and setting the rules for how smart cities should bring themselves across as legitimate and credible. Furthermore, throughout this process the cities keep a close eye on one another while at the same time trying to maintain the image and the experience of unique and locally focused smart city projects. Moreover, it is argued here that all these ways of discussing smart cities are part of the global discourse that determines how smart cities can be construed and discussed. Overall, this study sets out to bring forward a different viewpoint in relation to the diffusion theory, by exploring the global discourse around smart cities, and by analysing the way smart cities rely on certain reference points in order to bring themselves forward as credible and legitimate actors.

Keywords: smart cities, rhetoric, epistemic governance, critical discourse analysis, websites, global discourse

The originality of this thesis has been checked using the Turnitin OriginalityCheck service.

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1. Introduction

The Helsinki-Uusimaa Region is a forward-looking problem solver. The United Nation's Sustainable Development Goals, ambitious climate targets and sustainable growth are the basis for our research and innovation activities

- Helsinki Smart Region, 2022

The above extract is taken from the website of Helsinki Smart Region. The region serves as just one example of the hundreds of smart cities that have been established around the world during the recent decades. One could argue that the spread of smart cities is one distinct characteristic of the ongoing globalisation and the increasing worldwide interconnectedness which renders the world 'smaller' place due to new communication and transportation technology as well as the worldwide spread of capital, material goods, and various cultural forms (Drori et al., 2003, p. 44-45).

When it comes to globalisation and its effects, one particularly distinct perspective is offered by world polity theorists. They argue in favour of a shared 'global culture' (Boli and Thomas, 1997, p. 173) which is conceptualised as shared cognitive frames and understandings, and the notion that many local and national actions are actually defined through globally diffused policy models (Drori et al., 2003; Meyer et al., 1997). From this perspective, smart cities could also be argued to spread, not because of any need in the local context, but rather because the cities are ritualistically taking on and copying readymade models in a conformist manner (Meyer et al., 1997; Meyer, 2004).

However, in this study, this view of cities as unthinking 'conformists' (Meyer, 2004, p. 42) copying and taking on readymade models will be questioned on two fronts. First, it is argued that cities cannot bring themselves forward as credible and legitimate smart cities simply by calling themselves that. Rather they have to continuously construct and bring themselves forward as credible actors, who are appealing and making references to valid reference points, viewpoints to which one can legitimately refer to when bringing themselves across as a smart city. Second, what is also claimed here, is that it is not the ready-made models that are diffusing. Rather, it is the discourse, the way we are allowed to discuss something, the set of rules for comprehending and construing a phenomenon, that is diffusing and spreading. Each new city, in presenting themselves as a smart city, influences this legitimate way of talking and thus plays a role in constructing the legitimate model of a smart city.

With this in mind, this research will study the websites of ten smart cities in order to examine how these cities build their legitimacy and credibility from the ground-level up. The interest is on these

cities' ground-level rhetoric and how it acts to highlight their credibility and agency in the eyes of their audience and the field in which they are active. What is of particular interest here are the challenges and tasks that the chosen smart cities have set up for themselves. It is these tasks and challenges that are, in this study, brought forward as the reference points, the points of view that cities are expected to follow in order to come across as credible and acceptable smart cities.

Overall, drawing on existing literature and the findings of this study, this thesis will set out to suggest that these tasks and challenges and the discussion surrounding smart cities is part of how smart cities are born. Moreover, these ways of talking are part of the global discourse, within the limits of which smart cities are to be imagined and construed. In order to further explore this global discourse, this study will examine the way that the ten chosen cities act to legitimate themselves and present themselves as credible smart cities. In other words, this study will aim to analyse the elements of this global discourse in order to show how smart cities use this shared discourse to justify their reasons for being smart cities. Before going into more detail about the goals and arguments of this study, it is important to examine the rise and origins of smart cities, and how they have become such a global phenomenon.

1.1. The origin and rise of smart cities

According to Albino et al. (2015, p. 4), the term 'smart city' was first used in the 1990s. The focus back then was on the significance of new ICT with regard to modern infrastructure within cities. The California Institute for Smart Communities was considered to be amongst the firsts to examine how communities could become smart and how a city could be designed to implement information technologies (Alawadhi et al., 2012, as cited in Albino et al., 2015). Anthopoulos (2017) has also retraced the beginning of smart cities to the 1990s, particularly to the year 1994, and to the launches of the digital city of Amsterdam as well as that of the Geneva metropolitan area network. Afterwards, during the first years of the 21st century, the term smart city diffused as what Albino et al. (2015, p. 4) call an 'urban labelling phenomenon'. This could be seen in the emerging portfolio of available smart products, an extensive network of cities self-claiming to be smart, an increasing amount of city alliances and think tanks, as well as in several standardised bodies aiming to clarify the smart city domain (Anthopoulos, 2017, p. 128)

Nowadays, it could be argued that smart city has become the go-to term for cities planning for their future urban developments. Cities from Helsinki to Singapore and from Dublin to Cape Town have started their own smart city initiatives and in 2013 there were about 143 self-designated smart-city projects in the world; 35 in North America, 47 in Europe, 50 in Asia, 10 in South America and 10 in

Middle East and Africa (Vanolo, 2016; Gil et al., 2020; Albino et al., 2015). During the recent decade, this number can be expected only to have continued to grow, as more and more cities have started to promote their own smart city projects and initiatives all around world.

At the same time as smart city initiatives have grown in numbers, they have also started to gather increasing interest from academics and researchers. As will be later discussed in this thesis, much of this literature has focused on one of three questions: defining what smart city means as a term (see for example Albino et al., 2015; Hollands, 2008), criticising the idea and the notion of smart cities (see Hollands, 2008; Viitanen and Kingston, 2014; Caragliu and Del Bo, 2019), or looking at specific structural or governmental aspects of smart cities (see for example Gil et al., 2020; Viitanen and Kingston, 2014; Kitchin et al., 2017).

This thesis will not take part in these three well-worn areas of research. Rather, this thesis examines the rhetoric surrounding the smart city. More specifically, I look at how the cities construct themselves as credible smart city actors in the field in which they are active. To do that I examine the websites of the smart cities and the challenges and tasks put forward in them. By doing so, I wish to contribute to further theories surrounding the diffusion studies as well as the research concerning the interdependence of national policies. Furthermore, I wish to open up the role of smart cities' websites in informing and defining smart cities' credibility and agency in the field in which they are active.

1.2. Websites and ground-level rhetoric

Despite the arguable importance of the smart cities' websites in informing different audiences about smart cities' aims, actions and development plans, there are still only a very limited number of studies looking into these websites and their rhetorical content. Lnenicka and Saxena (2021) have looked and examined the extent to which open government data standards are being adhered to on the smart cities' websites, while Anthopoulos (2017) has used websites as one dimension in his examination of ten smart cities and the way they reflect the questions around smart cities versus smart utopias. Overall, however, smart cities' websites remain largely ignored in terms of data use in smart city related studies and research.

This study starts from the premise that the smart cities' websites have a notable role in building up smart cities' credibility and legitimacy in the eyes of their audience. In this way, focusing on the websites also enables the analysis of how the smart cities present themselves as legitimate within the limits of the global discourse. Since it is widely accepted that smart city is notably hard to define as a term, these websites could also be argued to have a significant role in defining smart

cities, their aims, goals, and development plans for their audience. In this way, one could argue that when it comes to questions around credibility and legitimate ways of presenting oneself, smart cities' websites are a logical and widely over-looked place to start.

The focus here is on conducting a discourse analysis of the ground-level rhetoric of these websites and on examining the way this rhetoric acts to define the tasks and challenges, in other words the reference points, for the chosen smart cities. As noted by Bryman (2012, p. 684) 'the study of rhetoric is fundamentally concerned with the ways in which attempts to persuade audience are formulated'. When it comes to rhetoric in the study of smart cities, former studies have examined, among other things, the allure of the rhetoric and vision of future cities (Watson, 2015), the way this rhetoric acts to sell a city to global economy (Wiig, 2016), the ways in which the rhetoric acts as a mean of ideology reproduction (Bär et al., 2020) and the way that studying this rhetoric can help to understand different understandings of smart cities (Baraniewicz-Kotasińska, 2022).

One could argue that what is missing in these former studies is the analysis of how smart city rhetoric acts to underline and reinforce the agency and credibility of these smart cities in the eyes of their audience. In this particular study, the questions are how can cities prove their credibility and legitimacy to those they want to impress and to those who might be interested in investing in them, as well as how do the chosen cities contribute to and change the legitimate way of bringing oneself across as a smart city. Thus, here the focus is on exploring the global discourse around smart cities by analysing the tasks and challenges which the chosen cities use to bring themselves forwards as credible and legitimate actors.

1.3. Epistemic governance and critical discourse analysis

In order to explore the global discourse and to analyse the questions around the credibility and legitimacy of smart cities, this thesis will draw on the broad analytical framework of epistemic governance. Epistemic governance is based on the notion that actors aim to bring about change by acting on others' views and conceptions of the surrounding reality (Alasuutari and Qadir, 2019). Basing much of the study on the analytical framework of epistemic governance will help in analysing how smart cities as actors aim to bring forward and reinforce their credibility and legitimacy in the eyes of their audience. The framework's focus on knowledge claims and rhetoric as well as the way actors seek to convince others about the best course of action will be a great help in examining the way smart cities aim to underline their credibility and legitimacy in the eyes of those they are seeking to convince and impress through the examined reference points. In other

words, it will make it possible to analyse the ways in which smart cities use the shared global discourse when trying to explain to others why they are, and why they should be, smart cities.

Methodology wise this study will lean on the method of critical discourse analysis as defined and described by Norman Fairclough. Fairclough describes critical discourse analysis as consisting of the ‘analysis of the dialectical relationship between discourse and other elements of social practices’ (Fairclough, 2003, p. 205). Critical discourse analysis is also strongly influenced by the works of Michel Foucault in that it aims to link language and its modes of use to the significance of power and social difference in society (Bryman, 2012, p. 528).

For Foucault, discourse was a term which denoted the way in which a particular set of linguistic categories relating to an object and the ways of depicting it frame the way we comprehend that object (Bryman, 2012, p. 528). From this Foucauldian perspective, in the words of Alasuutari (2022), ‘culture consists of a set of discourses within which people reflect on and debate things’. Bringing in Foucauldian understanding of discourse, knowledge and power will help in examining the way that smart cities aim to build up their legitimacy and bring across their credibility through their rhetoric. In other words, this analysis will make it possible to look at the central tasks and challenges and their role in giving smart cities credibility in the field in which they are active. Furthermore, bringing in this Foucauldian understanding enables the study to focus on the discourse around smart cities and analyse the way that the chosen cities reflect and contribute to the global discourse concerning them.

1.4. The structure and the content

This thesis will begin by going through previous research and literature in two parts. The first (1) part will examine literature around smart cities and the research that has been conducted concerning them, while the second (2) part will focus on institutional isomorphism and world polity theory, with the focus being on what they have to say about cultural rationalisation and modern actor. The second part will also examine the notion of smart cities as interested actors that are building up their credibility and legitimacy.

After this, the text will go on to introduce and discuss the research design for this particular study in the form of the research questions, the theory behind the study, the data and websites as a data source, as well as the methodology of critical discourse analysis. Following this, the thesis will move on to discussing the findings from the analysis to show and examine what tasks and challenges the smart cities have set up for themselves in order to analyse the ways in which the smart cities build up credibility and legitimacy by appealing to certain reference points. The

findings section will then be followed by the discussion and conclusion section linking the findings to the surrounding literature and research and briefly discussing the limitations of the study as well as the directions for future research.

2. Literature review on smart cities

The literature around this research can be roughly divided into two distinct strands. The first one centres around smart cities, the term's origin and definition, as well as the research that has already been conducted concerning them. The second strand is made up of the writings around institutional isomorphism, world polity theory, the global discourse and the view they offer when it comes to the existence and legitimacy of smart cities.

2.1. Smart cities – cities as centres of innovation, technology and knowledge

2.1.1. Smart cities and their definition

As more and more cities around the world have begun to enact smart city related policies and plans, smart cities have also started to attract increasing amount of attention from researchers both from in and outside of social sciences. Much of this literature still tends to focus on seeking to explain and define the concept, with continuous new takes on what smart cities are, what they are not, and what they should be. Indeed, the only thing that seems to connect these various attempts to define smart cities, is the agreement that there is, as of yet, no common definition of a smart city (Grossi and Pianezzi, 2017, p. 79).

As noted by Albino et al. (2015, p. 4) smart city is a 'fuzzy concept' and its uses tend to vary depending on the situation, the study context and the writer. From this perspective, the concept of smart city could be argued to resemble that which several writers have called a 'floating signifier', a concept that is non-fixed and is open to different meanings in different contexts (Farkas and Schou, 2018; Isoaho et al., 2019). Haarstad (2017, p. 424) goes as far as to call smart cities 'empty signifiers', meaning that the concept is virtually void of any substantive meaning.

While there is no common or widely accepted definition of smart cities, this study will aim to use the concept so that, while taking into account the difficulty in defining the concept, it also will use some of the most widely accepted themes to give the concept at least some specific meaning. The researchers around the term have noted that creativity can be recognised as one of the key drivers of smart cities, and thus education, learning and knowledge tend to have central roles in them (Albino et al., 2015; Thuzar, 2011). Indeed, it could be argued that what seems to connect many of the descriptions of smart cities is the notion of them as centres of innovation, technology and

knowledge (Batty et al., 2012; Albino et al., 2015; Alderete, 2020) and it is this definition of smart cities that will be used in this study from here on in.

2.1.2. Research into smart cities and their policies

In addition to defining and explaining the concept of smart cities, more and more of other types of analysis and discussions has also begun to come forward. When it comes to these new perspectives, a fairly large number of authors have sought to criticise smart cities. For example, Hollands (2008) is worried about the labelling process, arguing that it might play down the potential negative effects of the developments. He has also argued that the emphases on business-driven technology and gentrification could lead to the overlooking of other important issues, such as class inequality (Hollands, 2008, p. 312).

Viitanen and Kingston (2014), on the other hand, see smart city strategies and the technological orthodoxies which they rely on as empirically and conceptually shallow, and are worried about the unintended consequences and how they could act to exacerbate already existing inequalities. Meanwhile Caragliu and Del Bo (2019) highlight the lack of bottom-up approaches and are worried about the general disregard for local conditions while Grossi and Pianezzi (2017) call into question the definition of smart cities as concrete utopias and highlight the neoliberal ideas and values that tend to underpin the concept.

In addition to critical reviews, authors have also sought to analyse the organisational structures of smart cities, the workings of their various policy fields, as well as detailed analysis of their technological and digital workings (see for example Gil et al., 2020; Viitanen and Kingston, 2014; Kitchin et al., 2017). Kitchin et al. (2017), for instance, have examined what they call a new set of urban technocrats. In relation to this, they describe the existence of a new smart city epistemic community, a network of knowledge and policy experts that share a worldview and a common set of normative beliefs (Kitchin et al., 2017). Meanwhile Gil et al. (2020) have discussed smart city related business opportunities and the possibilities for collaboration between private and public sectors. They have examined how in smart city projects all stakeholders, including organisations, institutions and universities can contribute and create a network together (Gil et al., 2020).

From above one can note that smart city literature tends to focus on one of three things: definition, criticism and structural phenomena. When it comes to explaining the spread of smart cities, this has often been linked to functional requirements and been explained by the need for cities to take part in solving their surrounding local and transnational problems and issues. For example, in the article by Albino et al. (2015), it is noted that cities play a prime role in social and economic aspects

worldwide and have a considerable effect on the environment. From this perspective, cities play a key role in helping to solve the problems that they are also seen as responsible for causing.

However, among smart city literature, there are also other perspectives in relation to this, with some researchers seeing smart cities as being spread by private firms and major multinational corporations, who have an interest in the adjacent technologies (see for example Caragliu and Del Bo, 2019; Viitanen and Kingston, 2014; Alderete, 2020). Furthermore, Viitanen and Kingston (2014) have argued that global institutions such as World Bank, World Economic Forum, OECD and EU have backed digitising infrastructures in order to help ensure and support environmental sustainability and economic growth. This could be argued to highlight the role of various international organisations in supporting and enhancing smart city endeavours.

Overall, smart city literature has grown quickly and continues to bring in new insights concerning cities and their smart city centred projects. What this study aims to do is to add to this literature by exploring the global discourse around smart cities. Considering how fast and how wide smart cities have spread around the globe, it is crucial to understand and analyse the set of rules that seem to govern the way smart cities present themselves. This is all the truer considering the difficulties researchers have had in trying to define smart cities. In this thesis, exploring the global discourse is done by focusing on analysing the questions around the credibility and legitimacy of smart cities. The aim is to analyse how these cities construct themselves as credible smart cities through their own active rhetoric on their websites. By exploring the tasks and challenges as reference points that the smart cities appeal and refer to, it becomes possible to examine the global discourse that sets the limits for how smart cities can present themselves as credible actors in a given time, hence also informing the form of a global smart city model.

2.2. Smart cities, institutional theory, world polity theory and the global discourse

2.2.1. Smart cities, institutional theory and institutionalised organisations

When it comes to the question of why so many cities are taking similar steps on their way to become smart cities, one explanation could be found in the writings of DiMaggio and Powell. In their text ‘The Iron Cage Revisited’, they seek to explain the homogeneity of organisational forms and practices. DiMaggio and Powell (1983) argue that bureaucratization and other forms of organisational change occur in such a way that they make organisations become more similar without necessarily becoming more efficient. Furthermore, as innovation spreads, a threshold is reached where adoption of various practices provides legitimacy rather than efficiency or any other

type of improvement in the performance (Dimaggio and Powell, 1983, p. 148). From this perspective, organisations are not becoming more similar because they believe that they can learn to improve their performance by watching others. Rather, they are becoming more similar because they seek legitimacy within the field in which they are active.

Similarly, Meyer and Rowan (1977) have argued that institutional rules function as myths which organisations incorporate, and through this gain legitimacy and enhanced survival prospects. Meyer and Rowan argue that the formal structures of many organisations reflect these myths instead of the demands of their workplaces. Thus, organisations end up incorporating elements which are legitimated externally rather than in terms of efficiency (Meyer and Rowan, 1977, p. 348). Linking the writings from Dimaggio and Powell as well as Meyer and Rowan to smart cities, these extracts could be used to question whether smart cities incorporate certain functions because these are truly found to be the best and most efficient way of doing things in their particular local context or because they seek to gain external legitimacy from their established field. Meyer has later continued to expand this style of thought in his writings around world polity theory and world culture.

2.2.2. World polity theory, cultural rationalisation and modern actor

World polity theorists have aimed to explain why, despite the vast differences in local cultures and traditions, so many societies and nations tend to develop in strikingly similar ways (Meyer et al., 1997; Meyer and Bromley, 2013). They see the reason for this in the idea that many local and national actions and actors are in truth defined through globally diffused policy models (Meyer et al., 1997; Hironaka, 2014). Rather than following any internal instinct or logic, social actors act the way they act, because that is the way they are instructed to act by these policy models (Boli and Thomas, 1997). Thus, from this perspective, cities are taking on the smart city label, not because of any internal need, but rather because they are instructed to do so by these global policy models.

When it comes to the aims of this research, there are three points of particular significance in the arguments of world polity theorists that should be highlighted here. The first one (1) is rationalisation. For world polity theorists, many modern activities and organizations can be explained by the emergence of ‘rationalising world culture’ (Bromley, 2010, p. 578). Science operates as an axis of this modern rationalisation and helps to create a picture of the arena of social action in which it is necessary to face manageable uncertainties in a rationalised way (Drori and Meyer, 2006). The advocates of world polity theory have studied how the existence of world polity and scientific rationalisation could be used to explain trends in, among others, educational development (see for example, Bromley, 2010; Chabbott, 2003) and the institutionalisation of

health (see for instance, Inoue and Drori, 2006). They have all noted the increasing and notable rationalising trends and its consequences in their respective fields.

Linked to rationalisation is the idea of (2) modern social actors that must manage the newly rationalised uncertainties in order to appear sensible, responsible and properly accountable (Drori and Meyer, 2006). This type of modern actorhood is marked by the rise of rational, purposive and highly competent social actors (Drori et al., 2003; Drori and Meyer, 2006). As noted by Meyer and Bromley (2013, p. 369), these actors are ‘painted as autonomous and integrated’, but in actuality they rely highly on external definitions to sustain this image.

World polity theorists have analysed the actions of various social actors in relation to this. For example, Meyer et al. (1997) have analysed how different local and national actors, such as nation states, organise themselves based on universalistic models. According to them, these worldwide models define and legitimate agendas for local action (Meyer et al., 1997). Zapp (2018), on the other hand, has focused on the role of international organisations and their growing research capacity. Among international organisations, he has noted a striking increase in scientific activity particularly since the early 2000s. In relation to this, Zapp (2022, p. 455) has referred to international organisations as ‘research powerhouses’ publishing high-quality academic journals. Meanwhile Hironaka (2014, p. 77) has written about what she calls ‘environmental agents’ in order to highlight just how embedded these entities are. She has examined how institutions are ‘malleable’ to the efforts of these agents who elaborate and expand beyond their original premises (Hironaka, 2014, p. 78).

The third (3) point of significance, closely intertwined with the first two, is the marked rise in the number of organisations in the modern world. In their article titled ‘The Worldwide Expansion of “Organization”’, John Meyer and Patricia Bromley (2013, p. 381) aim to explain this modern expansion of formal organisations and note how the formal structure of these organisations ‘tend to have a non-rational character’. They show through examples, such as hospitals and churches, how the need to answer to external calls for rationality and legitimacy can lead conflicts when it comes to the internal goals and the main purpose of these actors.

Bromley and Powell (2012, p. 484) have further discussed the rise of what they call ‘a means-ends decoupling’ where new, often externally pushed, policies are implemented but have a weak relationship to the core tasks of an organisation. Bromley and Meyer (2015, p. 2), meanwhile, have used the term ‘hyper-organisation’ to describe the context in which organisation extends ‘into realms difficult to define and measure, and difficult to assess as contributing to any clear goal’.

Thus, based on these texts, one could argue that chasing legitimacy can actually lead to endangering of the core tasks and purposes of an organisation. From the perspective of smart cities, this could mean that their number one task of taking care of the welfare of their citizens could be endangered by their need to bring themselves forward as innovative and purpose-driven smart cities.

2.2.3. Smart cities through the eyes of world polity theory

By approaching cities, in particular smart cities, as actors from the perspective world polity theory, one is able bring forward different perspectives into cities as modern actors as well as their actorhood. From this point of view, smart cities are not only competing strategic actors, but highly-competent, rational and purposive social actors, that are expected to take part in helping to solve global issues. It is no longer enough that cities aim to solve their local issues. They now need to become ‘all competent good guys’ (Drori et al., 2003, p. 32) who take part in solving complex global questions in order to gain legitimacy from their audiences and their established fields. Furthermore, this chase for legitimacy can lead to endangering of some of their core purposes.

It is important to note that analysing cities as logical and strategic actors is not anything new in itself. Throughout the years, cities have competed with each other and sought to further their individual interests in areas such as business and tourism and this has been a notable point of analysis for researchers (see for example, Hartley et al., 2016; Buettner and Janeba, 2016). Pertti Alasuutari, in his 2013 article ‘Spreading global models and enhancing banal localism’, studies cosmopolitan consciousness and banal localism by applying the framework of competition to cities as strategic actors. His case study dealing with Finnish cities’ cultural activities development project showed how culture came to act as a tourist attraction and brought forward the notion of ‘creative city’ as a new catchword that could arguably be comparable to that of a ‘smart city’.

More recently, cities have also been studied as global actors in different fields of global governance, where they, for instance, are seen to maintain connections, give shape to modern globalisation and play a distinct role in global environmental governance (Herrscher and Newman, 2017; Oosterlynck et al., 2019). In this thesis, this emphasis of cities as rational and strategic actors is combined with the analysis of smart cities and the questioning of how they build up their legitimacy through their own active rhetoric and the tasks and challenges they set up for themselves. Rather than seeing cities as unthinking ‘conformists’ (Meyer, 2004, p. 42), who are simply ritualistically taking on and copying readymade models, this study approaches them as strategic actors that are continuously constructing and bringing themselves forward as credible actors. Furthermore, by exploring the

tasks and challenges as the legitimate ways that cities use to present themselves as smart cities, it becomes possible to explore and examine the global discourse that has evolved around smart cities.

2.2.4. Smart cities as interested actors building up their credibility and legitimacy

World polity theorists tend to favour large-scale quantitative studies that look at the spreading process of various actors and policy-models in the global society. They often focus on analysing and exploring the different factors that can be used to explain diffusion, such as geographical locations and links to world society in the form of memberships in international organisations. This type of research can be a great help in seeing and reporting the fast increases in the number of smart city projects in the world. According to the world society theory, when one adopts a certain model they also, at the same time, become a legitimate actor. According to this perspective, a city becomes a credible smart city when it begins to call itself that.

However, what is argued in this thesis, is that the actors cannot simply adopt a certain identity and become legitimate and credible actors through the act of adopting a model. After all, this type of speech might not be enough for those who are planning on investing in smart cities. Rather, in these types of cases, being a credible and legitimate actor has to be carefully constructed and built. In other words, in order to come across as credible actors, the cities need to continuously narrate their role and highlight their agency. These actors have to, through their own active rhetoric, and through certain reference points, build themselves up as credible smart cities. It is this ground level rhetoric that this study finds so interesting.

Furthermore, it could be argued, that through this rhetoric, smart cities themselves take part in building up the model of respectable and acceptable smart city. In their study, Syväterä and Qadir (2015), explore the way that the model of national bioethics committees (NBCs) was being constructed at the same time as the model spread across the world. From this perspective, it could be argued that the model of smart cities is also being constructed by the smart cities themselves as well as by their active ground level rhetoric. As thus, it is not the readymade model of how to be smart city that is diffusing, but rather the discourse, the set of rules for the way we are allowed to talk about smart cities, that is spreading as different cities present themselves as smart.

What research around various organisations has already shown is that the organisations have to continuously bring themselves forward as credible actors and to highlight their reasons for existing. In their study, Rautalin et al. (2021) argue that rather than being disinterested others, as they are often seen by the world polity theorists, IOs are self-interested actors deliberately seeking to accumulate their authority. In their article 'Organisations as Epistemic Capital: The Case of

Independent Children's Rights Institutions', Alasuutari et al. (2016), on the other hand, discuss the case of the Finnish office of the ombudsman for children and the way it has worked actively to come across as credible ontological and moral authority. Similarly, one could argue that smart cities, rather than being simply unthinking adopters of certain models, are interested actors that are in the middle of what could be called 'a battle for survival'. As noted by Alasuutari and Qadir (2019), the actors need to speak to the beliefs and principles that they believe others to hold. They need to appeal and refer to certain viewpoints which they believe are seen as credible and legitimate by the surrounding world.

2.2.5. The global discourse

Alasuutari (2022) has reflected on the way social actors are not simply legitimated externally, but rather these actors have to navigate on the global field, and sell themselves to the needed audiences. Thus, from this perspective, the promoters of smart cities also need to navigate on the established field and find a way to talk to and impress their intended audiences. Alasuutari (2022) has also argued that 'rather than a set of scripts that constitute actors as homogenous robots that imitate one another, culture consists of a set of discourses within which people reflect on and debate things'. Therefore, actors should be seen, not as mindless robots, but rather as something that are pursuing their goals and interests in terms of the set of discourses which limit their imagination. From this point of view, cities are navigating and trying to sell themselves for those who are important in their respective fields.

This could be argued to highlight what could be claimed to be lacking with the world polity theory and its view of the diffusing readymade models. One could make the claim that the world polity approach puts too much emphasis on the notion of social actors such as smart cities being unthinking conformists that are simply taking on readymade models as they diffuse around the world. What this study has already argued and what it will further aim to show is that smart cities, and other social actors, need to navigate creatively within the limits set by the surrounding global discourse, and through this, bring themselves forward as credible and legitimate social actors.

This type of argument is also made by Rautalin and Alasuutari (2022), who set out to argue that interdependence evident in COVID-19 policies was an outcome of a global epistemic field. According to them, this field evolved as nation states vindicated their respective policies giving birth to ever-new policy models that become part of the global set of discourses. This could be argued to draw attention to how smart cities' ways of presenting themselves are part of the global evolving discourse that also sets limits for how smart cities are to be approached and construed. From this point of view, it is not the ready-made policy models that are diffusing, but rather the

global discourse, which could be described as a set of rules according to which any phenomenon can be described and discussed about. From this point of view, it is not enough to talk about readymade policy models or scripts, but rather, we have to look at the wider surrounding discourse and explore how it acts to define the discussion and surrounding public discourse around certain phenomena. It is this that this study set out to do in relation to smart cities and their related tasks and challenges.

3. Research Design

3.1. The research questions

Drawing on existing literature, I set out to explore the global discourse around smart cities with the help of the epistemic governance framework. Thus, the broad research question being asked here is: what is the global discourse around smart cities like and what is it constructed of? In order answer this question, I examine how smart cities legitimate themselves on their websites and bring themselves forward as credible actors. Based on this, I pose the following empirical question to my data: how do cities construct themselves as credible smart cities through the rhetoric on their websites? To answer this question, I will focus on individual smart cities and how they account for their smart city projects. The resulting sub-questions are: what challenges do they (cities) set up for themselves in order to come across as credible smart cities? and what tasks do they (cities) undertake in order to come across as credible smart cities?

3.2. Theory

Epistemic governance framework will act as the background analytical framework for this research. When compared to world society theory, epistemic governance framework focuses on the way actors influence others by working on their beliefs and aspirations (Alasuutari and Qadir, 2019). As described by Alasuutari and Qadir (2019, pp. 87-88) the starting point for this approach is one where actors aim to bring about change by ‘acting upon other’s view of reality and the situation at hand’. This type of approach assumes actors to be rational and purposeful, rather than them simply following cultural models like in the world polity theory. Furthermore, epistemic governance framework shows that decisions need to be made in a local context, and it is these arguments aimed at convincing the needed actors that is of interest in here.

In this thesis, epistemic governance will inspire mainly the theory and but also partly the methods used in this study. The framework will be used to emphasise the importance of the smart cities’ own rhetoric and the discourses that rise from their analysis. Basing this study on epistemic governance

framework will also be a notable help in looking at the way smart cities justify their existence and their credibility to their own audiences and in their respective fields. Here, the analysis focuses on the way smart cities use the shared global discourse in order to influence other's understanding and to justify why they are smart cities. The use of epistemic governance framework will also help to draw attention to the ways in which the surrounding discourse can act to limit our understanding concerning smart cities and how important it is to understand the prominent views of reality and phenomena under study.

Overall, the use of epistemic governance framework will be a great help in the study of the global discourse, the set of rules that govern how smart cities can be discussed and construed. With this particular study, the focus is on analysing the elements of this global discourse in the form of tasks and challenges that the smart cities have set for themselves. The examined tasks and challenges act as reference points, valid points of view that need to be taken into account and that can be legitimately referenced when a city is aiming to present itself as a smart city. The epistemic governance framework will be a great help in this analysis, as it draws attention to the way actors tend to use and manipulate shared conception of the world by drawing on a shared set of discourses (Alasuutari and Qadir, 2014a; Alasuutari and Qadir, 2019). All in all, the analysis will aim to show how the legitimation and the presentation of oneself as a smart city is done within the limits set by the global discourse.

3.3. The data

As a data source, this study will be using the websites of ten smart cities. By using the websites of these cities, the study will be able to look at their ground-level rhetoric and see how the cities build their credibility and legitimacy from the ground-level up. Furthermore, focusing on the websites of these cities makes it possible for the study to focus on the parts of the smart city rhetoric that is most accessible to audiences and see how these cities justify their credibility to them. It will also enable the studying of how the smart cities are allowed to present themselves and talk about themselves within the limits of the global discourse.

The gathering of the data took place between 21th and 30th of November 2022. The websites in the sample were found and selected through a Google search using the terms smart + city + world. Through this, it became possible to find websites which has listed cities that had started their own smart city projects. After finding these websites, there were more detailed and defined searches based on them such as smart + city + Vienna or smart + city + Helsinki. The ten cities picked for the study were then chosen according to the following criteria: (1) they must have to have a

recognisable smart city project, (2) this smart city project must have a freely accessible website, (3) the website must be in English or have an English version available and (4) the website must have enough information about the smart city project for the analysis to take place.

One could argue that there are other important factors that should be taken into account here as well, such as the geographical location and distribution of the cities. In this way, one could make the argument that the data used here reflects only certain limited regional discourse. However, one could make the claim that this does not have a notably harmful effect on the results of this particular study. This is because even if the focus is on looking at relatively small, admittedly mostly European, array of smart cities, these can still act as a noteworthy sample that reflects the universal smart city speech and the social reality around them. In this way, this data reflects at least part of the discourse that is being uncovered. Furthermore, while introducing countries from a more diverse set of geographical locations might have changed the found and examined elements at some level, the elements and reference points that were found can still be seen be part of the global discourse as they are so often invoked and appealed to.

It should also be acknowledged that the reliance of freely available websites could be argued to limit what this study can achieve, as it leaves out important documentations that could have more detailed information about the chosen smart city projects, but which are not freely accessible and not available to larger audiences. At the same time, however, one could make the argument that using data that is freely and easily available on the smart city websites enables one to really focus on what is available to everyone, making it possible to look at how smart cities justify their credibility through their ground-level rhetoric. It will also enable the analysis of the found tasks and challenges as reference points that form a discourse and reflect the global discourse around them.

Another point of criticism here might be that the reliance on English language websites, or websites that are translated to English, rules non-English pages of certain cities out of the analysis. However, this has arguably less of an impact on this particular study. It pays repeating that the aim here is to conduct a detailed analysis of the way a small number of chosen smart cities refer and appeal to certain reference points, in this case certain challenges and tasks, in order to bring themselves forward as credible and legitimate smart cities within the limits set by the global discourse.

3.3.1. Websites as a data source

As noted by Bryman (2012, p. 554), the vastness of the Internet and its growing accessibility make it a potent source of documents for both qualitative and quantitative analysis. Through search engines one can now find a vast number of articles, and using internet as a source of one's data is

becoming an ever more popular practise. In this particular study, the data source being used are the websites of the chosen smart cities. The recent studies using websites as their data source have varied from the investigation of tourism websites and seeing how they link to factors such as authenticity and marketing (De Bernardi, 2019; Liasidou, 2018) to the examination of school and university websites and their conceptualisation of student life and showing of promotional discourse (Svendsen and Svendsen, 2018; Wilson and Carlsen, 2016; Hoang and Rojas-Lizana, 2015). This study will not go too deeply into showing the vast array of topics that have been studied through the analysis of websites. Rather, the idea is simply to highlight the increasing emergence in the interest towards internet and websites as a data source.

Taking inspiration from the words of Bryman (2012) and Wilson and Carlsen (2016), this study will approach the chosen smart cities' websites as 'documents' or 'virtual documents' that can and should be analysed qualitatively. While the websites do not give out as detailed or specific information as some other documentation might, they are the most easily accessible to the potential audiences. As noted by Winter, Sanders and Hart (2003, as cited in Wilson and Carlsen, 2016) websites are 'on-stage work areas where a performance is given to an actual or implied audience...'. From the perspective of this study, websites are where the chosen smart cities aim to bring themselves forward and construct themselves as credible smart cities.

Here, it should be noted, that there are some notable challenges in using internet and websites as a data source (Bryman, 2012, p. 654). The difficulties mentioned by Bryman (2012) include: needing to find the websites relating to the research question and using search engines which provide access to only portion of the web; seeking out websites on a topic and it being only as good as the keywords being employed in the search process; new websites continually appearing and others disappearing; websites continually changing; and the analysis of websites and web pages as a new field that is very much in flux.

With this study, of the above difficulties, those that should be particularly kept in mind throughout this research include the need to use search engines to find the websites of the smart cities, and the way this can lead to choosing certain smart cities over others. Also, the keywords used in the process can lead to specific smart cities being chosen over others. The final difficulty includes websites continually changing, with there being a need to keep a constant note of the times of when the websites were accessed. What is also useful to keep in mind here is that the data is only able to provide a picture of the discourse in certain point in time with the discourse continually changing. Overall, this study will aim to keep these potential difficulties and challenges linked to its data source in mind and make note of them whenever necessary throughout the research project.

3.4. Methodology

As a methodology, this study will be using qualitative discourse analysis. As noted by Hyland and Paltridge (2011, p. 1), discourse is one of the most important concepts in modern thinking in a range of disciplines from the humanities to social sciences. Discourse concerns the way language works in people's engagements with the world and in their interactions with each other, creating and shaping the social, political and cultural formations of societies (Hyland and Paltridge, 2011).

When it comes to discourse analysis, in the words of Paltridge (2012, p. 2), it examines pattern of language across texts and considers the relationship between language and the social and cultural context in which it is used. Furthermore, and as noted by Bryman (2012), discourse analysis is concerned with the strategies people employ in trying to create different kinds of effects. Here, the interest is on how smart cities aim to build up credibility and legitimacy through the discourse in their ground-level rhetoric.

One particularly important factor with discourse analysis in relation to this study, is its focus on performativity, which is based on the view that in saying something, we do it. In other words, we bring state of affairs into being as a result of what we say and what we do (Paltridge, 2012, p. 10). In relation to this, Gee (2011, as cited in Paltridge, 2012) describes discourse as a sort of dance that exists 'as a coordinated pattern of words, deeds, values, beliefs, symbols, tools, objects, times and places in here and now as a performance that is recognizable as just such a coordination'. In this research, this focus on performativity is of particular importance as the focus is on analysing how the cities construct themselves as believable and credible smart cities through their rhetoric and through certain reference points.

3.4.1. Critical discourse analysis

This study will be using a specific variant of discourse analysis called critical discourse analysis, which is strongly influenced by the works of Michel Foucault, and aims to link language and its modes of use to the significance of power and social difference in society (Bryman, 2012, p. 528). Compared to traditional discourse analysis, critical discourse analysis is more open to the notion of pre-existing material reality. It takes the reader beyond the simple texts and aims to bring forwards some type of explanation why a text is as it is and what it is aiming to do (Paltridge, 2012). This is of importance in regards to this study because the question posed in the study is not only what types of tasks and challenges the smart cities have set for themselves, but also about how this links to the surrounding discourse around them. From the perspective of this study, it is thus important for the

analysis to be able to show how tasks and challenges act as reference points through which it becomes possible to explore the global discourse.

It should be noted that, as a methodology, critical discourse analysis has no single way in which it should be done or practiced. Instead, ‘the structure of the analysis is always dependent on the specific study’s research situation, research question as well as the type of question that is being analysed’ (Paltridge, 2012, p. 194). In this particular study, the framework which the research will seek inspiration from is that which has been defined by Norman Fairclough. According to Fairclough, discourse is both conditioned by and conditions the overall social and political practices of a society and it contributes actively to the construction of social identities, to social relations between people and to systems of knowledge and belief (Fairclough, 1992; 2010, as cited in Svendsen and Svendsen, 2018) For Fairclough there are three analysable dimensions to every instance of language use: the text, the discursive practice and the social practice (Fairclough, 1992, as cited in Svendsen and Svendsen, 2018). In this particular study, Fairclough’s three dimensions are reinterpreted in order to get them to fit in better to the needs of the analysis.

The textual level, as defined by Fairclough, would usually involve a close examination of the language, with particular attention paid to the content and the style. In this study, this will mean paying attention to the word choices and terms in order to uncover and show what types of tasks and challenges the chosen smart cities have set up for themselves on their webpages. The second Fairclough’s level is that of discursive practice with its analysis involving the examination of the link between text and social practice. In this particular study, this will mean examining the way the tasks and challenges are brought up in the analysed webpages and how they could be argued to build up legitimacy and credibility for the chosen smart cities. The third and final level for Fairclough was the analysis of social practice meaning the analysis of the institutional and social context in which the language and discourse are situated. Here, this stage will involve looking at how the tasks and challenges reflect the social context in which they are situated and how this helps in building credibility and legitimacy for the chosen smart cities.

3.5. Coding of the data

Questions posed to the data were designed based on two previously mentioned sub-questions: what challenges do they (cities) set up for themselves in order to come across as credible smart cities? and what tasks do they (cities) undertake in order to come across as credible smart cities? Based on these two questions, the questions posed to the data were: what challenges can be found mentioned

in the chosen documents and what kinds of themes emerge from them? as well as what tasks can be found mentioned in the chosen documents and what types of themes emerge from them?

The coding of the data was done based on these two questions as well as on the thematic analysis of the found challenges and tasks. The strategy used in relation to the thematic analysis was a modified version of the framework approach which has been developed at the National Centre for Social Research in the United Kingdom. Overall, the main interest of the analysis was on the way that the coded documents, in this case the chosen smart city websites, brought forward specific types of tasks or challenges for the chosen smart cities.

In accordance with Alan Bryman's (2012, p. 576) instructions for the coding practices, I first read through the chosen smart city websites 'without taking any notes or considering an interpretation'. After this I started to go through the data while making notes and gradually refining them into codes. I used descriptive coding approach in that I coded the extracts and named the codes so that they described in detail what the text read. In my coding, I also used the deductive approach in that I had two pre-set coding categories or themes: tasks and challenges, which I was particularly interested in. After coding the tasks and challenges, I started to construct an index of central sub-themes which emerged as a product of a 'thorough reading and rereading of the transcripts... that make up the data' (Bryman, 2012, p. 579). The results of this can be found in the tables shown in the findings section of this thesis with the table 1 showing the sub-themes of the challenges found in the data and the table 2 showing the sub-themes of the tasks that were found in the data.

3.6. Ethical issues

Focusing the analysis on publicly open smart city websites and having no human participants involved could be argued to mean that there are only very limited number of ethical issues when it comes to following the guidelines of the Finnish National Board on Research Integrity. However, Bryman (2012, p. 679) has noted that when it comes to using Internet as a method of data collection, this could be claimed to raise specific ethical issues that need to be discussed. One problem pointed out by Bryman is the fact that we are in the middle of huge growth in the amount of research using internet as a method for data collection leading to issues such as over-researched populations. However, this should not be a problem here, as the study has already brought up the fact that smart city websites have been rarely used as data in smart city research.

Other potential issues in using Internet as a method of data collection include the blurred distinction between private and public space on the Internet as well the task of protecting research participants from harm. Again, as this particular study does not involve human participants online or otherwise,

but instead focuses on publicly available smart city websites, one could make the argument that the potential ethical issues when it comes to this particular research are notable limited.

4. Findings: Performing smart cities as defined by challenges and tasks

This part of the thesis will focus on discussing the findings from the analysis. The chapter is divided into two parts. The first part will concentrate on the challenges found in the chosen smart city websites while the second part will centre on the tasks mentioned in the examined smart city websites. These parts are then further divided into sub-chapters with the first sub-chapter discussing the similarities across the challenges and tasks and the later sub-chapters discussing the differences and variances among the examined challenges and tasks.

The aim here is to show how setting themselves certain tasks and challenges provides the chosen smart cities with a legitimate way of presenting themselves and sets a level of rhetoric they are expected to partake in. This examination could also be argued to add to our understanding concerning the definition of smart cities, in that it opens up the role of the examined websites in defining smart cities as well as their aims and goals to the potential audiences. In this way, the cities and their websites could be claimed to have a role in the construction of smart cities and our understanding concerning them. Overall, this section will show how the challenges and tasks mentioned in the examined smart city websites act as elements of the global smart city discourse. In other words, they act as reference points, which the cities need to appeal to in order to present themselves as credible smart cities.

4.1. Challenges

When it comes to the challenges that smart cities presented themselves as facing, the most prominent ones were linked to climate change and sustainability as well as digitalisation and urbanisation. Those mentioned more rarely but still by more than one city included mobility, attracting experts as well as demographic change. Finally, there were some, though arguably rare, challenges that were mentioned by only one city, such as changing nature of work and resource consumption. The most commonly mentioned challenges can be seen pictured in the table 1 along with the cities whose websites they were mentioned in.

Theme: Challenges						
Sub-themes	Climate change and sustainability	Mobility	Attracting experts	Demographic change	Urbanisation	Digitalisation
Cities						
Helsinki	x		x	x	x	x
Tampere	x	x	x		x	
Dublin	x	x				x
Stockholm				x	x	x
Vienna	x				x	x
Zurich					x	x
Dresden	x	x		x		
Melbourne	x				x	x
Pilsen	x	x				
Sydney	x		x			x

Table 1.

4.1.1. Similarities: building credibility and legitimacy through challenges

It should be noted here that, with the examined challenges, there was notably more variance when compared to the found tasks. This variance can be seen from the table 1 and it could be argued to show that, when it comes to the legitimate ways of bringing oneself across, there could be argued to be more room for the cities to set their own challenges. The challenges were thus not as widely shared or repeated among the examined smart city websites as tasks were. However, there were still some notable similarities in challenges between the examined smart cities and their websites.

When it came to the found and examined challenges in the chosen smart city websites, climate and sustainability were clearly the most prominent sub-theme. Of the ten examined smart cities, eight had climate change and sustainability as a named challenge in their websites.

The global megatrends of climate change...are present in Helsinki-Uusimaa, but also solutions to meet the challenges are created here.

- *Helsinki Smart Region*

Climate change imposes great global challenge, especially for cities. The climate crisis requires ambitious responses and the ability to adapt

- *Smart City Vienna*

We want to improve the environment in Pilsen and increase its readiness for climate change

- *Smart Pilsen*

From the above extracts, one can see how the chosen smart cities name climate change as a central threat and challenge which they must try to overcome. But this does not mean that all smart cities in the world have climate change named as a central threat or that the fight against climate change is

the main endeavour of smart cities. Rather, what this study aims to argue with this finding is that making references to climate change as a notable challenge is one of the legitimate ways through which smart cities can bring themselves across as credible actors. In other words, they are elements of the shared global smart city discourse, and are thus viewpoints which the examined smart cities need to refer to in order to legitimise themselves in the eyes of those they are seeking to impress and seek acceptance from.

It should also be mentioned that the challenge of climate change came across as quite central in the analysed websites. This could be argued to be understandable in an environment in which various actors, including cities, are expected to take on an increasing number of responsibilities and help solve complex global issues such as climate change (Drori et al., 2003, p. 32). From this perspective, the emphasis on climate change could be claimed to support the notion that increasing number of social actors, such as cities, are held responsible for increasing number of multifaceted issues that are not necessarily closely related to their core purposes such as taking care of their citizens.

Next to climate change, digitalisation was named as a notable challenge in the websites of seven out of ten analysed smart cities.

*From tackling the climate crisis **to bridging the digital divide**, we believe that through collaboration and innovation we can build a better, more resilient Dublin.*

- *Smart Dublin*

The digitisation challenges the City of Zurich and also offers new opportunities

- *Smart City Zurich*

Technology and data are increasingly playing a part in our daily lives, continuing to change how we live, work and play

- *Smart Melbourne*

The above extracts show how the analysed smart cities name digitalisation as a notable challenge which they as smart cities should aim to help solve. What makes digitalisation particularly interesting here, is the fact that it is brought forward by the analysed smart cities as both an opportunity as well as a challenge. Hence, digitalisation in itself seems to be an important aspect of the accepted smart city rhetoric and the shared smart city discourse. Overall, therefore, making references to digitalisation and the opportunities and challenges linked to it seemed to be important for the analysed smart cities and their claim for legitimacy.

When it came to other sub-themes next to climate change and digitalisation, urbanisation was brought forward as noteworthy challenge by six out of the ten analysed smart cities and smart city websites.

And Vienna is growing. *In the medium term, the Vienna metropolitan area will be home to nearly three million people, and the need for jobs, housing, energy and modern infrastructure will increase accordingly*

- *Smart City Vienna*

Tampere's population is growing rapidly. *To accommodate these new residents and fulfil their needs, we have to imagine and create new buildings and infrastructures. And, here is the challenge: it has to be eco-friendly, energy-efficient, and sustainable without decreasing people's comfort and well-being*

- *Smart Tampere*

Globally, more and more people are leaving rural areas and moving to the cities. *People live longer and the international mobility of labour increases. Stockholm is no exception. This creates opportunities but also needs within the city*

- *Smart Stockholm*

From the above examples one can see that while urbanisation is not named distinctly as a challenge, the cities do make references to growing populations and the fact that more and more people are moving to the cities. Thus, these extracts could be argued to show how the chosen cities bring urbanisation and their growing populations forward as something problematic and as something which requires them to act to solve the linked challenges.

The noting of how their populations were growing and how people were moving to cities seemed to have quite a central place in the analysed smart city websites. Thus, urbanisation along with digitalisation and climate change could be argued to be the central challenges through which the studied smart cities aim to take part in the legitimate way of speaking and bringing themselves across as smart cities. Thus, they could be argued to be central elements of the shared smart city discourse which the chosen smart cities use to legitimise themselves.

4.1.2. Variance: demographic change and attracting experts

As was already noted, there is significantly more variance among the challenges the analysed smart cities have set for themselves, when compared to the tasks. However, this should not be taken to mean that the challenges that were mentioned more rarely would be insignificant for this analysis.

For example, four out of ten smart cities named mobility as a central challenge, while three out of ten cities named demographic change and attracting experts as noteworthy challenges.

Municipalities face a number of current and future challenges, such as demographic change, climate action, the Energiewende energy-policy transition, and eco-friendly mobility

- Smart Dresden

Mobility: How can we use technology to help manage pedestrian, cycle and vehicle flows and reduce congestion

- Smart Dublin

As can be seen from the extract above, mobility was a notable challenge for some of the analysed smart cities. Despite the fact that it was mentioned more rarely than, for example climate change and sustainability, it can still be included to be amongst the elements of the global smart city discourse through which smart cities aim to legitimise themselves.

Next to mobility, another challenge that was mentioned quite rarely, but still by more than one smart city, was that of demographic change. The extracts below show how the challenge was brought up by Smart Dresden and Smart Stockholm.

*Municipalities face a number of current and future challenges, such as **demographic change**...*

- Smart Dresden

***People live longer** and the international mobility of labour increases. Stockholm is no exception. This creates opportunities but also needs within the city.*

- Smart Stockholm

The extracts above show how demographic change was a notable challenge for a few of the examined smart cities. Despite the fact that demographic change was only present as a challenge in three of the ten analysed smart city websites, it could still be argued to have some type of a role in the legitimate smart city rhetoric. The very fact that demographic change can be found among the examined smart cities and their challenges could be argued to mean that it is part of the shared discourse around smart cities. This is also the case for the sub-theme of attracting experts from which one can see a couple of examples below.

*We also boost Tampere as an internationally recognised hub of expertise, **an attractive place for talent, students, companies and new business initiatives***

- Smart Tampere

Competences are one of our greatest assets, and we are keen on developing them further. We are also eager to harness the competence of highly educated immigrants in Helsinki-Uusimaa.

- *Helsinki Smart Region*

Potential intrigue with the challenge of attracting experts may also be found in the fact that both of the above-mentioned extracts were taken from the webpages of Finnish smart cities. This, one could argue, could have something to do with the notion that these two geographically and culturally close smart cities might keep a closer eye on each other when compared to other examined smart cities. This could be argued to be especially true due to the past existence of 6Aika, which was a joint strategy of the six largest cities in Finland for sustainable urban development. 6Aika was based on multiple projects that were aimed at reinforcing Finnish smart city models' most significant elements.

This all links to the notion that there are no readymade models diffusing among smart cities, but rather, the model keeps on changing as the different cities keep a close eye on each other and on each other's actions. Overall, while the mentioned challenges here were notably rarer in the examined smart city websites, they could still be argued to be noteworthy in giving credibility and legitimacy to the chosen and analysed smart cities. They could be argued to be part of the variant number of challenges which the smart cities can name while still taking part in the legitimate and accepted level of rhetoric offered by the discursive and social context in which they are placed.

4.1.3. Differences: cities' unique yet global challenges

While most of the challenges noted in the analysed smart city websites could be included in the table 1, there were also some, through notably rare, challenges which the examined smart cities had set for themselves but which were not mentioned outside of the one smart city website. At the same time, it is noteworthy that even these challenges do not seem to be strictly tied to the specific cities or be somehow reflection of those cities' unique features and challenges. Rather, even these rare, unique challenges were global in their scale and quality. They were simply not repeated or mentioned in the websites of the other analysed smart cities. These types of challenges included resource wisdom, bureaucracy, increasing mobility of labour, challenges related to infrastructure, globalisation as well as increasing scarcity of resources. Some of the examples from this type of challenges are also shown below.

*In the coming years, Melbourne will face many challenges, such...**the changing nature of work***

- *Smart Melbourne*

Resource consumption in cities is to decline despite growth, the quality of life for the population is to increase and the conditions for businesses are to be further improved

- *Smart Zurich*

*Municipalities face a number of current and future challenges, such as the **Energiewende energy-policy transition,***

- *Smart Dresden*

From the above, one can see that the challenges such as the changing nature of work, resource consumption and policy transition were mentioned by individual cities as noteworthy challenges that they should take into account in their future developments. Despite the fact that they each appear only in one of the examined smart city websites, one could still argue them to be part of the shared smart city discourse simply because they are there.

As was already noted above, even these named challenges could be argued to be global in their scale rather than being unique local challenges which the specific cities could be claimed to face. Thus, these rarer challenges could be argued to show how taking part in globally scaled challenges, whether or not shared with other smart cities, is part of the legitimate way of bringing oneself across for the analysed and examined smart cities. Thus, it could be argued, that for the examined smart cities, the legitimate way to bring oneself across is to take part in and aim to counteract commonly accepted and widely shared global challenges, rather than local challenges that the cities face in their unique, local context.

4.2. Tasks

When it comes to the tasks found in the examined smart city websites, the most widely shared ones included those linked to sustainability and climate, encouraging participation, bringing together different actors, improving quality of life and taking advantage of digitalisation. Next to these, those mentioned by more than one city included being a pioneer, testing, piloting and scaling projects as well as developing services. Again, there were also some, though notably rare, tasks that were mentioned by only one smart city such as tasks linked to business and innovation as well as the task of focusing on people and their needs. The most commonly mentioned tasks can be found pictured in the table 2.

Theme: Tasks								
Sub-themes	Be a pioneer	Bring together actors	Test/pilot/ scale projects	Sustainability and climate	Encourage participation	Improve quality of life	Develop services	Take advantage of digitalisation
Cities								
Helsinki	x	x	x	x			x	
Tampere	x	x	x	x	x			
Dublin		x	x	x	x	x	x	
Stockholm	x			x	x	x	x	x
Vienna	x	x		x	x	x		x
Zurich		x	x	x	x	x		x
Dresden	x	x			x	x		x
Melbourne			x	x	x	x		x
Pilsen	x			x		x	x	x
Sydney		x		x	x		x	x

Table 2.

4.2.1. Similarities: building legitimacy and credibility through shared tasks

Similarly to the challenges, when it came to the tasks mentioned in the smart cities' websites, nine out of ten websites mentioned those related to sustainability and climate.

*Smart Tampere is the strategic development programme of the City of Tampere for 2017–2021. The programme is **building a sustainable and smart Tampere region...***

- *Smart Tampere*

*First and foremost, Smart City Wien is looking to improve its economic and social performance and **drastically reduce its ecological footprint***

- *Smart City Vienna*

*The aim is to maintain and further improve the high quality of life in Zurich today and in the future, to **promote sustainable development** and to strengthen Zurich as a site of business and innovation.*

- *Smart City Zurich*

The extracts above show how Smart Tampere, Smart City Vienna and Smart City Zurich all have set sustainability and climate change at the forefront of their smart city endeavours. In their websites, sustainability and climate action were mentioned at the very first pages and amongst the primary aims and tasks. This was a common theme among the analysed smart cities and their websites, with sustainability and climate change often acting as central themes around which the rhetoric and discourse regarding the smartness of the cities was build.

It should be noted, however, that this does not mean that all smart cities have sustainability and climate change at the forefront of the endeavours. What can be taken from this analysis, is that,

among the few chosen and analysed smart cities, sustainability and climate change was a notable and a widely shared task. It could therefore be seen as a notable element of the shared global smart city discourse, which the analysed cities use to bring themselves forward as credible and legitimate smart city actors.

Similarly to sustainability and climate change, eight out of ten smart city websites included references to encouraging participation as a task for the chosen smart cities. The extracts below show that the smart city websites promoted the way that citizens and city employees were given opportunity to participate more in the administration and decision-making processes. They also show how different parts of the community came together to partake in designing and developing new and better ways of living and working.

City employees are given the opportunity to develop their own ideas for improving the city administration and to put them into practice in a project.

- *Smart City Zurich*

...we wish to offer Tampere residents new ways to influence decision-making and the development of their living environment through new channels for participation

- *Smart Tampere*

we're working with the community (residents, workers, businesses, students and visitors) to design, develop and test the best ways for you to live, work and play in Melbourne

- *Smart Melbourne*

From the above extracts, one can see how the chosen smart cities emphasise the way they are giving various actors new opportunities to take part in decision-making, city administration as well as in designing and developing the city. When compared to sustainability and climate change, encouraging participation was not quite as centrally placed on the examined smart city websites as climate action was. Yet, the fact that it was present in eight out of ten examined smart city websites, could be argued to show that it is notably important when it comes to the elements of the global smart city discourse and the reference points that the cities need to take into account when presenting themselves as credible and legitimate smart cities. Thus, encouraging participation, whether it is that of the residents, city employees or community, could be argued to be part of the legitimate way through which the analysed and examined smart cities bring themselves across to their audiences.

When it came to other tasks mentioned in the examined smart city websites, seven out of ten websites mentioned the following tasks in their smart city related rhetoric: bringing together different actors, improving life quality and taking advantage of digitalisation.

Below one can find extracts from the examined smart city websites that have to do with the task of bringing together different actors.

*Our smart innovation strategy for the Helsinki-Uusimaa Region **brings together the actors from both the cities and the countryside** for impactful research and innovation activities...*

- *Helsinki Smart Region*

*Smart Dublin **brings together technology providers, academia and citizens** to transform public services and enhance quality of life*

- *Smart Dublin*

From the extracts, one can see that bringing together actors, whether it is from different parts of the city or country, or from different fields, was also a notable feature when it came to the tasks mentioned in the smart city websites. Moreover, the act of bringing together different actors seemed to be placed in a quite central position in the examined smart city websites. Thus, the chosen smart cities seemed to want to promote the way that they could act as a place where different actors could come together and work towards common goals.

Below, one can find extracts where the chosen and analysed smart cities promote the task of improving the lives of those living in the chosen cities.

*That's how a smart city should operate – adopting useful innovation that folds seamlessly into how we live our lives **to improve our day-to-day experiences.***

- *Smart Melbourne*

*These projects are a set of smart and modern solutions via which the City of Pilsen is striving to **make the lives of both its citizens and visitors better and more pleasant***

- *Smart Pilsen*

Here, the analysed smart cities seem to want to emphasise the notion that the tasks that they had set up for themselves were aimed at improving and enhancing the life quality of those who lived or visited the chosen cities. This could be argued to link to the need, among the examined smart cities, to emphasise that they were also serving and taking into account their citizens and their life quality in their smart city endeavours. This, again, could be argued to link to the need, which will also be discussed later in this chapter, to show that the examined cities were not only taking part in the

smart city projects for the sake of them, but were also aiming to better the lives of the people living in them.

Finally, below one can also find extracts in which the analysed websites mentioned the task of taking advantage of ongoing digitalisation.

*This means that the city is well placed to **take advantage of the opportunities presented by digitalization...***

- *Smart Stockholm*

*Smart City Zurich **embraces digital transformation as an opportunity for the city***

- *Smart City Zurich*

From the extracts above, one can see how the chosen smart city websites emphasise the advantages of digitalisation and promote the way that digitalisation can be used as an opportunity for the analysed cities and their citizens. This is despite the fact that, as was already discussed in the previous part of this section, digitalisation is also mentioned as a notable challenge in many of the analysed smart city websites. Despite this, or possibly in relation to this, an element of the shared global smart city discourse seems to be the need to mention taking advantage of the opportunities offered by digitalisation and embracing it as an opportunity for the city and its inhabitants.

The central place of digitalisation among the analysed smart city websites is not that surprising taking into account the context in which it is situated. Many writers have noted how digitalisation is an important feature of smart cities, with the term smart cities even being quite often swapped with that of digital cities (see for example Batty et al., 2012; Albino et al., 2015). Still, it is noteworthy to see how the chosen and analysed smart city websites emphasise digitalisation as a task that needs to be addressed.

4.2.2. The trend of being a smart city and the fashion of being unique

So far, this part of the chapter has focused on discussing the similarities between the examined smart city websites. However, based on the examination of the chosen websites, one could argue that the analysed smart cities also aim to bring themselves forward as leaders and pace setter in the ‘trend of being a smart city’, while, at the same time, trying to bring themselves forward as unique and different in their smart city endeavours. In this way, they aim to build up credibility and legitimacy by promoting themselves as leaders in smart city related phenomena, while at the same time trying to underline the uniqueness of their own smart city related actions.

Out of the ten analysed cities, six smart cities mentioned being a pioneer or in some way ‘trail blazer’ when it came to questions and issues central to smart cities. Below, one can find the extracts from the websites of Smart City Vienna, Helsinki Smart Region and Smart Dresden in which they emphasise their status as leaders and pioneers in issues related to smart cities and the related issues and questions.

*Vienna is known as **a global pioneer** when it comes to Smart City issues.*

- *Smart City Vienna*

*The region is **a world leader in** making data public and using it to create new businesses.*

- *Helsinki Smart Region*

Dresden is one of the very few regions in Europe to have the technological bases – through the Silicon Saxony cluster - for a smart city

- *Smart Dresden*

Here, part of the evident discourse could be claimed to be the need to emphasise the way that the analysed cities are leaders and pace setters in the field in which they are all active. In other words, part of the smart city discourse is showing how the cities are leading the pack when it comes to the trend of being a smart city. Rather than simply following and learning from other cities, they seem to want to emphasise themselves as pioneers that are actually setting the pace for other smart cities to follow suit and are therefore taking part in this ‘smart city trend’.

Yet at the same time, they could be argued to try to set themselves apart from other cities, and to underline their own uniqueness. When it came to emphasising the uniqueness of one’s smart city approach, one particularly notable instance of this can be seen in the rhetoric of the Smart Melbourne. The city, while setting itself similar tasks as other smart cities, also promoted its approaches’ uniqueness as can be seen from the extract below.

*Our vision for Melbourne as a smart city is simple: to **enhance the aspects of our city that make us uniquely Melbourne...***

- *Smart Melbourne*

We're not in the business of rolling out technology's latest bells and whistles for the sake of it.

Instead, we're working with the community (residents, workers, businesses, students and visitors) to design, develop and test the best ways for you to live, work and play in Melbourne

- *Smart Melbourne*

In the extract above, one can see the way that Melbourne describes being smart city as a way to enhance and promote its own uniqueness. The city also stresses the fact that they are not taking part in smart city related issues and tasks just ‘for the sake of it’ but are rather working with their own community to better the lives of those living in Melbourne. This could be linked to Alasuutari’s study, which discusses the way cosmopolitan consciousness coexists with persistent banal localism. In the study, Alasuutari notes how in the study’s comparison of different cities ‘the international, standardizing and globalising aspects...were overshadowed by local considerations’ (Alasuutari, 2013, p. 114). This could be argued to also be a notable aspect of smart city rhetoric, at least in the case of Melbourne, as it at the same time shares many tasks with other smart cities, but still aims to bring itself across as unique and locally focused in its approach to smart city issues and questions. This all could be claimed to be linked to the experience of a one-of-a-kind, locally constructed smart city project.

4.2.3. Differences between tasks: not all is shared

It should be noted here that despite the many similarities found in the tasks of the examined smart city websites, there were also instances in which the cities had set themselves tasks that were notably different from other cities’ and thus were present only in one or two of the analysed smart city websites. For example, Smart City Zurich stressed the importance of businesses and innovation in a way that could be argued not to be present with other smart cities and their websites.

The aim is to... strengthen Zurich as a site of business and innovation.

- *Smart City Zurich*

*Smart City Zurich should enable the city administration to develop and **adopt innovative ideas** in order to take advantage of the opportunities offered by the digital transformation. **Collaboration with business and industry and cooperations will be continued and strengthened***

- *Smart City Zurich*

As can be seen in the above extracts, Smart City Zurich emphasised innovation and collaboration with businesses in a way that differs from the other analysed smart city websites. That is not to say that, for example innovation, was not present in the other cities’ endeavours. Rather, when it came to the analysed smart city websites’ rhetoric and discourse, the other websites did not mention or stress the importance of innovation and businesses in the same way as Smart City Zurich’s website did. But again, similarly to challenges, one could argue that the very fact that innovation and business are mentioned by Smart City Zurich could be argued to mean that it is part of the

legitimate discourse around smart cities. The fact that it is not mentioned in other examined smart city websites does not, arguably, take away this legitimacy.

Similarly to the example discussed above, the website of Smart City Vienna emphasised the importance of focusing on people and their needs in a way that was arguably not present in the websites of other examined smart cities, at least to the same degree.

*We also need smart, affordable, accessible solutions that really do make life simpler for us all. **The focus, at all times, remains on people and their needs.***

- *Smart City Vienna*

*“Smart” solutions are not an end in themselves, but must always **focus on people and their quality of life***

- *Smart City Vienna*

As can be seen from the extracts above, the website of Smart City Vienna put great emphasis on the smart city endeavours focusing on people and what they need. As was already noted above, while many other smart cities also emphasised the need to improve the quality of life of those living and visiting smart cities, they did not emphasise the focus specifically on people as much as Smart Vienna’s website could be argued to have done.

It should also be noted and emphasised here that these marked differences between the examined smart cities’ websites were surprisingly rare when taking into account how many similar tasks were shared among the chosen cities and between their websites. This all could be argued to mean that cities seem to use and utilise strikingly similar reference points as they account for their smart city projects. This, in turn, could be claimed to show just how unified the shared global discourse around smart cities is.

5. Discussion and Conclusion

This thesis set out to explore the global discourse around smart cities with the help of the epistemic governance framework. As discussed previously, epistemic governance framework focuses on the way different actors influence others by working on their beliefs and aspirations, with the framework’s starting point being one where actors aim to bring about change by acting upon other’s view of reality (Alasuutari and Qadir, 2019). When it comes to the questions around smart cities, epistemic governance framework can be used to show how smart cities use the shared global discourse when trying to justify their reasons for being smart cities. In this way, the discourse here acts as a type of a tool through which smart cities aim to affect other’s understanding.

This study aimed to explore the elements of this shared discourse by analysing the challenges and tasks that ten smart cities had set up for themselves in their websites. The broad research question being asked was: what is the global discourse around smart cities like and what is it constructed of? In order to answer this question, the study set itself the task of examining the way the chosen smart cities legitimated themselves and brought themselves forward as credible actors through the challenges and tasks that they had set for themselves. Thus, the study aimed to analyse the way that the chosen cities presented themselves as credible and legitimate smart cities within the limits set by the global discourse. Based on this, the thesis posed the following empirical research question to the data: how do cities construct themselves as credible smart cities through the rhetoric on their websites? The follow up questions to this were: what challenges do they (cities) set up for themselves in order to come across as credible smart cities? and what tasks do they (cities) undertake in order to come across as credible smart cities.

5.1. The results of the case analysis

5.1.1. Performing smart cities as set by challenges

The case analysis showed that when it came to the challenges mentioned in the chosen smart city websites, the most common ones were those linked to sustainability and climate change, digitalisation as well as urbanisation. All of these challenges were also placed centrally on the examined websites, and therefore they could be argued to be integral when it came to the chosen smart cities' endeavours to bring themselves across as legitimate and credible smart city actors. Thus, they could also be claimed to be notably important when it came to the chosen smart cities' efforts to build up legitimacy in the eyes of the actors they are seeking to impress and seek acceptance from.

Challenges that we more rarely mentioned but still appeared in the websites of more than one smart city included mobility, demographic change and attracting experts. Particularly noteworthy here could be argued to be the fact that, with the challenge of attracting experts, the most prominent examples could be found within the websites of Finnish smart cities. This could be argued to bring out the possibility that these two geographically and culturally close smart cities keep a particularly close eye on one another when compared to the other examined smart cities.

Pi Ferrer et al. (2019) have analysed the notion of reference groups when discussing the differences in the way that Spain and Portugal's parliamentarians alluded to certain clusters of countries when debating national-policy making. Based on the results of this study and the way different cities referred to surprisingly similar reference points, one could also bring forward the possibility that

cities, like nation states, have certain clusters of cities which they tend to allude to and which they aim to identify with. At the same time, these cities still also aim to underline the uniqueness of their own approach even as they are keeping an eye on the cluster of cities that they see as their reference group. This, in turn, could be linked to the notion that the model of smart city keeps on developing as different smart cities keep an eye on each other while at the same time trying to bring out their own uniqueness. This is in line with the results of the study by Syväterä and Qadir (2015) in which they noted the way that the model of national bioethics committees was being constructed at the same time as it spread.

Within the results, there were also some rare challenges that were mentioned only in the website of one of the examined smart cities. What could be argued to be particularly notable with these challenges, was the fact that they were still global in their scale and thus were not tied to any specific local problems. Therefore, one could argue that in order to bring oneself forward as credible and legitimate smart city, one has to take part in global and commonly accepted challenges rather than unique locally based problems. There seems to, therefore, be a need for smart cities to bring themselves forward as global actors and benefactors. These results would imply a phenomenon similar to that researched by Mike Zapp (2021, p. 226), who, in his study concerning the rise of global reporting, noted the way that virtually all domains of human life are now global sectors and are also treated as such. Thus, one could make the argument, that cities also feel the need to take part in global problems and phenomena in order to come across as credible actors in the field in which they are active.

5.1.2. Performing smart cities as set by tasks

The analysed smart cities shared a notable number of tasks between themselves. The most often mentioned tasks included those linked to sustainability and climate change, encouraging participation as well as bringing together different actors, improving life quality and taking advantage of digitalisation. One could argue that, based on the results, all of the above-mentioned tasks served as a source of credibility and legitimacy for the examined smart cities. By making references to these same tasks, the cities were able to bring themselves forward as credible smart cities that were taking part in the commonly accepted tasks that they shared with other cities.

What was also found through the examination of the chosen smart city websites was what could be called 'leading the trend of being a smart city' existing alongside of the 'fashion of being unique'. In these cases, the chosen smart cities aimed to bring themselves forward as leaders and pace setters in the trend of being a smart city. At the same time, however, they also wanted to promote their own

uniqueness in a way that would imply that they are not taking part in this ‘smart city trend’. Here, one could come to the conclusion that this need to bring themselves forward as unique is also a notable part of the smart city discussion, with the cities needing to make references to shared and global challenges and tasks while at the same time highlighting the uniqueness of their own smart city approach.

This could be claimed to be in line with the results of studies concerning political rhetoric and the way nation states make references to other countries while at the same time stressing the need to come across as independent and sovereign. In the study by Alasuutari and Vähä-Savo (2018), for example, the writers focus on ‘the spirit of American exceptionalism’. They argue that rather than appealing to globally shared principles, the political speakers aim to claim ownership of them by trying to construct USA as origin of worldwide models. The concept of domestication as discussed by Alasuutari and Qadir (2014b) draws further attention to the way national policies appear to be synchronised globally but are, at the same time, developed with distinct national flavours.

Finally, through the examination of the chosen smart city websites, one could also discover a few, through notable rare, tasks that were found only in one of the examined smart city websites. These included Smart City Zurich’s focus on business and innovation as well as Smart City Vienna’s focus on people and their needs. Yet, even these rare individual tasks could be argued to be part of the legitimate smart city speech simply because they exist and are brought forward in the chosen data. In this way, the global smart city discourse could be claimed to be in constant evolution, with each individual account changing and adding to the discourse.

5.2. Global smart city discourse in the making

When it came to the challenges and tasks that the smart cities set for themselves, one could make the claim that the smart cities relied on very similar types of challenges and tasks for their credibility and legitimacy. Thus, the results of this study could be argued to show that, even while there is no common conception or definition of what smart cities are, what they should be or what they should do, the global discourse around them could be claimed to be quite unified. Particularly with tasks, but also with challenges, there seemed to be a tendency among the examined smart cities to appeal and refer to the same viewpoints or moral objectives. Thus, they could be argued to share a same kind of understanding of what type of language and what type of reference points would be seen as legitimate when it comes to performing being a smart city.

What these results could also be claimed to show is that there is no single readymade model that would spread and diffuse among the examined smart cities. Rather, this model could be argued to

be in constant evolution and construction as the cities keep an eye on each other all the while also trying to stand out through their own unique features. This could be seen in the way that the chosen cities shared common challenges and tasks while at the same time maintaining the fashion of being unique when compared to other examined smart cities. From this perspective, all the new viewpoints can take this ever-changing model to new directions and global models are formed in 'parallel' with their spread (Syväterä and Qadir, 2015, p. 267). Thus, rather than simply adopting ready-made models in a 'conformist' (Meyer, 2004, p. 42) manner, the cities could be argued to be constantly adjusting and changing their ways of bringing themselves across based on the ever-changing signals they are getting from other cities.

Furthermore, instead of the readymade model diffusing, one could argue that it is the discourse and ways of talking that are diffusing. From this perspective, each new city, in presenting themselves as a smart city, changes the legitimate way of talking about smart cities. These ways of talking are here seen as being part of the global discourse, which sets the limits for how smart cities can be understood, talked about and construed. From this perspective, the smart cities are presenting themselves as legitimate within the limits of the global discourse. This is in line with the findings by Rautalin and Alasuutari (2022) and their research concerning Sweden's COVID-19 debate, in which they see the interdependence evident in national policies as an outcome, not of ready-made models diffusing, but rather of a global epistemic field. Had the study been made a decade earlier, it is very likely that the found global discourse would have been very different. This is because every new viewpoint takes the model to a new direction just as was the case with Sweden's COVID-19 strategy.

5.3. Epistemic governance approach to smart city rhetoric

By relying on epistemic governance as a background framework for this study, this thesis has been able to bring forward many new viewpoints into the study of smart cities. It has been able to examine the elements of the global discourse around smart cities, as well as analyse the way smart cities use this discourse in their attempts to justify and legitimise being smart cities. The study has also been able to highlight the importance of smart city websites in defining and determining our understanding concerning smart cities as well as their aims and goals. Furthermore, the study has also been able to approach the tasks and challenges that the smart cities have set for themselves as reference points which the cities appeal and refer to in order to build up their credibility and legitimacy. This could be argued to highlight the importance of understanding just how smart cities

have achieved and continue to try to achieve their legitimacy and credibility through common understandings of the surrounding discourse.

Furthermore, this study has been able to show how the fact that there is no definite definition for smart cities does not mean that there is no common discourse. Rather, the discourse around smart cities seems to be rather unified, with the examined cities appealing and referring to surprisingly similar reference points in their search for credibility and legitimacy. This could be seen particularly with the tasks, but also with the challenges, that the smart cities had set for themselves. The examined smart cities seemed to share a common understanding of the challenges and tasks that they should refer to in their search for legitimacy.

In addition to the literature surrounding smart cities, this study could be argued to have also added to the research around diffusion studies as well as to the research around studies concerning the interdependence of national policies. The study sets to show that instead of simply talking about readymade models, one should also consider the wider discourse surrounding the various actors and models and how it construes the way different actors and phenomena can be understood. The study set out to show how epistemic governance framework can be used to highlight the way smart cities justify their existence and credibility by relying on certain reference points.

5.4. Limitations and directions for future research

This study set out to explore the global discourse around smart cities. In order to do this, it was necessary to examine how the chosen smart cities legitimate themselves and present themselves as credible actors through the explored challenges and tasks. It should be noted that this particular study was quite limited in its range, with the chosen smart cities representing only two different continents. Had there been more countries from different continents included, this might have had a noteworthy effect on the types of observations one could make about the global discourse surrounding smart cities. Yet, despite this, one could make the claim that this study was able to point out the reference points that were part of the surrounding global discourse as they were the ones being referred and appealed to. This study selected certain viewpoints which reflected the global discourse in specific space and time and thus showed what kind of global discourse around smart cities is shared within this specific timeline and locality.

Future research could widen the choosing of the cities in order to examine cities from more continents and on a wider range. This could bring out new elements in the ever-changing global discourse around smart cities. Future research could also examine how the smart city discourse changes as time passes by. This type of research could achieve more definite understanding of the

way that the global discourse construes our understanding of smart cities, and how new approaches and ways of presenting oneself as a smart city act to change and modify this discourse.

Furthermore, while this study has examined and discussed the way that the chosen cities try and aim to bring themselves forward as credible and legitimate smart cities, future research could focus on how well these cities have succeeded in fulfilling their aim. This could involve analysis of how well the cities have succeeded in bringing in investments and how well they have placed, for instance, on the global smart city rankings and what types of reference points they have appealed and referred to in order to achieve this. Moreover, future research could also focus on analysing other documentations next to smart city websites, and see how the way of presenting oneself as smart city changes based on the documentations examined.

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