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plaNext

NEXT GENERATION PLANNING

Governing the Unknown:
Adaptive Spatial Planning in the Age of Uncertainty

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plaNext – Next Generation Planning

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Acknowledgment

The Editorial Board of pla*N*ext would like to warmly thank the reviewers of this volume for their invaluable contributions. The following are the reviewers who accepted to disclose their names.

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- Ana Mafalda Madureira, University of Twente, the Netherlands.
- Carissa Champlin, TU Delft, The Netherlands.
- Carlo Federico dall'Omo, Università Iuav di Venezia, Italy.
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VOLUME TWELVE, SPECIAL EDITION

Governing the Unknown: Adaptive Spatial Planning in the Age of Uncertainty the Unknown

Each year, *plaNext* aims to publish two volumes; one of which presents a collection of original works following an open call, and the other presents a selection of articles from the annual conference of AESOP Young Academics (YA). plaNext also publishes special volumes following global challenges. This volume includes manuscripts presented at the 15th AESOP-YA Conference "'Governing the Unknown: Adaptive Spatial Planning in the Age of Uncertainty", Tirana, Albania, March 29 - 2 April 2021. The call for papers attracted forty original papers. The editors of this volume however invited ten manuscripts, following the nomination made by the chairs of sessions. Due to the ongoing Covid-19 pandemic and its dramatic impacts on all walks of life only six contributors were able to complete and submit their top-quality manuscripts. Their contributions explore a range of complex matters that challenge but also inspire the "governing of uncertainties", reflecting on topical debates in academia and planning practice. Their contributions explored new planning ideas and technologies that can be further developed to facilitate a sustainable transition towards (more) adaptive planning. The authors' contributions went through a rigorous peer-review process managed by an editorial board. This board consists of: Prof. Rudina Toto, from Co-PLAN Institute for Habitat Development and key-speaker at the 15th AESOP-YA conference; Elisa Privitera, from the University of Catania (Italy) who is a member of both plaNext Editorial Board and of the coordination team of YA-AESOP Network (2020-22); Mafalda Madureira from the University of Twente (Netherlands) who is member of *plaNext* Editorial Board; Pinar Doerder, formerly chair of the YA coordination team; and Kejt Dhrami, who is member of Co-PLAN Institute for Habitat Development and coordinator of planning studies in the Faculty of Urban Planning, Management and Environment at Polis University, she was also one of the local organizer of the AESOP YA conference in Tirana.

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Notes on Contributors

Amelia Seabold is a B.S. in Urban Planning (2022) and Master in City Planning (2023) candidate at MIT. Her interests lie at the intersection of international development and public health and her research focuses on marginalized populations.

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Christian Lamker is Assistant Professor in Sustainable Transformation & Regional Planning at the University of Groningen (Netherlands) since 2019. His research and teaching within the Department of Spatial Planning and Environment focuses on roles in planning, post-growth planning, regional planning, and leadership in sustainable transformation. He has studied and worked on spatial planning in Dortmund, Aachen, Auckland, Detroit, and Melbourne and coordinates the Master programme Society, Sustainability and Planning (SSP) in Groningen.

Daniela Beltrame has a master's in City Planning (MIT'20, International Development Group) and specializes in urban settlements and international cooperation. Her research includes alternative urbanisms, participatory planning, and slum upgrading programs.

Eleni Komninou is a PhD Candidate in the Department of Planning and Regional Development, University of Thessaly, Volos, Greece. Her academic background consists of postgraduate studies in the University of Sheffield, UK graduating with a MA in Town and Regional Planning in 2017 and an Integrated Master from the Department of Planning and Regional Development, University of Thessaly.

Elisa Privitera has got her Ph.D. in Urban and Environmental Planning and Design (University of Catania, Italy). She works at the intersection between community-based planning, environmental humanities, and environmental justice studies and is working on the concept of small data and toxic autobiographies. She has been recently a Fulbright visiting fellow at the University of California Santa Barbara. Elisa has been a member of the coordination team of the AESOP Young Academics Network (2020-22) and currently she is in the editorial board of *PlaNext*- Next Generation Planning.

Giancarlo Cotella is Associate Professor at Politecnico di Torino. His research positions in the field of comparative planning studies, with a particular focus on the mutual influence occurring between European Spatial Planning and the spatial governance and planning systems characterising the different Member States. Giancarlo took active part to the coordination of several international research projects. He published several contributions on various international scientific journals and edited books, and has recently been elected AESOP Secretary General.

Joaquín Benitez is a Ph.D. candidate, MSc in Urban Studies and B.A. in Sociology at the University of Buenos Aires. His interests lie in urban policies and politics, urban social movements, and informality.

Karenna Groff is a B.S. candidate at MIT studying Biological Engineering and concentrating in Urban Studies and Planning. She is interested in global public health and healthcare in informal settlements across the global south.

Kejt Dhrami is a spatial planning expert, working as coordinator of planning studies in the Faculty of Urban Planning, Management and Environment at Polis University, and as Head of Territorial Governance Unit at Co-PLAN, Albania. She has over 8 years of work experience in research, project acquisition, as well as project implementation and management for regional, local and sectoral planning. Kejt completed her doctoral studies in 2020, focusing on the relationship between spatial typologies, urban morphology and land development indicators.

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Mafalda Madureira is currently an Assistant Professor at the Faculty of Geo-Information Science and Earth Observation (ITC), in the department of Urban and Regional Planning and Geo-Information Management (PGM), of the University of Twente. Her research focuses on strategic spatial planning support tools, geo-citizen science and equity in the planning and development of public spaces, and informality and creative industries.

Marjan Marjanović is a PhD student and postgraduate teaching assistant at the Bartlett School of Planning, University College London. His doctoral research concerns the governance of circular economy transitions in shrinking cities and regions. Marjan's research work focuses on evolutionary governance perspectives and the role of ideas in policy development, while his broader interest lies in the domain of planning for shrinking cities, strategic spatial planning, planning theory, circular economy, and urban governance and politics.

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Pinar Dörder is an architect and planner currently involved in planning practice. She holds a Ph.D. from the Technical University of Darmstadt, Faculty of Architecture and formerly chaired the AESOP Young Academics Network. Her research interests include urban governance, sustainable planning, climate adaptation and urban green spaces.

Rebecca Staats is a PhD candidate at the Department for Conservation, University of Gothenburg, Sweden. She is interested in intersections between planning, heritage studies and place branding, and how these converge in forms of place care. Her research is part of the pan-European HERILAND research and training network on cultural heritage in relation to Spatial Planning and Design.

Rodina Toto is a senior researcher and expert in territorial governance and environmental planning, focusing on the Western Balkans for most of her carrier at Co-PLAN, Institute for Habitat Development, and at POLIS University, Tirana, Albania. She has co-authored the development of the planning legislation in Albania from 2010 to 2016. Her recent research investigates urban commons, particularly public space, and ecosystem services.

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Foreword

I have contributed to the establishment of the AESOP Young Academics Network during the mid-2000s and I have continued to be an enthusiastic supporter ever since. Therefore, it is my pleasure to write the foreword to this important volume of the international open access journal PlaNext – Next Generation Planning, which is a compilation of the most advanced proceedings from the 15th YA conference, that took place in Tirana, Albania, in the Spring of 2021. This conference was the first YA event to take place during the COVID-19 pandemic, and its topic – "Governing the Unknown: Adaptive Spatial Planning in the Age of Uncertainty" – very much reflects the uncertainty that pervaded that period. Simultaneously, it drew inspiration from a lengthy wave of crises that, in Europe and beyond, have gradually increased instability and questioned our development models over the past 15 years. The global financial crisis, the escalating climate emergency, and the energy and food crises spawned by the Russia-Ukraine war have all highlighted the need for alternative models of development that prioritize quality over quantity, society and ecology over economy, equity over growth. These phenomena have had a disproportionate impact on weakened and marginalized communities, resulting in an increase in precariousness and uncertainty. This has for the first time since the post-war reconstruction brought to the fore of planning debates new questions about the capacity of mainstream development paradigms to tackle the critical notions of inequalities, poverty, vulnerability, and marginalisation. As a matter of fact, inequality and crises have mutually reinforced each other over time, with inequality that made cities and regions more prone to decline and crises casting light on and amplifying inequalities.

These debates suggest government authorities at all levels to rethink their approach to the dynamics of territorial development and to embrace new paradigms of multilevel coordination, reflexivity, and adaptability. As I already argued elsewhere, I believe that planning and planners play a crucial role in this process by developing and experimenting with new concepts, ideas, and techniques alongside the public, civic society organizations and other actors, and by assisting in their implementation in practice (Cotella, 2023). Planners might thus contribute into the provision of new opportunities for the creation of more resilient and robust communities by encouraging local participation and promoting equity and inclusiveness. In this, a special emphasis should be directed towards reducing inequality and promoting equity in both social and spatial contexts. Concurrently, the promoted actions must concentrate on minimizing the environmental impact of human activity by implementing sustainable transportation systems, investing in renewable energy and green infrastructure, and adopting waste reduction and pollution prevention measures. Planners have, therefore, the ability and knowledge to mobilize the strengths of multiple government levels, private stakeholders, civil society organizations, and communities.

Some of these debates are explored in this volume of plaNext. The contributors, in different ways, address the intricate challenges faced by societies and some of the opportunities that societies and authorities may explore in order to create a more socially just future.

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I'm delighted to see that the YA Network has taken up the effort, with its ongoing support for the progressive consolidation of the next generation of planning academics and practitioners!

Cotella, G. (2023 - forthcoming). disP Column. Planning the postpandemic, disP – *The Planning Review,* 232, 59.1, pp 4-5.

Giancarlo Cotella

AESOP (vice-)Secretary General

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Editorial: Planning for uncertainty

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Volume 12 “Governing the Unknown: Adaptive Spatial Planning in the Age of Uncertainty” of the peer-reviewed journal *plaNext* – Next Generation Planning comes as a product of the 2021 AESOP YA Conference that took place at Polis University (Tirana) during March 29 and April 2, 2021. This was the 15th conference of the YA network, aimed at fostering a welcoming environment for debate and peer-learning among students, young and senior researchers, and practitioners interested in urban planning studies. Being the first YA conference since the initiation of the COVID pandemic, it was organized in a hybrid format, with the organizers managing more than 50 participants remotely from Albania. Despite fewer spontaneous and informal meetings than in previous events, due to the limitations imposed by the hybrid format, the conference went smoothly and engendered insightful reflections that provided a tangible input for this special issue of PlaNext.

The conference theme, “Governing the Unknown: Adaptive Spatial Planning in the age of uncertainty” was tailored around the spatial-temporal context of uncertainty triggered by coexisting phenomena, such as the pandemic and its social and economic implications, as well as climate change. The mantra of spatial planning having to continuously reinvent itself,

adapting to the ever-changing context, gains a new level of significance when confronted with the uncertainties bounding socio-ecological and economic systems driving the latter towards developing resilience and evolution. The conference was yet another opportunity to nurture the discourse around the resilience of complex systems and how spatial planning should seek for new knowledge that addresses uncertainty within such systems.

The concepts of adaptation and resilience have been the focus of several conferences and forums in recent years, often with a deep theoretical examination of the concept, but sometimes also little practicality. One more conference on uncertainty would risk adding to the buzzword. But the dilemma of the Local Organizing Committee was 'shaken' by two consecutive seismic events of magnitude 5.8 and 6.4, which occurred in September and November 2019, respectively, in the coastal region of Albania and the Tiranë-Durrës metropolitan area. The aftermath was tragic, with thousands of buildings damaged and ten-thousands more declared uninhabitable. Moreover, there were thousands of people that got injured, and 51 casualties were recorded. The 2019 earthquakes event brought to light many of the planning and construction failures in Albania, highlighting the need to rethink the overall approach of spatial planning and urban development. Suddenly the terms 'resilience' and 'adaptivity' did not sound like buzzwords anymore. Governing the unknown had become as much a necessity as it had become a practical matter.

In the light of these events, with a newer and wider knowledge horizon on how uncertainty can affect the urban socio-ecological and economic system, the 15th conference of AESOP YA examined uncertainty and the unknown by investigating seven themes, which touched upon adaptive planning theory and technology, climate change; socio-economic resilience; territorial governance and politics, including a specific focus on South-East Europe; and COVID19 and territorial governance. This special issue has put together some of the key reflections that the young scholars contributed to the conference following these seven threads of the 'uncertainty and the unknown' discourse.

Being able to cope with crises, adapt to sudden change and live with uncertainty, is a necessity that pushes towards changing planning paradigms. The famous saying of Donald Rumsfeld (2002) "there are known knowns, known unknowns and unknown unknowns" holds true also for planning. The complexity of the systems is growing, and besides dealing with uncertainty, planning and governance should also address the complexity of the unknowns. The high uncertainty in planning and resilience is related to and affects economic, political, social as well as environmental aspects, all requiring some level of adaptation. While improving prediction mechanisms and management of big data may help reduce uncertainty, the governance of "unknowns" requires perhaps a shift in paradigm and the way we deal with knowledge in planning altogether. Davoudi (2015) puts an emphasis that planners need to increase their knowledge of what their "does do". Spatial planning, as one of the main mediums for achieving territorial governance and resilience of socio-ecological systems, is a domain in constant evolution and needs reinvention as a response to the challenges ahead. The discipline has always been subject to various pressures and concerns trying to adapt to the world's dynamics. While in its early days, planning was trying to control the future, now the growing recognition that it needs to work with uncertainty is becoming one of the main drivers for change. Today, planning as a discipline has a more complex mission to face, and it needs to move away from the initial paradigms that created it.

As such, also in the framework of this special issue, by the "unknown", we refer to the relation that this notion has in and for planning. In Europe, for instance, planning should address the continuously increasing inequalities between people and places. These territorial inequalities

drag development towards critical levels of unsustainability, which are further challenged by the (yet to be discovered) effects of the COVID-19 pandemic, as well as by the long-term climate change impacts. Both, the pandemic and the climate change, as phenomena characterized by high uncertainty and unknowns are not to be seen merely from a health or environmental (respectively) perspective. Their socio-economic impacts are extremely important too and are displayed across territories and spaces, reflected unequally among various geographies. In these complex circumstances, planning can address the multitude of territorial effects resulting from these and further upcoming unknowns, only by building systems' resilience, which encompasses both adaptation and robustness.

In a nutshell, spatial planning is one of the main mediums for achieving territorial resilience through the governance of the socio-ecological system, and is in constant evolution and reinvention as a response to constant upcoming challenges. With time planning has shifted from trying to control the future/s, towards increasingly recognizing that it needs to work with uncertainty as one of the main drivers of change. As such, planning has embraced a more complex mission driving it away from the paradigms that conceived it in the first place.

The contributions in this volume explore the intertwined relationship between planning and uncertainty in a highly complex system of upcoming unknowns, departing from different perspectives and contexts. The special issue consists of 6 papers that provide pluralistic and multifold perspectives on the theoretical and practical challenges of planning and governing the unknown.

In their article "*Covid-19 Response in Freetown's Slum Communities: Embracing Situated Knowledge in Crisis and Beyond*" Daniela Beltrame, Joaquin Benitez and Karenna J. Groff question what constitutes knowledge in planning. This contribution begins with the recognition that successful pandemic responses often had in common their grounding in guidance, knowledge and the embodied experience of local communities. The paper engages in debates regarding how community generated data and knowledge, collaboration between grass-root community organizations and other development actors, and learning from past experiences can facilitate successful intervention in challenging times and contexts. The discussion is set in the context of Freetown's slum communities' response to the COVID-19 outbreak. Located in Sierra Leone, these slum communities took advantage of the experience in dealing with epidemics, namely previous Ebola outbreaks. The paper analysed how community-based organizations were able to "leverage their situated knowledge to negotiate, develop and occupy spaces of power in their city's crisis management systems". A rich dataset of semi structured interviews and personal communications with different stakeholders' sheds light on the importance of understanding what knowledge is, where, how and by whom it is produced, and how it can be collectively managed in challenging contexts and times. The importance of engaging in non-expert knowledge is particularly highlighted, together with how planning can benefit from this engagement. The wealth of this paper lies also in its reliance on grassroot experiences, and the strong case it makes for the inclusion of situated community knowledge in urban planning beyond the situation of exception or urgency created by pandemics.

In her article, titled *"Is Covid-19 going to change our relationship with space? A paradigm from Greece"* Eleni Komninou reflects around the impacts of the COVID-19 pandemic in cities and the lessons that urban planning should learn. Focusing on Greece, the author investigates the relationship between people and space to explain how the pandemic led to: counter-urbanization, quiet urban environment, lifeless streets, etc. It also brought a disturbance to the everyday lives of people as well as a shift in urban balances. Komninou showed how our uses of indoor and outdoor spaces have space during the pandemic and how this change has

influenced the shape of urban landscape as well as people's conception of security in public spaces and interaction with their surroundings. If the emerging trends are to become the new normal, a complete shift in our perception and relationship with space is possible. The pandemic can thus be viewed as an opportunity to put in place an integrated planning framework that prioritizes humans and their safety.

Barbora Borotova's contribution *"Cultural heritage challenges and Smart City concept. A strategic planning tool in a strategic planning framework"* brings together the concepts of Smart City and of Cultural Heritage, to understand what are the potential synergies that can develop between the two. These concepts are often found in Planning literature and research, but not often found together. It focuses on the gap between existing Smart City strategies and technologies, and how cultural heritage is integrated into these. The paper is informed by a literature review and a review of Smart city strategy documents in European cities with a notable cultural and historical significance. It questions, what are the different approaches to integrating a cultural heritage in a Smart City strategy? Borotova discusses how cultural heritage could be used as an identity creator in existing Smart City strategies, but how this opportunity is often neglected. Ultimately this paper engages with an often-found challenge of planning, that of strategically integrating different agendas, strategies, and sectoral approaches and our shared spaces, identities, memories and desired futures. This lack of integration and coordination is a hindrance in the approach of "strategic spatial planning".

Another valuable contribution to this special volume, "*Planning with uncertainty: place development of undefined becoming in south-west Sweden*" by Rebecca Staats, looks into the complex and uncertain nature of contemporary planning. The article investigates the extent to which a post-structuralist planning approach can unlock the potential of "uncertainty-as-opportunity" through the studied case, Uddebo in south-west Sweden. Uddebo is a small town and goes through place development coordinated at the regional-level. Place development in the studied case shows the characteristics of structuralist planning, where there is relatively little room left for place development to evolve with – often unforeseen – complexities and uncertainties that inevitably emerge during any planning process from conception to on site implementation. Through a rigorous qualitative analysis, the study identifies a "mismatch" between the regionally-coordinated place development project and the already existing citizen-led initiatives in Uddebo in terms of their compatibility with complexities and uncertainties. Instead, taking on a post-structuralist planning approach with a focus on the process rather than the desired outcome could be more promising. The study confirms, for the studied case and beyond, that an approach which would n ot necessitate a fixation to the desired or predetermined outcomes can and should be adopted in order to unlock the potentials of working with unknowns and uncertainties. Otherwise, the rigidity of the accustomed structuralist planning approaches remains inadequate in addressing complexities which the planning discipline itself operates in.

A more theoretical contribution comes from the *"Reproduction of Spatial Planning Roles. Navigating the Multiplicity of Planning"* by Christian Lamker and Marjan Marjanović, who embrace Gilles Deleuze's concept of assemblage thinking to frame spatial planning as a continually changing multiplicity of diverse entities and emerging dynamic relations among them. The authors also refer to Niklas Luhmann's social systems' theory for promoting a perspective on planners as a multiplicity of roles grounded in continuously evolving self-descriptions and self-developed meanings. Their core argument is that planners achieve the organization (navigation) in an uncertain and complex environment through the reproduction of roles. In their view, planning is, therefore, a self-reflexive process that uses a multiplicity of role configurations that ultimately define and transform the meaning of planning itself.

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In "*The mechanics of drawing: helping planners use serious games for participatory planning*", by Micael Sousa, the discussion moves to the opportunities provided by board games to facilitate participatory planning processes. The paper departs from the claim that the interactive tools can facilitate participation in planning and generate useful data. However, there are challenges to how planners can engage with and adapt to their needs the existing interactive tools. This is also the case with serious games. This paper explores specifically drawing board games that are easily available in the market, ludic and created for entertainment purposes. It identifies the characteristics of drawing games through a popular board game database platform, and goes further to discussing how the selected games and their drawing mechanisms can be adapted and/or transferred to support participatory planning processes. The paper also discusses current challenges faced by planners in using serious games in participatory planning processes, and how to overcome these challenges via existing, ludic, readily available board games. The final aim is generating a debate around the opportunities to engage in a meaningful, representative manner with a wide range of stakeholders, and generate meaningful data to better inform planning processes and decisions.

Reference

Davoudi S. (2015), Planning as practice of knowing, *Planning Theory* 14(3): 316–331. DOI: 10.1177/1473095215575919

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COVID-19 Response in Freetown's Slum Communities: Embracing Situated Knowledge in Crises and Beyond

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The difficulties in tackling COVID-19 have shown with unparalleled strength the need to acknowledge alternative epistemologies in planning. Pandemic responses that seem to have been met with relative success were based upon the guidance, knowledge, and embodied experience of communities on the ground. While some recognize the key role of alternative or 'non-expert' knowledge in addressing current planning challenges, most have struggled to broaden their definition to include different ways in which community-based organizations generated data, shared knowledge, collaborated with other development actors, and learned from past experiences. This paper studies the response in Freetown´s slum communities to the unprecedented crisis brought by the COVID-19 outbreak. It analyzes how community-based organizations were able to leverage their situated knowledge to negotiate, develop, and occupy spaces of power in their city´s crisis management systems during the first months of the pandemic. Data was collected through semi-structured interviews and personal communications with residents of Freetown's slum communities, workers of international non-governmental organizations (INGO) based in Freetown, researchers, and local government officials. This research discusses what knowledge is, where and by whom it is generated, and how it can be collectively leveraged in crisis situations. We also offer a reflection on what this may mean for the future of planning, in terms of transforming structures of exclusion and sustaining that transformation.

Keywords: Slums and Informal Settlements, COVID-19, Situated Knowledge, Community-Based Organizations, Freetown.

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Introduction

As the COVID-19 pandemic was declared by the World Health Organization (WHO), international institutions started to raise flags about the difficulties of prevention and containment in slums and informal settlements. Blanket measures widely recommended (e.g. social distancing, regular handwashing) were not viable in overcrowded communities with inadequate access to water and sanitation, among other issues. Specialized organizations, like the Special Rapporteur on the Right to Adequate Housing (OHCHR, 2020), Social Science in Humanitarian Action Platform (SSHAP, 2020), and Habitat International Coalition (HIC-AL, 2020) published specific guidelines for slums and informal settlements. Based on experience and knowledge from previous outbreaks, such as Ebola in Western Africa, some of the guidelines mentioned halting evictions, ensuring adequate access to water and sanitation, taking special precautions to protect those most vulnerable, and, perhaps most importantly, including slum communities[1] in assessing impact and planning responses.

This paper studies the contributions of community-based knowledge - knowledge based on slum dwelling communities' lived experience as marginalized populations - to face the unprecedented crisis brought by COVID-19. It discusses grassroots actions to adapt data collection strategies and other actions based on how communities were affected by both the pandemic and its response policies. We start by asking whether situated knowledge during initial stages of the pandemic contributed to creating space for organized communities in the city's governance structures and legitimized their position. We wanted to understand how this situated knowledge was utilized to bring forward communities' mobilization potential to contribute to an adequate response, and then reflect on what the answers to these questions tell us about crisis governance and the role of marginalized populations therein.

There is an expanding literature that shows that engaging and participating slum communities in health programs improves the effects of the interventions (Lilford et al., 2016; Corburn & Lee, 2016; Corburn et al., 2020; Wilkinson, 2020). Due to these communities' complexities, proper responses seem to be those with a co-production model where residents and medical personnel co-deliver, co-plan, and co-research, taking into account forms of local, non-western knowledge (Corburn & Lee, 2016; Lilford et al., 2016).

However, even when residents have systematically generated endogenous forms of knowledge through their embodied experience that depart from hegemonic "*loci* of enunciation" (Mignolo 2002), formal authorities still struggle to create space for their engagement in decision-making processes, oftentimes due to lack of capacity or low political interest (Cownwall, 2008). In the extreme uncertainty brought about by the COVID-19 pandemic, the inclusion of knowledge derived from residents of slum communities is not only advised, but deemed essential for a successful response (Corburn et al., 2020; Wilkinson, 2020).

To situate our discussion, we relied on a practical case: the first months of COVID-19 response in Freetown, Sierra Leone, and the work and experience of organized communities in five settlements.

[1] We acknowledge the problematic uses of "slum" as a lexicon for settlements and neighborhoods inhabited by the urban poor (Gilbert, 2007; Arabindoo, 2011; Hurchzemeier, 2014). However, for this article, we chose to refer to them as slum communities based on our partnership with local Freetown chapters of Shack/Slum Dwellers International (SDI), a global network of community-based organisations that are comfortable with this identity and reclaim to empower themselves (D'Cruz and Mitlin, 2007).

With limited public health infrastructure and just one ventilator in the country for 7.5 million people, Sierra Leone opted to take early action in the COVID-19 outbreak. The first positive COVID-19 case in Sierra Leone was recorded on March 30, 2020, but the West African country was quarantining travelers with fevers or travelers coming from countries with COVID-19 cases as early as January, 2020. Influenced by the 2014-2016 Ebola outbreak, Sierra Leonean authorities knew that the governance of a pandemic required enhanced collaboration between a wide range of actors, including community-based organizations (CBOs). The COVID-19 response in Freetown's slum communities relied heavily on the collaboration of grassroots organizations with different governance structures, including the Community Disaster Management Committees (CDMCs), the Community Health Workers (CHWs), the Office of National Security (ONS), the Ministry of Health and Sanitation (MoHS), the Freetown City Council (FCC), and the local chapters of various international non-governmental organizations (INGOs). As we will explore, situated knowledge generated and shared by Freetown's organized slum communities had a central role in shaping the city's response to COVID-19. While we would have liked to have better reflected inherent complexities and diversity within communities and among them, the task was not without challenges, and remains an avenue for further research.

The analysis and arguments presented in this paper are based on data emerging from a combination of desk research and primary data collection conducted between April and August 2020. The latter included semi-structured interviews as well as informal communications with a total of 28 people, including residents and leaders of slum communities, local government representatives, officers of INGOs' local chapters, and members of research institutions, both in Sierra Leone and abroad.

However, we found that at the beginning of the pandemic, some of the most significant challenges, related to rampant misinformation and uncertainty, were closely linked with long-established mistrust in the healthcare system and government authorities in general. Because of this, material responses, such as hand-washing stations or food and mask distribution were paired with behavior change messaging. Conscious of the high levels of mistrust, authorities followed approaches such as sensitization campaigns that were based upon the guidance, knowledge, embodied experience, and existing structures of communities on the ground.

Through grassroots experience, this research reflects on what knowledge is, where and by whom it is generated, and how it can be collectively leveraged in crisis situations. We hope to contribute to the discussion about the value of community participation in crisis response and beyond, to re-imagine governance models that transcend hegemonic structures of centralized planning and give way to alternative, more collaborative forms of decision-making. By highlighting the importance of organized communities in the governance structures of the COVID-19 pandemic, we hope our paper contributes to making the case for the continued inclusion of their situated knowledge in urban planning once the pandemic is over.

This paper is structured as follows: we begin by discussing the literature on situated knowledge, participation and African urbanisms that framed our research, and go on to describe our qualitative methodology. We then present our results in three sections. First, we describe the situated knowledge production and circulation among Freetown's CBOs before the pandemic hit the city. Second, we delve into the urban governance of the 2020 COVID-19 outbreak, describing participatory mechanisms, distribution of responsibilities, and policies deployed. Third, we analyze how the crisis affected the production of situated knowledge and how it was mobilized by CBOs to improve interventions. Finally, we will offer a concluding section with a more speculative set of closing remarks and questions for future research.

Situated Knowledge, Participation and African Urban Futures

Among local actors we can find particular forms of situated knowledge: embodied, located, critical, and practiced modes of knowing, constructed by communities rather than isolated individuals (Haraway, 1988). This concept is part of a feminist epistemological project that seeks to transcend both relativism and totalism by recreating objectivity as a positioned rationality: this means a critique of the pretended universality of science but also of a relativism, which can be equally universalising by pretending to speak from everywhere and nowhere. In this perspective, objective scientific knowledge is only possible when partiality, position, location and situation are taken into account to ground knowledge, both in political and epistemological terms. Here objects of knowledge are not passive and inert things, but rather actors and agents. The situationality of this knowledge comes from circumstances that call for action, but within certain constraints that have to be taken into account, particularly in planning and participation (Leino & Peltomaa, 2012). These include conventions, commitments, objects, beliefs, procedures or rules. It's 'the interplay of these ways of being situated [that] combines in each of us and produces a unique and dynamic locus of situated knowledge that moves and shifts according to multiple inputs' (Ibid.: 161). These located forms of knowing imply a geo-politics of knowledge crucial to any decolonial project that seeks to reaffirm an alternative form of modernity from the Global South, and denounce the eurocentered epistemologies of universal knowledge as if the knowing subjects were universal too (Mignolo, 2009).

One of the most criticized elements of western planning is its use of tokenism and empty rituals to deny constituents the power to affect policy outcomes, hollowing out its own participatory aspirations (Arnstein, 1969). Certain political uses of 'the local' tend to disempower grassroot communities as a result of the competition among various social, economic, and political actors (e.g. social movements, state institutions, NGOs, international agencies). Particularly problematic is a tendency to romanticize local context and their participants in a way that downplays vernacular inequalities and power relations, as well as the weight of national economic and political forces (Mohan & Stokke, 2000). Attempts have been made to create normative frameworks to judge participation on the level of community engagement and power devolution, paying attention to who, how, and where participation occurs (Cornwall, 2008).

However, some of the criticism of participatory mechanism that points to de-politicization of development fails to acknowledge that, like any configuration of power and knowledge, it also produces spaces and moments of resistance (Williams, 2004). As many people and CBOs engage in these participatory mechanisms, they do so in ways 'highly contested: in form, content, limit, extent, politics, and ideology, and unequivocally in practice in their implementation' (Oldfield, 2008: 487). Who leads the process, participatory design, and how, when and where local agents are engaged, are not minor details, as they set the power dynamics, the rules of the game and whose premises guide the participation (Miraftab, 2003). However, 'much depends on how people take up and make use of what is on offer, as well as on supportive processes that can help build capacity, nurture voice and enable people to empower themselves' (Cornwall, 2008: 275).

Classic planning and development theory written in the global North tends to frame Sub-Saharan African urban slums and informality as a failure, a nuisance that needs to be overcome by governance, infrastructure building, formalization, and connecting economies with global flows of capital, disregarding local urban histories (Watson, 2003; Simone, 2014; Eskemosen Andersen, Jenkins & Nielsen, 2015). However, African urban studies have reframed this issue as a question of alternative forms of modernity not necessarily bound by

the western rationality and experience (Harrison, 2006). This project implies taking the African cityness seriously, recovering the daily ordinary life of urban Africa and the multiple ways in which its inhabitants deal with their everyday challenges (Pieterse, 2010, 2011), by understanding how cities are places of entrepreneurship, collaboration, and kinship among marginalized urban residents that 'have demonstrated a remarkable inventiveness in making cities something that—despite the prevailing conditions and odds—might be something that could work for them' (Simone, 2014: 42). Moreover, these practices create forms of insurgent planning: counter-hegemonic, transgressive and imaginative ways in which the disenfranchised (women, immigrants, the poor, and stigmatized populations) build and develop their own houses and infrastructures, challenging neoliberal forms of urban governance (Miraftab, 2009; Holston, 2008). In other words, these marginalized parts of cities and practices are loci of situated knowledge necessary to actually understand how the African city is lived and experienced by its dwellers and challenge the classic western development theory with its overarching statistics, its top-down approach, and its stress on participatory planning.

Methods

The analysis and arguments presented in this paper are based on data emerging from a combination of desk research, as well as semi-structured interviews with development actors on the ground, and personal communications with members of research institutions, in Sierra Leone and abroad. Desk research for this project included a review of academic papers, reports, news articles, and public information shared through official websites and social media, among other resources about the COVID-19 response in Freetown. When selecting the materials to work with at this stage, we considered documents produced and shared by a network of local and international actors with years of engagement with Freetown's slum communities. The aim of this initial stage of desk research was to gain a grasp of the situation on the ground prior to engaging with local partners, and as input for primary data collection design. Our focus was on identifying emerging themes in academic and grey literature that highlighted the COVID-19 response in slum settlements across the global South, specifically in Freetown.

We wanted to understand how development organizations aided in the response to COVID-19, their opinion on the success of the response, and factors that influenced their actions. To do this, we selected methods for primary data collection with local partners to fit contextual conditions and data needs. Methods for primary data collection included semi-structured interviews as well as informal communications with residents of slum settlements, local government representatives, officers of INGOs' local chapters, and members of research institutions. Because of the pandemic, most of these interviews were conducted remotely, especially at times when settlements were closed off by authorities due to COVID-19 outbreaks. At times when our partners were able to safely meet slum dwellers in-person for interviews, they did so.

We carried out 16 semi-structured interviews, either individually or in small groups, to a total of 23 people in the above mentioned groups, that either had distinctive knowledge about or took part in Freetown's COVID-19 response in some capacity. Primary data collection was conducted between April and August 2020. Respondents of semi-structured interviews were categorized by residents of slum communities and non-residents, and the questionnaires were tailored by category. Non-resident interviews and all other communications were conducted through the *Zoom* and *WhatsApp* platforms, and resident interviews were conducted in person by trained local residents. For the resident interviews, we partnered with two of Freetown's

CBOs: first, the Federation of the Urban and Rural Poor (FEDURP), with its professional support organization, the Centre of Dialogue on Human Settlements and Poverty Alleviation (CODOHSAPA), and second, Foundation for the future Sierra Leone (FFF-SL).

FEDURP is the Sierra Leone affiliate of Slum Dwellers International (SDI). Much has been written about SDI as a network of the urban poor. Some of the most cited publications concentrate on horizontal learning exchanges (Patel & Mitlin, 2002), co-production strategies (Mitlin 2008), savings practices (Bolnick, 2016), and housing provision (Bolnick & Bradlow 2010). The Sierra Leone Federation reportedly reaches over 7,000 slum dwellers organized in networked savings groups at the settlement, city, and national levels. For their role in disaster risk reduction and community health, they are also organized in CDMCs across Freetown's settlements, and work closely with CHWs, sometimes with overlapping roles. The second CBO we partnered with, Foundation for the future Sierra Leone (FFF-SL) is an educational syndicate, non-profit, community-led organization in Cockle Bay, Freetown. Its mission is to work with vulnerable and underprivileged children and young people, especially girls, so that they can complete their school curriculums.

Our team was able to develop these situated partnerships due to one of our team member's prior engagement with Freetown's urban slum settlements (through work experience with a Consortium of INGOs, local government, and grassroots organizations developing a slum upgrading strategy for two of Freetown's settlements). These two organizations were key to our research. We engaged with members to articulate and tailor our questions, select the settlements and populations we would work with, decide on methodology, develop tools, and conduct research on the ground.

***Map 1**. Map of Freetown showing location of selected settlements*

Source: Prepared by the authors.

Together, we decided that semi-structured interviews would be the best suited data collection tool for this moment and context. We preferred interviews to focus groups because the COVID-19 situation made it inconvenient, and irresponsible, to propose any type of gathering of more than 2 or 3 people. The selection of semi-structured questionnaires over a more open in-depth option responded to the informed position of our partners, which gave us an initial grasp of the situation on the ground prior to conducting the interviews. We then created and tailored the interview questionnaire with them. The entire data collection team was careful to include locally pertinent topic guides and open-ended questions, and to create a questionnaire structure that allowed for flexibility.

As regards sampling, we agreed on including a diverse set of participants in terms of age and gender, and selected five settlements to work with. The selection of the settlements responded to the will of the FEDURP to study both hill-side and sea-side locations, to include geographical diversity, and to include both a site with a high number of COVID-19 cases and one with no cases, to understand the extent of other hardships. While we have tried to address the inherent complexities within communities and among them and pursue in-depth elaboration on "the community" role to allow for a more detailed representation of them, this task has proven challenging within the context of the pandemic.

Table 1. Selected settlements in Freetown

Settlement name	**Population**	**Location**
CKG (Krab Town, Kolleh Town, Grey Bush)	> 2,000	By the Atlantic ocean and the Congo River, on a central part of Freetown, close to dumpsite
Cockle Bay	~ 20,000	Seaside settlement along the Aberdeen Creek
Dworzark	~18,500	Hillside community located 5 km away from Freetown city centre, on the Peninsula Mountains
Moyiba	~37,000	Hillside stone-mining community located on the East side of the city
Thompson Bay	~ 6,000	Dense and relatively small settlement, located by the sea, on the western side of Freetown

Source: Prepared by the authors from SDI (2017), UCL (2018), SLURC (2020), and FEDURP/CODOHSAPA (2020).

Trained community members carried out a total of seven resident interviews in these five settlements during July and August 2020. Interviews were conducted in the language interviewers deemed more appropriate for each interviewee, namely Krio or English.

With regard to non-resident interviews, we included representatives from the local chapters of Catholic Relief Services, CARE International, and GOAL as well as local government officials from the Mayor's Delivery Unit, and members of the MIT Governance Lab (MIT GOV/LAB) team that collaborated with the Institute for Governance Reform and the Government of Sierra Leone to implement a rapid survey to inform country-wide COVID-19 response policies. We asked how their organizations aided in the response to the pandemic, their opinion on the success of the response, and factors that influenced the response.

We also had a series of informal communications with five people mainly from research-

oriented organizations with experience and knowledge about Freetown, located both in Sierra Leone and abroad. These conversations responded to the fact that some of the people we wanted to interview were not necessarily available for a formal session on account of them being busy with the urgency of the COVID-19 response. On a couple of occasions we also used these spaces to informally corroborate pieces of official information and follow-up on leads.

All data was processed using qualitative analysis software which allowed us to categorize responses into emerging topics, some of which had been identified from desk research or previously discussed with partners. This categorization served as the starting point to recognize emerging issues, locate commonalities, pinpoint discrepancies, and establish connections that we analyze in the following sections.

While we have engaged with a variety of actors in each urban setting, it is important to acknowledge that the diversity in perspectives by far exceeds those included in this paper. Situations in these settings present heterogeneity in the form of varied lived experiences and perspectives. Our choice of settlements and interviewees relied heavily on partner access, and we acknowledge we were only able to reach a small subset of the population.

Communities count: producing and mobilizing knowledge

Any form of collective action is made up of a dense network of interpersonal relations, where not only material and information exchanges occur, but also the transmission of symbols and meaning (Diani, 2013; SDI, 2020). All across SSA, networks of residents of slums, including historically marginalized, self-constructed settlements, usually stand together as organized communities and as part of larger social movements. Their action and advocacy continuously shape both the built environment and the policy landscape around them. Even with restricted access to resources and power, they put forward alternative forms of inhabiting the city and often “inadvertently or with full awareness, they contest the status quo of private individual property, land tenure and inheritance, sustainability concerns and even the very notion of ‘Enlightenment Age’-old social contract.” (Beltrame, 2020: 36) The way these movements define their reality, socially producing their habitat guided by their values, has been and will continue to be critical to cities everywhere.

In Sierra Leone, Freetown houses 15% of the country’s population and is home to 72 slum communities, built by their inhabitants on the hillside and seaside, near dumpsites and other precarious places, usually with no secure land tenure (CODOHSAPA/FEDURP 2020). Although highly heterogeneous, they are often spatially, socially and economically marginalized from the rest of the city, and frequently more vulnerable to environmental risks (Lynch, Nel & Binns, 2020). However, they are also sites of resilience, solidarity and ingenuity (SDI, 2020; Simone, 2014).

In our research, we focus on the Sierra Leone affiliate of Slum Dwellers International (SDI), FEDURP/CODOHSAPA, to consider how their principles and practice, particularly those about situated knowledge production and dissemination, contribute to shaping policy and practice around them. A core element within SDI network are its practices for change, a “creative repertoire of rituals and performances [that] creates the sort of feedback loop between general principles and specific goals which is at the heart of all active social change” (Appardurai 2004 in Patel & Bartlett 2009: 7). Two of these practices are particularly relevant for our research:

1. *Community-led data collection:* Diagnostic and planning activities, performed with the

purpose of building the political leverage that emanates from self-knowledge, including enumerations, household-level socio-economic surveys, focus groups to define problems and set priorities, mapping exercises, and settlement profiles, among others.

2. *Horizontal learning exchanges:* Primary learning strategy across the network, performed community-to-community to share local knowledge and expertise. These take the form of meetings and encounters at the local, national and regional hub levels, and act as a vehicle for the spread of ideas and strengthening of the network.

FEDURP/CODOHSAPA uses strategies such as daily savings, peer-to-peer exchanges, community profiling, enumeration, and mapping to organize a critical mass of poor localities "enabling [them] to engage with local and state authorities as partners in development rather than beneficiaries, and shift development priorities to be more inclusive and pro-poor and ultimately more resilient and sustainable" (FEDURP/CODOHSAPA, n/d). This critical mass provides a platform and opportunity for the poor to change their own lives and shape their contexts. Before the COVID-19 pandemic, these actions were mainly conducted through in-person meetings or exercises.

In the extreme uncertainty brought about by the COVID-19 pandemic, slum communities have been essential to the response, contributing their situated - sometimes referred to as 'non-expert' - knowledge, which seems to have enhanced their participation in their city's crisis governance mechanisms in emergency and disaster response.

(Not so) new governance mechanisms

In the early days of the pandemic, the central government coordinated the response by setting up response teams at the national level (National COVID-19 Emergency Response Center, NaCOVERC) and district level (District COVID-19 Emergency Response Center, DiCOVERC). DiCOVERC included many representatives from FCC as the regional governing body. In the words of a CKG community leader, Bob Jones:

> 'It was like a speedy reaction by the government to even close down the border, that was one of the good measures that the government put in place. At the community level, NaCOVERC has the responsibility to respond to [COVID-19 related] things, so what we used to do is get the information about the basic needs of the people and give the information to them…'

NaCOVERC and DiCOVERC teams consisted of representatives of INGOs as well as members of government such as from the Ministry of Health. Coordinators were appointed by the Ministry of Planning for each district, usually from INGOs, a role that Catholic Relief Services played in Freetown's district. Early on in the pandemic these teams were meeting daily (later on they would meet on a weekly basis) to coordinate relief efforts and delegate actions to each member based on their strengths, knowledge, and capacity. This coordination was key to reduce duplication of efforts.

These participatory governance structures were inspired by learnings from the 2014-2016 Ebola Virus Disease (EVD) outbreak in West Africa, when the government launched the Community Lead Ebola Action (CLEA) campaign with the goal of mobilizing communities in the response with participatory methods (Bedson *et al.*, 2020). Many of the actions taken in response to COVID-19 were originally part of this campaign, such as mobilizing and engaging community activists, religious leaders, and local radio stations, both for communication efforts and monitoring the situation. The government also deployed Community Care Centers (CCC)

as temporal facilities embedded in the community (half of the staff was recruited locally) to triage suspected cases, provide centers for isolating of infected people, and add extra beds in case of health systems collapse (Michael-Strasser et al., 2015). During the Ebola crisis, INGOs and government teams alike learned about the importance of leveraging communities to design robust interventions (Oxfam, 2015): early response efforts were resisted by locals because their traditions and concerns were disregarded as part of the problem. The authorities were unable to understand the negative reactions of locals to hazmat-covered disinfectant-spraying strangers or the burial of the dead without proper health protocols. It was only when local experience, values, and traditions were understood and multiple actors were engaged at the village, ward, and chiefdom level that response tactics changed for the better (Wilkinson, Parker, Matineau & Leach, 2017).

NaCOVERC and DiCOVERCs deployed several policies geared towards prevention and containment. Some forms of preventive behavior learned from the EVD outbreak, such as hand washing and social distancing, were easy to re-introduce during the COVID-19 outbreak. However, mask wearing had a much slower uptake, and public health guidelines such as frequent hand washing, social distancing, and staying-at-home were also difficult, if not impossible, to implement in slums. As a result, solutions to improve housing conditions in slums and informal settlements received a sort of re-legitimizing push. Given the emergency situation, hotel rooms and sports facilities were used for the public good to deploy mobile health services to those in need. Specifically, many overcrowded slum dwellers were moved to international hotels and guest houses to safely isolate themselves from relatives. Additionally, forced eviction and slum clearance was thought of as a non-option, as it would raise the risk of viral transmission throughout the city. Those among our interviewees who reside in slums and informal settlements reported that they did not receive threats nor hear of any evictions occurring during the rainy season, when they typically take place.

The economic downturn and the overarching uncertainty regarding the outcome of the pandemic necessitated aid by the local government and INGOs, which was critical in helping residents survive during the lockdown and quarantine periods. Emergency cash transfer programs were the major source of economic relief. These programs were implemented by several actors, both governmental and non-governmental. Several interviewees spoke to the efforts of FEDURP to support residents who lost their jobs in the wake of COVID-19, with one of them describing the transfers as ‘not much, but okay to get by for a certain time.’

Situated knowledge for COVID-19 response

As mentioned above, collective action is often based on material and symbolic networks that sustain discourse and action. More often than not, face-to-face interactions are central to building trust, as well as organizing and mobilizing capacity. The COVID-19 pandemic disrupts the ability of these organized residents to mobilize themselves and their knowledge which in turn makes it much more difficult to advocate for, enact, or sustain positive change. As a resident from Moyiba and member of FEDURP mentioned: ‘The outbreak of COVID-19 caused great changes in our work; it prevented us from conducting our meetings and doing our savings[2] because of the social distancing measures set by the government; and that has affected our work immensely.’

[2] Community saving schemes are SDI’s widely used method to provide microfinance services for small-scale community initiatives in low-income communities. They work by aggregating modest individual savings to leverage and attract bigger financial resources. However, this organization also uses these initiatives to empower female leaders and other social agendas. See D’Cruz and Mudimu (2012); Bolnick (2016).

COVID-19 was economically devastating to residents of slum communities, who mainly live on daily wages and work in the informal economy. Measures such as lockdowns and curfews prevented residents from going to work, posing a serious threat to their survival. In fact, one of the biggest concerns stemming from the national and local governments instituting lockdowns was food security of the population (MIT GOV/LAB, 2020). With supplies and resources often limited, identification of people most in need or "priority lists" were commonly referenced in many of the interviews we conducted. Lacking the necessary data to establish priorities (like household income, special conditions like pregnancy, disabilities, unemployment, etc.), INGOs relied on the input and situated knowledge of residents themselves to identify those with more pressing needs to be prioritized in the distribution of food, cash transfers, and other forms of aid. Community leaders also aided in the distribution of goods when lockdown measures were in place because movement in and out of settlements was restricted. Their knowledge was also relevant for policy creation regarding how to handle lockdown measures and ensure that the needs of the communities were still being met during the crisis.

Although restrictions on mobility and physical gatherings hindered CBOs' activity, they were still able to continue engaging. In the first moments of the pandemic, when lockdowns were in place, WhatsApp groups were widely used as the main vehicles of communication. Later, when it was possible to exit the home, door-to-door engagement was re-introduced.

In terms of knowledge generation and sharing, one clear theme that emerged throughout our research was the need for more accurate and reliable geospatial, quantitative and qualitative data, not only for Freetown, but across Sierra Leone. With their own challenges and limitations, Freetown's organized communities have been collecting their own data for years. This pre-existing practice acquired new value in the pandemic context, as it reveals the nuance and complexity of health issues in slum settings that desk-based research often misses. When speaking with government officials, INGO representatives and slum residents and leaders, two data-related projects were mentioned:

1. The Sierra Leone National COVID-19 Emergency Response Centre (NaCOVERC) partnerships to produce geospatial datasets;
2. The Freetown Informal Settlement Covid Data Dashboard (Fiscovidata)[3], developed by CODOHSAPA mainly for COVID-19 related data collection and dissemination.

The Fiscovidata dashboard is particularly interesting because it highlights how, under pandemic constraints, FEDURP/CODOHSAPA adapted their way of producing situated knowledge to fit the needs of both communities and local government (Figure 1). This app was developed by FEDURP/CODOHSAPA to record and disperse real-time COVID-19 data. Through a google form, residents were able to report cases of COVID-19 in their communities, as well as other incidents, such as crime and gender-based violence. (Richard Bockarie, CODOHSAPA). Using accessible technology, this initiative yields a public chart, updated every 15 minutes, and provides valuable information for decision-making. This is but one example among many of organized communities generating knowledge, reporting incidents and contributing to the crafting and implementation of the pandemic response.

In Freetown, organized communities also made large contributions in the areas of sensitization, awareness campaigns, and behavior change messaging, for which many forms of situated knowledge were mobilized. Several public servants and INGO officials mentioned

[3] Available at https://datastudio.google.com/u/0/reporting/e5255d5d-6553-49fa-b286-e46c49d296a4/page/kfQSB

that mistrust of the government was widespread among communities.

The novelty of the disease made Freetown residents weary of official information from authorities, including healthcare workers (James Riak interview). When discussing this issue in Hill Station (Thompson Bay), a resident mentioned that “95% of people in our community are saying COVID-19 is not real. This has affected the spread of COVID-19 in Hill Station”. In this sense, engaging residents and leaders was extremely important to create trust in Freetown’s response. A significant portion of sensitization efforts were aimed at communicating preventive measures, informing containment procedures, and debunking misconceptions surrounding the COVID-19 virus. Posters, radio programming, videos, WhatsApp messages, megaphone messaging, and a national hotline (117) were all combined to tackle misinformation and share facts about the virus and how to slow the spread.

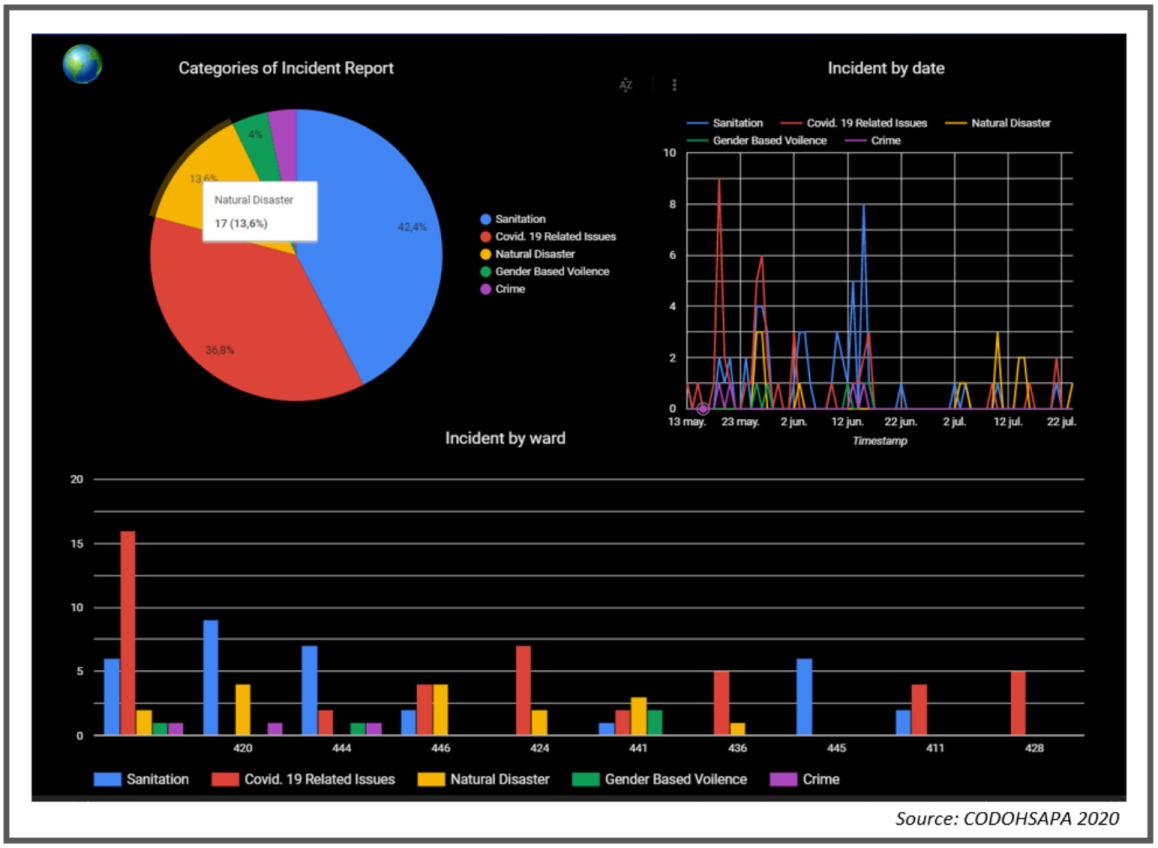

Figure 1. Fiscovidata app snapshot

To combat misunderstandings and make sure health guidelines were followed, messages were spread through individuals and organizations with decades-long histories of direct service and emergency response. This contributed to building trust and an ability to communicate behavior change objectives effectively. Community-led action was a successful strategy pioneered in prior crises that empowered residents and members of long-standing cultural and religious organizations to design and inform response policy at a regional level (Bedson et al., 2020; Wilkinson et al., 2017). These strategies were also aimed at containing stigmatization and facilitating information sharing. The government and INGOs worked with community leaders, who were already well respected and known, to use their platform to spread messages about social distancing and hand washing. They became what some have called "influencers" in their settlements. As messages were coming from trusted community

members, giving feedback to their fellow residents was made easier. This contributed to an increased back-and-forth between government agencies and communities, which allowed for CBOs to negotiate increased presence in decision-making spaces.

Community control of public space in slums and settlements was another important measure to contain the spread, one that residents also spearheaded. As noted before, checkpoints and stations run by CBO members were set in entry points and strategic places of the settlements both to install handwashing stations and sensitize residents. People were required to wash their hands, particularly while entering the communities, and their temperature was checked before entrance whenever a thermometer was available. These stations were run by community organizations, donated by INGOs or the FCC, and required constant monitoring to avoid crowding. Community control also was exerted through Local Police Partnership Boards (LPPB), with residents and CBOs patrolling areas where crowds could potentially arise like markets, sports facilities, wharfs, etc. However, this community control of public space had its down-sides: it damaged the rich public life of these communities (centered around markets and wharfs, long benches, sports fields, etc.), and it also resulted in the police arrest of residents that violated the lockdown to secure their livelihood and the confiscation of goods from street vendors.

One of the most mentioned features in Freetown's response has been the already existing spaces where community knowledge was able to transform into concrete actions for mitigation or response. Two of these already existing structures are CDMCs and CHWs. CDMCs are networked, resident-run committees aimed at addressing different types of disaster and risk. They have been around for years now and are present in most of the settlements. They establish early alert systems and organize and carry out sensitization initiatives, mitigation measures, and direct actions such as clearing drains. As for the CHWs, in 2012, the Ministry of Health and Sanitation (MOHS) of Sierra Leone launched the first National Community Health Worker Policy. Its aim is to improve health access in a country where community health posts are often inadequately staffed. CHWs are volunteers, today over 15,000, who come from different health programs and are trained in health education messaging and integrated community case management (ICCM).

Some of the hard-earned lessons from the past, however, seemed to have been forgotten in the early days of COVID-19, mainly due to the lack of legitimacy that INGOs and government officials had given community knowledge during the period between crises. This re-learning process was explained by Catholic Relief Services' Emergency Response Program Manager James Senesie when he stated that the biggest lesson from the field during COVID-19 was 'the knowledge at the local level which we did not capitalize on... this has been a lesson in fact that we are re-learning, it was a lesson observed in the past and we did not learn.'

In fact, much of the post Ebola literature holds unreflective and uncritical views of communities that somewhat obscure the lessons from the Ebola outbreak (Wilkinson et al. 2017). While that epidemic was stopped mainly through the learnings and changes in collective practices of transmission by the Mano River populations themselves -- some generated locally and some facilitated by external actors (Richards, 2016) -- much of the post-Ebola reflection created romantic accounts of external interventions, without acknowledging how these also generated impositions, abuse, elite capture, resentment and distrust among people (Wilkinson et al. 2017). We wonder whether some of the hard-earned lessons had to be re-learned precisely because of these simplified representations of "the community" and its failure to unpack the complexities of communal participation.

As for COVID-19, several INGO workers highlighted in our interviews the value of trusted community members to influence behavioral change in slums and informal settlements, where residents were much less likely to listen to outsiders or so-called experts. Throughout our research, we have seen a recognition of situated knowledge's value increasingly emerging in authorities' and other development actors' views. As community activist Bob Jones from CKG Settlement explained:

> 'We have been able to get more recognition, we've got a lot of respect, in fact, for our role because we are playing a risky role as volunteers. We are not getting paid for that, definitely, we want to serve. It's like having a passion, working for people at a community level.'

It remains to be seen whether this time the importance of situated knowledge will be adequately learned, considering how common it is for authorities to welcome participation in tokenistic or invited forms (Miraftab, 2009), partly due to requirements by international policy standards and INGO donors, partly because they aim -deliberately or not- at co-opting it. Communities, on the other hand, who have been organizing for decades in local, national, and global networks, often look for and create windows of opportunity for more transformational engagement to rebalance power structures (Williams, 2004; Oldfield, 2008).

Conclusions

This paper aimed to explore how the 2020 COVID-19 pandemic response in Freetown, Sierra Leone generated conditions that allowed community organizations to mobilize their situated knowledge, being at the forefront of the response, to participate in crafting local policies with authorities. We delved into ample literature supporting the notion that coordinating a health crisis response with slum communities improves outcomes, and interviewed development actors in Freetown to understand that co-production of slum health and multi-actor governance are essential to understand and address communities' needs.

We found that, in a historically less than favorable context, Freetown's slum communities have been able to slowly negotiate spaces of participation and even leadership. They leveraged their situated knowledge and capacity, gained after years of mobilizing and organizing, to take up a central role in the crisis response. Due to their experience from the previous Ebola outbreak, organized communities were able to coordinate their actions with authorities and fulfill valuable roles including data collection, contact tracing, cash transfer prioritizing, and distribution of goods, including hand sanitizer, masks, and food items. They also installed stations and checkpoints in strategic locations within or at the edge of settlements for hand washing, temperature checking, and information distribution. This allowed them to effectively exert forms of community control of public space in their communities. Moreover, community 'influencers' were rallied to educate their peers on COVID-19 prevention.

These findings, however, do not reflect the inherent complexity within communities and among them. While we have strived to present details and particularities of the settlements we worked with, this task has proven challenging within the context of the pandemic and we acknowledge the need for further research to achieve more nuanced results.

In the extreme uncertainty brought about by the COVID-19 pandemic, the situated -sometimes referred to as 'non-expert' - knowledge that residents of slum communities have brought to the table has been deemed essential to successful planning and response by NGO officials and government representatives alike. A number of initiatives have given increased

legitimacy to community residents and leaders' role in the response: distributing food items, facemasks, and cleaning products (mentioned in CKG, Cockle Bay, and Dworzark), contact-tracing (in CKG, Moyiba, Dworzark), patrolling public space with police officials through the LPPB (in Cockle Bay), participating in emergency coordinating bodies such as DisCoVERC (leaders from CKG) and CDMCs (in all settlements) sensitization and behavioral change (in all settlements), data collection (in all settlements), among others. This seems to have enhanced their space in their city's crisis governance mechanisms in emergency and disaster response.

However, even when the context of a global public health emergency may have created space or enhanced the legitimacy of community-based knowledge, this cannot be taken for granted. Even when residents are experienced in carefully assessing risk and uncertainty in their daily lives and have systematically generated knowledge about their situation, we have seen how formal authorities still struggle to create space for their engagement in decision-making processes. We wonder whether some of the hard-earned lessons will have to be, once again, re-learned because of simplified representations of "the community" and the failure to unpack the complexities of communal participation. As the pandemic continues in 2021, and vaccines are hoarded by countries in the global North, it still remains to be seen whether the delegated power and community control that Freetown's organized communities conquered during the COVID-19 crisis is sustained during "normal times."

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Cultural heritage challenges and Smart city concept (a strategic planning tool in a strategic planning framework)

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The Smart City concept is often debated in academic, corporate, and institutional spheres, highlighting its conceptual model variations and technological interests. Many cities have decided to implement the Smart City concept as another development strategy with the vision of growth and efficiency enhancement. Such strategy refers to an extra instrument, in many cases, for bridging technological-based solutions with urban development. However, a social aspect is increasingly considered as the missing piece in the Smart City concept. This paper examines the presence of socio-economic aspects in the Smart City conceptual model and the difference by its practical implementation, searching specifically for cultural heritage. The paper uses case studies to investigate the models of cultural heritage integration in different existing Smart strategies of the historical cities and cities significant for their cultural heritage. Case studies aim to provide an oververview of Smart strategies and Smart technologies, that support cultural heritage as one of the main aspects of its development and address its global challenges. The paper provides a critical view of Smart strategies based on technological innovations in historical cities, where the aspect of cultural heritage as an identity creator was neglected. The research addresses the overall position of the Smart City strategy in the strategic planning framework. It draws attention to coherence with other development strategies searching for cultural heritage objectives, in the case study of Nitra. The paper concludes with recommendations for positioning Smart City's strategy in strategic planning frameworks.

Keywords: Smart City conceptual model, Smart strategy, cultural heritage, urban development, strategic planning framework

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Introduction

Over the past decades, We have witnessed the evolution of the Smart City (SC) concept. The concept that evokes technological revolution in development strategies seems "known" and "unknown" at the same time. The SC concept in terms of urban development has been transformed into a strategic tool as a part of the urban planning approach (Vanolo, 2014). Local authorities strive to implement the concept to improve and simplify all the services and living, and overall city's performance for the inhabitants and users by integrating technological innovations into urban planning processes. Perception of the SC concept from a purely technological approach of technological tools and innovations shifted to the concept of a systematic development strategy that focuses on several development areas of the city. This development strategy aroused a trend of modern and innovative cities – Smart cities (Sikora-Fernandez, 2016). While such a trend brought various approaches to designing the SC conceptual model into strategic urban planning processes, its implementation and methodological basis stay "unknown" (Neirotti, 2014; Zubizarreta, 2015). Overall, different approaches towards SC concept models and their implementation occurred. The concept does not have a unified academic and scientific background (Dameri, 2013), which brought many researchers to compile its definitions and recommendations for its adaptation and implementation.

Nevertheless, the most quoted definition and the structure of the concept defined by Giffinger et al. (2007) attribute six dimensions of urban development to where the technological innovations should be focused. Various studies further developed definitions and designs of the concept, based on Giffinger's extensive study. The extension of the concept thus reflects its inflexibility and the absence of a more precise methodological basis, which points to its criticism and limitations. (Neirotti, 2014). Much of the criticism point towards SC perception, which pictures the concept as an explicitly technological infrastructure.

Many practical examples of the concept when implemented still depend only on technology-oriented solutions that testify to its narrow and technological-based understanding (Sánchez-Corcuera et al., 2019). Many studies point to the fact that in practice, the technological perception of the concept is reflected through poorly designed strategies or purely technically oriented solutions (Kummitha et al., 2017). In such studies, authors complement the concept of socio-economic dimensions of urban development, which have hitherto been lacking in either perception or designing the strategies (Kar, 2019). This paper focuses on the cultural heritage as part of the socio-economic dimension of urban development, which is an integral part of urban development and is the creator of the uniqueness and identity of a particular place. The paper overviews the SC concept as a strategic planning tool and its conceptual models towards urban development areas. The paper analyses approaches of the concept concerning cultural heritage as a development factor. Literature review seeks to identify the relationship between SC concept and cultural heritage based on examining social aspects in the SC model resulting from several studies. Identification of the relationship helps understand the socio-economic approach of the SC conceptual model. The presence of cultural heritage in SC strategy is investigated using a case study method of cities with notable cultural and historical significance, to bring an overview of practical examples of SC implementation. The case study approach enables the classification of the types of integration of cultural heritage into SC strategy in various cases. This answers the partial research question: What are the different approaches to integrating a cultural heritage in an SC strategy? Summarizing the theoretical and practical approaches to integrating a socio-economic and identity-forming attribute of urban space such as as cultural heritage, aims to answer the main research question: Under which circumstances might a SC strategy be a supportive strategic

development tool of cultural heritage development and the identity of the city? This results in another contribution of the paper, based on case studies examination. SC strategy in strategic urban development figures as sectoral strategy, which also outlines the examination of SC strategy and its position in the strategic planning framework. In-depth case study analysis – city of Nitra highlights the coherence in strategic planning framework focusing on the presence of cultural heritage in strategic objectives.

Defining the Smart City concept and socio-economic aspects of the Smart City concept

Numerous definitions have been addressed to the SC concept as the concept is a very still frequent topic and the objective of research in the scientific literature (Winkowska et al.,2019). Many definitions stem from different understandings, adaption to different trends, and disciplinary areas amongst researchers and practitioners (Chourabi et al., 2012). Primary scientific sources aim to extend the previous definitions or the model of the concept itself based on a comparative approach. However, a unified and ambiguous definition of the concept's methodological and scientific origin is still missing. Such an approach suggests that the concept is still volatile, and its practical implementation is very individual for each case (Dameri, 2013).

The original idea of smart cities does not only correspond to the involvement of information and communication technologies (ICT) in the urban planning processes. Instead, it was a kind of alternative to traditional urban planning regimes, where the role of ICT is to deal with urban/city problems caused by the urban population growth and rapid urbanization based on more efficient data collection (Alawandhi et al., 2012). Nevertheless, transforming the idea into the involvement of ICT throughout the SC concept implementation to modernize cities takes place. Here it is often forgotten that the original objective of SC concept was to tackle global issues such as population growth, climate change, environmental issues, and other urban challenges (Giddens, 1999; Caragliu, 2011). The current perception of the concept by the practical example mainly refers to implementing technological-smart solutions driven by the hi-tech companies oriented to specific areas to bring not only the simplification of processes and urban life but also the presentation of technological innovations. Such trend contradicts the original idea of not only solving urban problems but also connecting the city as a whole, solving problems effectively on a faster basis of communication and connecting its areas (Dameri, 2013; Angelidou, 2014; Neirotti et al., 2014; Allam and Newman, 2018). In this respect, it seems that a misunderstanding of the original idea of the concept can lead to even greater fragmentation and isolation of individual areas of urban development at the expense of its harmonization. “Smart city” became a label of the smartness associated with the involvement of ICT in an urban environment (Allam and Newman, 2018). SC has been defined based on ICT involvement in managing various city functions (Ramaprasad, 2017) and structured by dimensioning urban development areas, while the following period addressed its characteristics the role in urban development (e.g. Intelligent, Digital, Inclusive, Sustainable) (Dameri,2013).

The past decade that refers to SC research significantly moved its focus on the social aspect of the concept. Shifting from ICT-oriented aspects of the city development in terms of SC concept implementation into a broader concept finally focused on the social dimension. Monfaredzadeh and Krueger (2015) addressed a topic of social factors in the SC concept, where the social, human, and cultural capital is underlined as a neglected factor of the SC concept. However, some contributions created a basis for the social-economic aspect development of the SC concept even before. For example, Dameri (2013), in the publication already mentioned, that "the most important subjects in the smart city definition should be the

citizens." Socio-economic aspects refer to social, cultural capital, and economy, and the integration of such aspects means bringing quality of life for citizens, support participation, responding to population needs (Monfaredzadeh and Krueger, 2015). Integrating socio-economic aspects in the SC strategy would aim to goals specific for each city made for its inhabitants with its own identity, history, cultural and economic profile. Human capital is a fundamental asset of the cities. Therefore, the stress of the social and economic dimension in SC strategy design might strengthen the position of the inhabitant. Furthermore, this refers to intellectual capital, generating knowledge, developing social and cultural capital, implementing technology that responds to the interests and needs, supporting technological literacy and digital inclusion, and respecting diversity and individuality (Angelidou, 2014; Radziejowska & Sobotka, 2021).

SC concept is a multidisciplinary construct that would transfer the city into an extensive organic system connecting many subsystems and components. Hollands (2015), in the study, pointed to defining the social problem first in designing SC initiatives, rather than focusing on answers immediately in Smart technology. The paper's purpose and a focus on the social aspect as cultural heritage, a representation of the most popular definitions, is complemented by its area focus with the emphasis on social aspects.

Table 1 provides an overview of the most frequent academic definitions of SC in scientific literature. Most of the definitions aim to define SC as a city performing technological innovations concentrated in different city areas. However, there is no common agreement on the SC definition. Definitions of the SC follow up on the model of the concept pointing on certain aspects, where some of them define the model of the concept via dimensions (Giffineger, 2007; Toppeta, 2010; Washburn,2010; Petrolo,2015), elements (Chourabi et al., 2012), factors (Nam and Pardo, 2011), domains (Neirotii, 2014) and others in performing characteristics (Hall, 2000; Herrison, 2010) or type of the city (Lombardi et al., 2012). The overview looks for social aspects present in the definition/model of the concept. As the Table shows, almost every academic author emphasize the social aspect in defining an SC. Some authors integrate such factors into the SC concept as separate dimensions – Smart people, Liveability, Wellbeing (Giffinger, 2007). Many point to social factors in definition (Caragliu et al., 2011; Nam and Pardo, 2011; Dameri, 2013). Each definition or characteristic of the SC concept is based on ICT integration. However, many contributions define SC in technological or institutional-oriented literature. One example is a study where Toli and Murtagh (2020) overviewed such differences while defining the SC concept. Technology-oriented definitions offer corporate visions via a top-down approach and refer to the presentation of technological innovations. In contrast, institutional-oriented definitions of SC focus on connecting technological innovations with the socio-economic development aspects. These definitions mainly offer development characteristics of the SC concept – sustainable, inclusive, and many more. (Toli and Murtagh, 2020).

Table 1. Defining a smart city with an emphasis on the social aspect

Author (Year of publication)	Definition /Characteristics	conceptual model	Social aspect/s
Hall (2000)	"A city that monitors and integrates conditions of all of its critical infrastructures, including roads, bridges, tunnels, rails, subways, airports, seaports, communications, water, power, even major buildings, can better optimize its resources, plan its preventive maintenance activities, and monitor security aspects while maximizing services to its citizens"(Hall,2000,p.1)	Monitoring, integration, ICT innovations	Citizens
Giffinger (2007)	"A city well performing in a forward-looking way in economy, people, governance, mobility, environment, and living, built on the smart combination of endowments and activities of self-decisive, independent and aware citizens." (Giffinger, 2007,p. 11)	Six dimensions model - Smart economy, Smart people, Smart Governance, Smart mobility, Smart environment, and Smart living	Citizens, Smart Living, Smart People
Harrison et al. (2010).	A city "connecting the physical infrastructure, the IT infrastructure, the social infrastructure, and the business infrastructure to leverage the collective intelligence of the city" (Harrison et al.,2010, p.2).	Instrumentation Interconnection Intelligence	Social infrastructure
Toppeta (2010)	A city "combining ICT and Web 2.0 technology with other organizational, design and planning efforts to dematerialize and speed up bureaucratic processes and help to identify new, innovative solutions to city management complexity, in order to improve sustainability and livability" (Toppeta, 2010, p.4).	ICT technologies, new innovative management solutions/ Governance, Sustainability, Liveability	Liveability
Washburn et al. (2010)	"The use of Smart Computing technologies to make the critical infrastructure components and services of a city—which include city administration, education, healthcare, public safety, real estate, transportation, and utilities—more intelligent, interconnected, and efficient" (Washburn et al., 2010,p.2).		Smart Liveability Smart Education Smart Healthcare Public safety
Caragliu et. al. (2011)	"A city to be smart when investments in human and social capital and traditional (transport) and modern (ICT) communication infrastructure fuel sustainable economic growth and a high quality of life, with a wise management of	Community, technology, liveability, sustainability, governance, policy, accessibility	Human and social capital, participatory planning, community

	natural resources, through participatory governance" (Caragliu et al. 2011,p.70).		
Nam and Pardo (2011)	Technology factors (Smart, mobile and virtual technologies and digital networks), human factors (human infrastructure and social capital), institutional factors (governance, policy, and regulations /directives) (p.. 286-287))	Information, infrastructure, efficiency, mobility, decision making	Human infrastructure and social capital
Chourabi et al. (2012)	Incorporating sustainability and liveability issues by internal and external factors affecting Smart cities. (p. 2291)	Management, organizations, technology, governance, policy context, people and communities, economy, built infrastructure, natural environment	Citizens, communities
Lombardi et al. (2012)	Triple helix model with a civil society that empowers universities, governments and industries. (p.140)	entrepreneurial cities, pioneering cities, livable cities and connected cities	Liveability, Connectivity, Education
Dameri (2013)	"A smart city is a well-defined geographical area, in which high technologies such as ICT, logistic, energy production, and so on, cooperate to create benefits for citizens in terms of well-being, inclusion and participation, environmental quality, intelligent development; it is governed by a well-defined pool of subjects, able to state the rules and policy for the city government and development" (Dameri, 2013,p.2549).	Dimensions: Smart Governance Smart People Smart Living Smart Environment	Citizens oriented approach, well-being, inclusion, and participation
Neirotti et al. (2014)	"SC is a wide notion that encompasses many different socio-environmental aspects and ICT applications"(Neirotti,2014, p.34).	Tangible and intangible urban assets: Hard domain (energy, lighting, environment, transportation, buildings, and health care and safety issues) Soft domain (Education and culture, society, government, economy)	Soft/ intangible domains
Petrolo et al. (2015)	"Smart city is a multidisciplinary task that involves various stakeholders from different thematic areas like politics, finance, city management, and organisation and ICT". (Petrolo et al., 2015, p.8)	transport energy, emergency services, waste management, air, and water - recreation	

Socio-economic aspects of the SC conceptual models primarily include social capital, communities, participatory planning, health care, education, or economy. These aspects are usually transmitted into one component as "liveability" or "quality of life." However, none of the definitions nor characteristics mention the identity or cultural heritage, which is, after all, the city's main characteristics and forming socio-economic factor (identity/ "face", visual). The only Neirotii's (2014) study includes Culture in SC concept structure as a part of soft domains. His study revealed the misbalance between the SC components by measuring the model differentiation of the components in existing SCs conceptual models. According to Neirotti (2014), less than 10% of worldwide SC development strategies integrate cultural heritage management or culture in the SC strategies. Misbalance between the development areas in SC strategies also proves Mapping Smart cities in EU (2014) study. Component's coverage measured in the Smart cities different sizes in Europe shows that the "Smart living" component, which should possibly include support of the cultural development, is covered by only 12% out of 599 cities examined (Manville et al., 2014).

Challenges of cultural heritage development

Cultural heritage represents the cities' uniqueness; it forms its identity and refers to its characterizing attribute (UNESCO, 1972) as development factor refers to a multidimensional object and dynamic factor (Bandarin, Van Oers, 2012; Ferreti, 2014). Physical and spiritual representation of cultural heritage together creates an irreplaceable picture of the cities. Therefore, cultural heritage as a development factor carries one of the biggest challenges in spatial development (UNESCO, 1979; Borowiecki et al., 2016). One of these challenges refers to the continuity of cultural heritage values synergically with modern spatial development (Bandarin, Van Oers, 2012). In the past century, the main objectives of cultural heritage management/development became preservation, valorization, and its presentation (Guzmán et al., 2017). However, with the onset of globalization and the digital age, other challenges came to the forefront (Borowiecki et al., 2016). The digitalization era is responsible for cultural changes. Its speed creates a gap between digital technology development and the slow pace of the cultural models and their inherent values (Combi, 2016). "The greater our awareness of living in a global world, the more strenuous our defense of local identity is," argues Combi (2016). Therefore, in the digital age, the cultural heritage faces challenges such as preserving its values the identity of cities/places and sites while integrating technological innovations that might be effective or contradictory in answering those challenges. However, digital technologies are a potent tool. On the contradictory, they might appear as a threat in the field of cultural heritage development – they might change the identity of the places, cultural aspects, a misleading presentation of cultural heritage might be caused as well (Borowiecki et al., 2016; Zubizarreta, 2015).

The SC concept represents the new cultural idea of modern cities led by technological-based innovations. That could suppress the existing culture, identity – genius loci, competitiveness, and uniqueness resulting in conflict between cultures – one that the city already has, and the one (digital) SC is creating (Zubizarreta, 2015). However, there is the possibility of taking advantage of its conveniences - transmitting information and preserving cultural heritage through ICT as well as its ability to present it (Borowiecki et al., 2016). Economou (2015) discusses conveniences that Smart technologies offer in cultural heritage management. Her analysis points to data in capturing, modeling, audience engagement in various contexts, such as schools, cultural tourism, museum visits, and life-long learning as a tool for cultural heritage management applicable for its tangible and intangible elements. Economou (2015) also points to the employment of Smart technologies that might be sensitive and used in answering cultural heritage challenges. Cultural heritage and its challenges in globalization and

modernization are not discussed nor answered in the SC concept. Cultural heritage became one of the sustainability pillars (Nurse, 2006); however, it is not considered a priority for urban development (Ruoss, 2013). SC concept cannot apply to any city in the same way and under the same conditions, simply because each city has its own “local needs and development priorities, building on existing assets of the city and the identity of place” (Angelidou, 2017). SC concept seems incompatible with Cultural Heritage preservation, presentation, and management, despite its potential to merge the objectives of both fields.

Methods

Based on a literature review of the SC concept in the context of cultural heritage, available existing SC strategies and cultural heritage context was searched for, in localities with cultural and historical significance. The first part of the research refers to content analysis of SC strategic documents and analyses its models focusing on cultural heritage integration. The process of selecting cities was conducted based on the SC ranking list. The cities with cultural and historical significance (UNESCO sites, monuments present) with SC strategy adapted were selected (UNESCO, 2019; Smart City Index, 2021). Using a ranking list, a list of existing SCs was available. Another step of selecting was the availability of data and present aspects of cultural heritage. The analysis of this part consists of the model of the strategy, its cultural heritage context – what is the objective and focus of the SC strategy in the context of cultural heritage and the following projects using case studies – London, Bologna, Prague, Rome, Sydney. In the third part, the "smart tools" analysis is assembled. Case studies from Sardinia, Pompey, Karlsruhe offer "Smart solution-level options in the context of cultural heritage.

The following part aims to analyse the cultural heritage context in SC strategies frameworks in Slovakia. The country was chosen precisely because of its strong cultural and historical assets and identity representation. Within the country, four cities have compiled their SC strategy. The paper studies the integration of cultural heritage through the SC model and its specifications by the same approach.

Additionally, a comparison of spatial development strategic objectives is chosen in terms referring to the coherence of overall strategical development objectives and balance between strategic approaches in strategic urban planning. The fourth part examines a case study of Nitra city as an in-depth analysis of one particular case, where the comparison of the SC and overall strategical framework is analysed. Comparison of objectives and evaluation of coherence between individual objectives of strategic development plans follows the proposal of a unified socio-economic strategic framework of urban development with integration of SC strategy.

SC strategy as a tool for cultural heritage development – cultural heritage as the main component of SC strategy

Cultural Heritage can also be involved in Smart culture as evidenced by the analysed examples – cities, which place Cultural Heritage as a significant component in their SC strategy. Table 2 shows different approaches to Cultural Heritage management and its presentation support in SC strategies. Practical examples offer an SC strategy model – in each case by the components (Bologna, Pague, Rome) or a vision of certain development areas (London, Sydney). Culture and history of the SC strategy context develop areas and focus of particular goals. Projects offer actions of SC strategy towards implementing an SC strategy.

Table 2. Cultural Heritage as a part of SC strategy is analysed examples

City	Smart concept - components	Culture and history context	Projects
Bologna	*Cultural Heritage* Iperbole 2020 Cloud & Crowd Intelligent networks Sustainable Mobility Safe and sustainable neighborhoods Health and Welfare Education and technical training	Enhancement and requalification of the historical center and its cultural heritage, the porticoes and tourism	Data not found
London	Put Londoners at the core, Provide access to open data, Leverage London's research, technology, and creative talent, Collaboration networks enable London to adapt and grow Enable City Hall to better serve Londoners' needs, *Offer a 'smarter' experience for all.*	- cultural heritage promotion as part of city hall services to citizens and visitors. - inclusive 'smart London' experience to all -one - offer of integrated services across several functional areas, such as cultural heritage promotion, transport, and collaborative governance.	- collaborative urban planning and policymaking - integrated wayfinding navigation system (journey planner) including points of interest - clean streets application
Prague	Mobility Smart buildings and energy Waste-free city *Active tourism* People and the urban environment Data	-modern visitor's attractions throughout Prague and a universal tourist card for easier moving around, entering the main attractions. -friendly and fun tourism, the release of crowded streets in the city center, data collection for further use, and tourism management.	An app offering tourist information and several additional functions - for example, an extensive list of monuments and attractions, including information about them, routes for various target groups, the possibility of discounts, navigation to points of interest, current cultural, sports, social and other events.
Rome	Energy Environment Mobility Economic development Tourism *Culture* Education and school Social security	Data not found	Data not found
Sydney	A city supporting (connected, empowered communities)	Seamless integration of the physical and digital to strengthen the community's connection to	Leverage the city's wayfinding network as a platform for interactive art installations, such as

	A city fuelling (global economic competitiveness and attracting and retaining global talent) A city future-proofing its environment and bolstering resilience *A city cultivating (vibrant, livable places)* A city providing customer-centric, efficient services	place and each other, celebrating the unique identity, culture, and history of the local area	virtual/augmented reality and digital city walks, enabling communities to experience local art and architecture and the history and culture of the First Nations people. Working with the local area's art and cultural institutions can help promote the digital amplification of their assets across the community. Expanding the deployment of free Wi-Fi across the local area can unlock a range of opportunities to enhance the city's livability and social connectedness. For example, the network can help tourists navigate the city and support communities to create online groups, share ideas and resources and organize meetups.

Source: (Smart Prague official website,2021; University of Bologna official website, 2021, City of Sidney,2020; TIM Group official website,2020; Greater London Authority,2016).

Practical transformation of the theoretical SC strategy models is in case studies proposed by components – development areas. The study cases show the extension of the theoretical models and the adaption to an urban development need of an SC strategy (tourism, economy, environmental improvement, value, and awareness-raising). A cultural heritage might be integrated into the SC strategy variously. Cultural heritage is a multidisciplinary subject in terms of urban development. Likewise, each city has different needs and goals in cultural heritage development. In the case of Bologna, Rome, Prague, and London, the integration of cultural heritage in SC strategy is linked to tourism development. In the case of London and Sydney, projects of SC strategy are aimed at community connectivity or participatory planning. In this case, the paper spots an integration of cultural heritage into the SC as the primary objective – component refers to its importance in urban development through various areas – cultural heritage, culture, tourism, identity, participation, communities.

Cities supporting culture and history by Smart City solution-oriented model

Smart technologies enabled a connection between Cultural Heritage and its visitors, among the objects/territory and the visitor, and the digital platform's real and virtual worlds. Assets of the Cultural Heritage as the objects of interest become more accessible via technologies (QR codes, Internet of Things, sensors, Wi-Fi, GPS, Smart devices, etc.) and for its observers more tempting (Chianise, 2014). It seems that in this way, we can talk only about the tourism sector, but in this sense, Smart technologies offer a broad range of possibilities to access its representations. Smart Solutions at the experience level could be addressed to a broader audience and make it easier for their users to feel it as something of their own and leisure-

oriented, educational, informational benefits, not to mention participatory planning. Paquin (n.d.) stated: "In this case, heritage, being as it is the root of the identity/identities of a society (new or old) formed by ancestors or by newcomers, makes up its essential pillar. Therefore, in order to optimize global strategies towards a SC view, an in-depth reflection is required on the role to be played by culture and heritage as one of its fundamental pillars."

Table 3 displays the brief review of the Smart technologies as a tool for cultural heritage development implemented as a project without a broader strategical connection to SC strategy. Case studies of Pompei, Sardinia, and the city of Karlsruhe offer a practical example of implementing a Smart technology to enhance the identity and cultural heritage of the place. Pompei offers an experiential journey through the Smart paths based on augmented reality, filling in the missing places. This project focuses on informative character and spreading the identity of the place. Sardinia connects its historical mosaic of historical and cultural goods platformed on mapping the whole region, using augmented reality in place. The city of Karlsruhe offers a much broader concept of implementing Smart technology through the involvement of institutions and stakeholders by promoting cultural assets and creating a collaborative channel. Table 3 defines a Smart technology and describes its benefits.

Table 3. Apps/ innovations applied for Cultural Heritage support

Pompei/ Italy	Smart placemaking – Smart paths are equipped with sensors and information points that should inform about the history and culture of these places and immerse people in the atmosphere of the place in an innovative way.
	The new approach aims to improve knowledge of Pompeii from a different perspective: to encourage well-being from this place through its best and lesser-known sources of contemporary identity, not only in relation to its archaeological site, but especially in terms of its cultural environment and local roots. A network of public spaces with different identities is an experiential journey based on the promotion of local products.
Sardinia / Italy	Smart experimental paths / RAR technology (relational augmented reality) A mosaic of historical and cultural goods platform, which undertook to map the Sardinian regional heritage (currently contains about 15,000 cultural artifacts and manifestations) and serves as a basic source of knowledge for the study of the cultural landscape.
	Links fragmented cultural heritage with local food and wine, accommodation, cultural and recreational offerings).
Karlsruhe / Germany	AR and VR applications: enhancement of visitor experience in historical sites; application brings images, stories and other content of the past from the city archives to the present. The 'Culture in Karlsruhe' initiative, a marketing effort where cultural institutions, promoting cultural assets, culture-related events and knowledge exchange. Stakeholder ecosystem development: collaboration channels and knowledge exchange networks across cultural heritage stakeholders.
	Promoting smart cultural heritage as a tourism development component. Using dedicated, as well as other informative app, combined with offline initiatives.

Source: (Garau,2014; Sepe,2015; Karlsruhe City official website, 2019).

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Cultural heritage integration examination in SC strategy models in Slovakia - Does the strategy support cultural heritage development?

A country placed in the heart of Europe inhabited by 5,6 million people has few cities marked as smart cities in its territory. In this small country with relatively disharmonized spatial development, I analysed 4 smart strategies. Slovakia is a small country but rich in its history and covers many tangible and intangible heritage sites and cultural and natural sites (O Slovensku official website, 2021). Table 4 analyses strategical objectives in socio-economic development plans and the SC strategy model that refers to a component model in each case. It compares and searches for coherence between them. Lastly, the present context of cultural heritage is analysed in individual SC strategies, if there is one.

Table 4. Slovak SCs

City	Spatial socio-economic development strategy objectives / focus areas /priorities	SC strategy - components	Cultural heritage context
Bratislava /capital city / 437 725 inhabitants	Bratislava - supraregional center Economy of knowledge Quality of life and human potential Environmental and urban quality Transport and technical infrastructure City administration and management	Mobility Energy Environment Circular economy Business Public spaces Social inclusion Education Culture Tourism Sports	Protection and enhancement of the movable cultural heritage; care for cultural monuments - intangible and tangible; improvement of services for the use of cultural monuments, cultural facilities and public spaces of the city; modernization of cultural objects with the use of modern technologies in order to increase the quality of comfort for visitors; development of culture, cultural and creative industry on the territory of the capital of Bratislava; introduction of innovative information systems on the history and present of the city (trips through Bratislava history, monuments, traditions, curiosities, green spaces, bike

			paths, educational trails); building local patriotism and the citizen's relationship to his city; protection and restoration of cultural monuments, including the construction of new premises for research and educational activities (deposits for the protection and safe storage of historical and artistic objects, etc.
Poprad / 51 235 inhabitants	Smart economy Quality of life Tourism Partnership Smart governance	Ecology and health Energy Mobility Education, entrepreneurship, and innovation Tourism	Tourism and cultural heritage support
Nitra / 78 353 inhabitants	Nature and culture Mobility A living standard Partnerships	Mobility Living standard Smart energy Energy management	Does not include cultural heritage support
Prešov / 88 464 inhabitants	Economic development Transportation Environment Security Social care Education and training of children and youth Culture, sport, tourism Efficient management	Mobility Environment Digital city Energy	Does not include cultural heritage support

Source: (Magistrát hlavného mesta,2018; Mesto Poprad, 2017; Nitra Smartcity official website,2021; Prešov Smart city official website ,2021,).

As data shows, the leader of SC is the capital – Bratislava, where the concept shows comprehensive coverage of many development areas and describes the objectives in detail. Additionally, culture is placed as a major component. Comparing the socio-economic objectives and SC strategy components, different and conflicting formulations of individual objects can be seen. Both correspond to urban development areas. However, only a few match. In many cases, technocratic perceptions of a theoretical concept as a predetermined template or a one-size-fits-all approach mislead to develop only supportive technological strategies (O'Grady and O'Hare, 2012). This may result in incoherence between urban development strategies (Neirotti et al., 2014; Zubizarreta, 2015). Case studies from Slovakia indicate such an issue. Differences in the determination of strategic objectives in individual

strategies for the particular city might lead to fragmentation of overall urban development and development intentions.

SC strategy as a part of socio-economic strategic planning framework in the historical city of Nitra

The cultural heritage of Nitra – Identity, and challenges

The oldest city of Slovakia, built on seven hills - Nitra, has been experiencing dynamic growth in the recent period. This city also became home to the automobile industry developer (Jaguar Land Rover). Other residential development projects ensure the city's expansion, while the character of cultural heritage and its historical identity started to fade slowly (Krogmann et al., 2021; City of Nitra official website, 2021; Borotová, 2020). Further characteristics, challenges of cultural heritage and management, and the strategic planning are summarized in Table 5.

Table 5. Cultural heritage characteristics, challenges of cultural heritage, its management and strategic planning

Characteristics	**Challenges of cultural heritage**	**Challenges of cultural heritage management and strategic planning**
Heritage reservation and a Heritage zone Cultural heritage fund - 134 monuments Archaeological sites Traditions Cultural events, local authority's engagements Private-public partnership Private organizations/actors Cultural events organized by private sector Performing arts traditions, developed activity of theatre organizations	Fragmented identity Cultural events attention prevails over the cultural heritage itself and its presentation Non-functional cultural objects owned by the city; unused cultural spaces owned by the city Support for subjects of cultural and creative industries Unadopted infrastructure for tourism and the modern visitor	Destination marketing, branding of the city is missing Using public spaces for cultural activities and events Care for the monuments in private ownership, non-use of available financial resources for the maintenance Unharmonized territorial development and industrial development, real estate development projects in historical centre The image of the historic centre disturbed by modern construction, modern elements of public spaces

Source: (Krogmann et al., 2021; City of Nitra official website, 2021; Borotová, 2020).

Strategic planning framework

In the system of strategic development planning in Slovakia, optimal tools, methods, and systemic relationships other planning activities are searched to ensure the harmonized socio-economic area of urban development (Finka, 2014). For example, in the case of Nitra, socio-economic strategic planning tools (Fig.1) refers to the Programme of social development and economic development city of Nitra. Sectorial development plans in cultural development are a strategy for the development of culture and creative industry in Nitra and Strategic and

marketing plan for the development of tourism in the Nitra (Fig.1). The program of social development and economic development city of Nitra refers to a document that conceptualizes a strategy aiming to address shortcomings and strengthen the competitiveness of urban development by defining a planning and financial framework by precisely defining activities (City of Nitra, 2014).

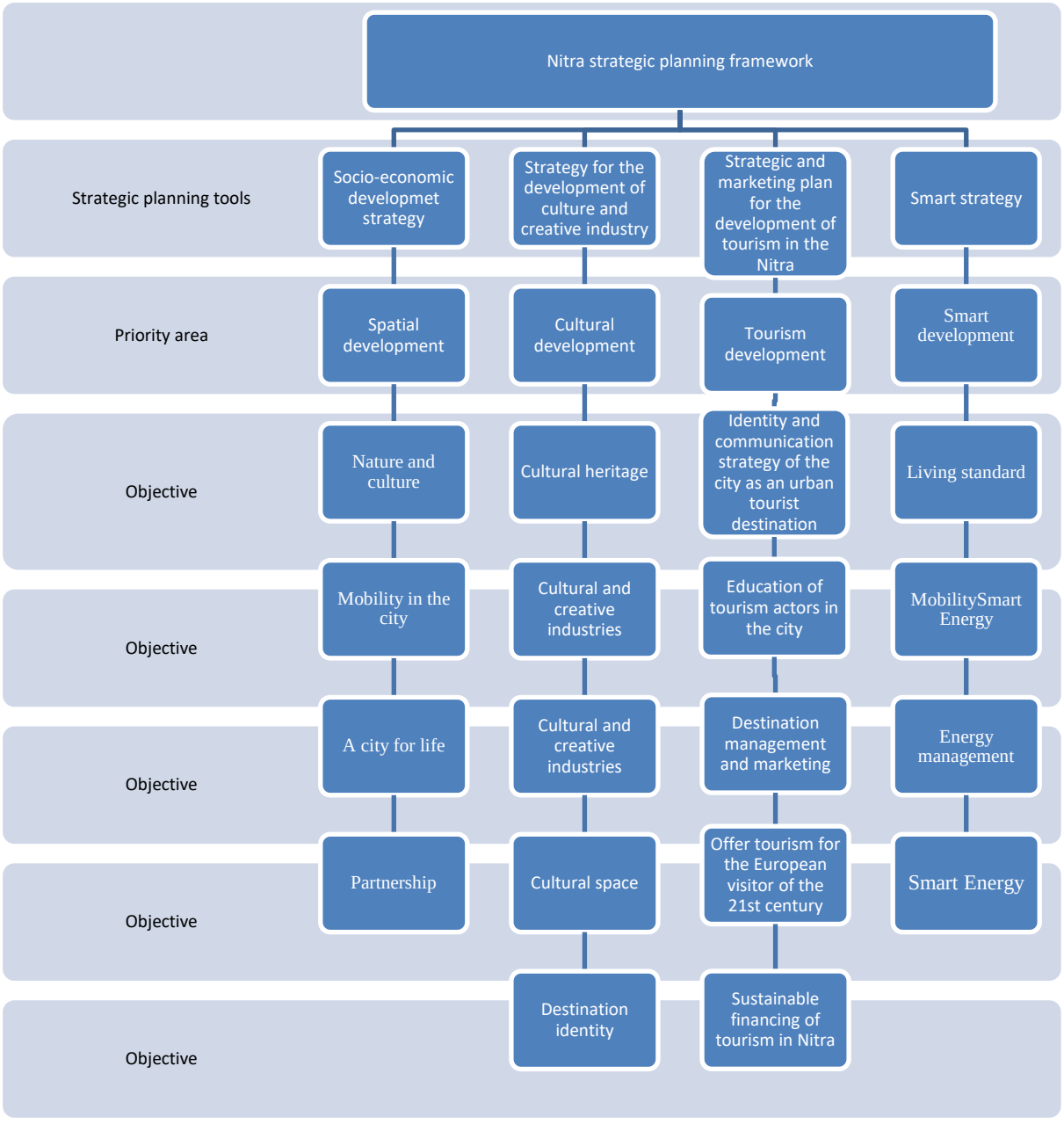

Figure 1. Nitra's strategic framework, strategic tools, and objectives
Source: (City of Nitra, 2016; Smartcity official website,2021; Tourist Information Board of Nitra; Pálenčíková, 2020 ONplan lab, 2020)

In the case of SC strategy, four pillars were integrated into the SC strategy - Mobility, Living standard, Smart energy, and Energy management. The Mobility component mainly focuses

on public transport, bicycle transport, and parking. The Living standard (safety of life in public spaces) aims to create public lighting projects, the lighting of buildings owned by the city, and of apartment buildings, and sports grounds. Smart energy focuses on municipal waste management, water, and heat management. Energy management includes energy efficiency and city security, electronic services, information, and communication (Nitra Smartcity official website, 2021). However, the SC strategy was compiled based on a technological approach. None of the pillars that refer to SC components aim to connect to social aspects or interconnect other strategic planning tools. Figure 1. displays the strategic planning framework in the case of Nitra. The figure provides an overview of strategic planning tools and their priority areas, touching cultural heritage development.

Using the example from the city of Nitra, I search for addressing cultural heritage challenges in strategic planning framework that are partially present in sectorial development strategies. By analysing the framework itself, the relations between strategic objectives and positions of SC strategy that are not linked in the case of Nitra are observed. Adapting a sectorial strategy for cultural heritage development and tourism development, it is unclear which sector should dominate in terms of cultural heritage care and its development. Whereas strategies are subject to various time frames, the individual strategic objectives differ. Pointing on the SC strategy of Nitra, the objectives are directed at the solution-oriented level, however, as they appear to respond to dimensions of the SC conceptual model. In this case, it might spot a lack of complexity and inconsistency with the broader planning context of the city that might result from purely technological understanding and designing SC strategy. Therefore, a lack of methodological or legislative background in designing SC strategy might cause incoherence and the absence of synergy in an overall strategic framework. As a result, various challenges concerning Nitras' identity and cultural heritage emerge, ultimately making development conditions more difficult or even exacerbating the challenges that cultural heritage faces. Therefore, the proposal for a unified strategic planning framework for SC strategy integration and coordination of the strategic objectives is drawn in Figure 2.

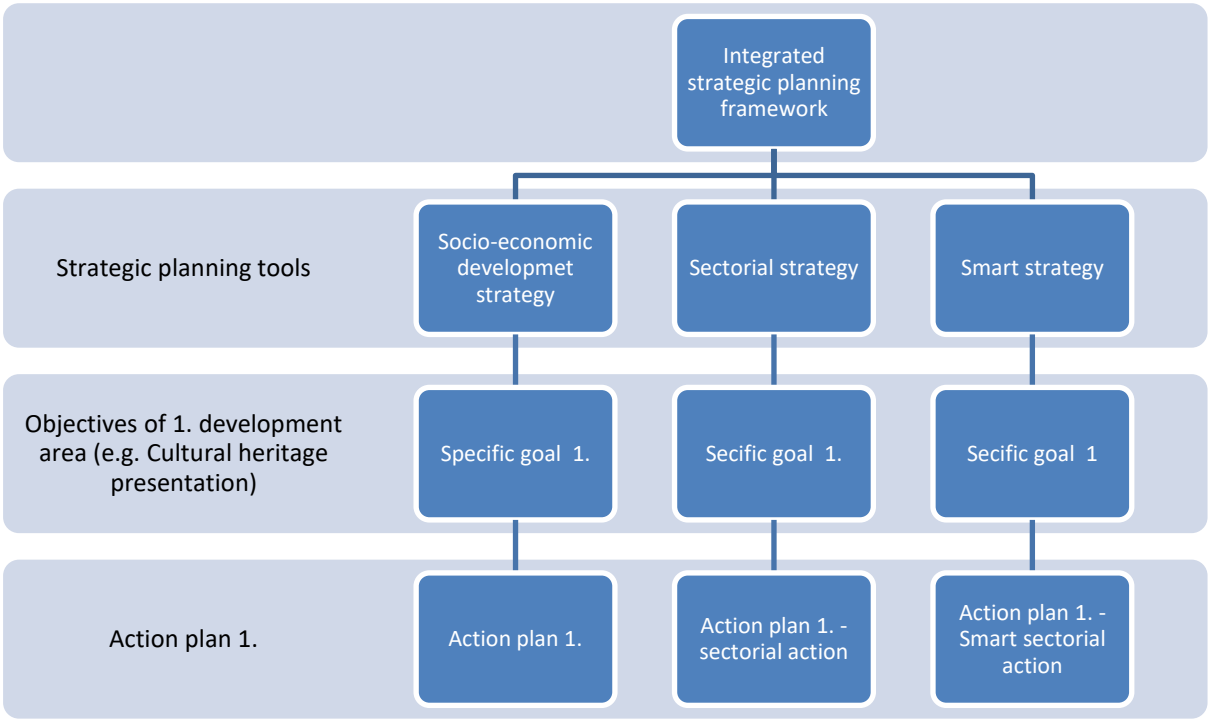

Figure 2. Socio-economic strategic framework of urban development proposed scenario

The scheme describes how development and sectoral strategies could take to achieve coherence and mutually consistent individual objectives. However, developing an integrated strategic planning framework requires uniform processing and a uniform methodology, which should be the role of local government to ensure that policymakers (whether private agencies or municipal companies) cooperate to shape future interventions. In the case of the city of Nitra, it is precisely the opposite; as the references suggest, almost every strategy is created by various external companies with a different methodological approach, applied in a different time sequence. However, the formulation of strategic objectives must not lead to subsequent conflicting activities, whether within one or different sectors.

Discussion and conclusions

The paper draws attention to several shortcomings of the SC conceptual model and its practical representation as a SC strategy. It also highlights the absence of a segment of cultural heritage, and what position the SC strategy should have in strategic urban planning to achieve coherence in strategic planning frameworks. The paper points out the difference between theoretical, conceptual, and practical SC strategies models. The critical approach of summarizing conceptual models towards social aspects such as human, citizen, and identity approach was conducted by searching specific socio-economic aspects – cultural heritage in SC conceptual models. The paper identifies a large gap and even a total absence. However, research critically analysed SC conceptual models in this matter. As a product of the SC concept, many practical examples suggest that SC strategy can effectively address the global challenges facing cultural heritage today. In major cases, historical and cultural heritage is an identity former that should be preserved and cultivated in the cities. Today, we are witnessing that the SC strategy is often used to modernize cities and thus also modify its identity (as in the case of Nitra or Poprad in Slovakia and in many other metropolises around the world). Transmitting SC conceptual models into the development strategies has shown that most case studies use the dimensional SC model. The paper analyzes case studies where an SC strategy integrates a cultural heritage as a movable component reflecting different approaches to respond to its challenges and support its development. A comparison of case studies confirms that preserving and raising awareness of cultural heritage should be part of the SC strategies. Case studies from Pompeii, Sardinia, and Germany provide evidence that cities might support cultural heritage preservation and presentation and fragmented link identity by the Smart technologies.

Nevertheless, the specificity of the Smart solutions and implementation methods should be used to dace the global challenge of cultural heritage might be a topic of further research in linkages between cultural heritage and SC concept implementation. Cultural heritage might be part of the SC concept, although it does not figure as a significant component in the conceptual models. Where culture shapes identity and participates in the development, its position in the strategy should be clearly described. By not appearing within the general SC concept, evokes its absence. It encourages policymakers to omit it, which points out that the SC strategy needs a further methodological and legislative background to adapt to the development needs of a specific area. In practice, policymakers adopt strategic objectives to the needs of cities, as in the case of the strategies analysed in the paper. This approach leads to the absence of a uniform definition or methodology for developing SC strategies. The absence of a legislative or methodological basis for creating the SC strategy is evidenced by a case study from Nitra, whose type of strategy does not in any way comply with the objectives of either the socio-economic development strategy or sectoral strategies. Lack of linkages between goals and developing strategies at the same time are revealed. The absence of integration of cultural heritage in SC conceptual models and practical examples brought a

much broader focus in answering the question of what circumstances an SC strategy might be a supportive strategic development tool for cultural heritage development and the city's identity. The SC strategy can be effective in responding to the challenges of cultural heritage only if it is part of the strategic framework in coherence with other strategies. A negative example in the case study from Nitra points to a non-harmonized strategic framework, where the SC strategy has been classified as a completely separate strategy, unrelated to both the definition of objectives and the time frame. Such an approach might lead to conflicting non-harmonized development and the incorrect solution of development problems in practice, as in the case of Nitra's cultural heritage.

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Open Access Journal

Planning with uncertainty: place development of undefined becoming in south-west Sweden

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There is increasing awareness in the planning community of the need for planning methods that can work with the complex and uncertain issues that characterise contemporary planning contexts. Through a case study of *platsutveckling* [place development] in south-west Sweden, this paper explores the potential of a post-structuralist planning perspective as one way forward in approaching uncertainty and complexity in planning. *Platsutveckling* is an approach to place development planning in the context of regional development, implemented by the Swedish regional government Västra Götalandsregionen (VGR). Place development initiatives in VGR incorporate a participatory approach, actively involving local stakeholders to develop target place visions. The *platsutveckling* process also has characteristics of structuralist planning methods, with a strong emphasis on goal setting. The case is used to argue that a mindset shift is required in order to move forward with planning with uncertainty. Conceptualising uncertainty-as-opportunity, the paper applies a post-structuralist planning perspective to the case study to consider how planning could respond in contexts with high levels of self-organisation. The paper concludes with a discussion of the potential of a post-structuralist approach in complex and uncertain planning contexts.

Keywords: place development; uncertainty; post-structuralism; Sweden

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Introduction: Uncertainty in planning & place development

The uncertain nature of the future is well acknowledged (Amin, 2016 [2011]; Wachs, 2016 [2013]). Across the world, complex social and environmental problems bring additional uncertainties. Despite its ubiquity, responses to uncertainty differ – from calls for better tools to respond to uncertainty (Matejova & Briggs, 2021) to a need for better integration of uncertain outcomes in decision making (Winkler, 2016). In rational planning cultures that have a linear approach to plan implementation, uncertainty is generally treated as something to be managed and mitigated.

This mitigation approach to uncertainty in rational planning approaches has been criticised for failing to recognise the complexity of the real world (Allmendinger, 2017). Indeed, Mintzberg (2000 [1994]) argues that a major pitfall of planning is the rigidity plans take on when they are articulated in detail, which does not allow room to respond to unexpected events that arise during implementation. Planning in this form can be inflexible, focussed on achieving predetermined goals or milestones which must be met before the next set of actions can be taken (King, 2008). Such a focus on meeting set goals and milestones can lead to other opportunities being missed (King, 2008). Similar problems are observed in risk management practice, where attempts to reduce the perceived risk of external factors can in fact impede innovation (Zwikael & Ahn, 2011).

Of course, this is not the only form of planning. For instance, more emergent forms of planning provide the opportunity to learn from the environment and adapt (Mintzberg & Waters, 1985). Such learning capacity is necessary in order to respond to the complexities of contemporary challenges. As Winkler (2016) points out, complexity and uncertainty go together; as complexity increases, so does uncertainty. One example of how the complexity of issues can increase is through increasing the number of stakeholders involved in decision-making. Despite the additional uncertainty this can inject into the process, there are strong arguments for the benefits of co-producing knowledge with stakeholders to reach solutions that better address the problem at hand (Winkler 2016). The importance of greater stakeholder input and more inclusive methods has received substantial attention in the planning literature, characterised particularly by the communicative planning approach which frames planning as a participative process (Allmendinger, 2017). Successful implementation of inclusive practice is no doubt challenging; some part of this has been down to the reluctance of some planning experts to relinquish control (Allmendinger, 2017). Such a focus on control has been particularly dominant in Western planning paradigms, where planners are viewed as uniquely qualified experts in the creation of place (Rauws et al., 2016). Although communicative planning approaches have shifted the emphasis towards decisions achieved through consensus, the goal-oriented, structuralist nature of these approaches means they have a limited capacity to respond to complexity (Boelens & de Roo, 2016). To move beyond these limitations, Boelens and de Roo (2016) suggest a post-structuralist planning of ‘undefined becoming’, in which the ultimate goal is not known beforehand and where ‘uncertainty prevails’ (p. 43). Contrary to structuralist or end-goal oriented planning, a post-structuralist planning perspective explicitly recognises complexity and embraces the associated uncertainty.

Despite the potential of a post-structuralist approach to planning with uncertainty, a mindset shift is required to reach a wider acceptance of uncertainty in planning. To assist with this shift, it is helpful to consider alternative ways of thinking about the future. May and Holtorf (2020a) identify two different ways of perceiving the future; as either continuous or discontinuous. Each conception carries a different attitude towards uncertainty. In a discontinuous understanding, the future is conceptualised as a break from the present; it is a distinct period of time that lacks

continuity with present-time. This conceptualisation of the future prompts a precautionary approach, where risks are anticipated in an attempt to be controlled. Conversely, in a continuous understanding of the future, changes are gradual and seamless. This logic enables a 'proactionary' approach, where risks are accepted in order to take emerging opportunities (May & Holtorf, 2020a, p. 273). In this understanding of the future, uncertainty is not a threat but an opportunity. In fact, an uncertain future may even be preferable to a certain one, because of the opportunities it presents for change to occur (May & Holtorf, 2020b). Embracing a mindset of uncertainty-as-opportunity could be one way to open up to alternative practices such as post-structuralist planning.

Taking this mindset shift as a point of departure, this paper aims to draw on the conception of uncertainty-as-opportunity to explore the potential of a post-structuralist planning approach through a case study of *platsutveckling* [place development] in south-west Sweden. *Platsutveckling* is a Swedish term that has been used by the regional government Västra Götalandsregionen[1] (VGR) over the last ten years to refer to different kinds of planning activities in the context of sustainable regional development, often with a focus on culture as a factor in development (Björling & Ohlén, 2018). This paper examines the *platsutveckling* method developed as part of the regional *Hållbara Platser* [Sustainable Places] project that took place from 2016-2019[2]. The project aimed to develop a method of working with sustainable rural development (Björling & Ohlén, 2018), and resulted in a six-step *platsutveckling* process developed through working with eight places across the Västra Götaland region. This paper examines the implementation of the *platsutveckling* method in one of the eight places, the village of Uddebo, where some challenges were encountered during the implementation of the project. I draw on this case to examine differences between the structuralist planning approach of the regional *platsutveckling* project and autonomous citizen-led place development initiatives. In the text the Swedish term *platsutveckling* is used when referring to the VGR project, whereas place development is used as a broader term that includes citizen-led initiatives. The case is used to illustrate the complexities of planning place development, and to consider the potential of a post-structuralist planning of undefined becoming as an alternative response to these complexities. Although the challenges encountered are contextually specific to the case study examined in this paper, they nonetheless point to the broader issue of how to respond to complexity and uncertainty in planning. The significance of the findings therefore goes beyond Uddebo and can be used to increase knowledge of contexts in which a post-structuralist planning approach is a useful alternative to mainstream planning practice.

The next section of the paper provides a theoretical overview of post-structuralism in planning before using the post-structuralist planning perspective to interpret the results from the case study. The final section outlines the policy implications of this perspective by considering what a post-structuralist approach to place development might look like.

Theoretical Overview: Uncertainty & Post-Structuralist Planning

As introduced above, post-structuralism provides some important insights for how to better plan with uncertainty. The need for such alternatives is clear: as Winkler (2016) argues, contemporary social and environmental problems are highly complex, involving nonlinearity, independencies and emergent behaviour. All of these factors make outcomes difficult to

[1] Västra Götalandsregionen is the regional political governing body for Västra Götaland in south-west Sweden. They have responsibility for regional development, culture, public transport and health care.
[2] The *Hållbara Platser* project was funded by Tillväxtverket (Swedish government agency for Economic and Regional Growth), VGR and Länsstyrelsen (Swedish County Administrative Board).

predict in advance: they are uncertain. Salet et al. (2013) argue that there is a strong connection between uncertainty and complexity: since uncertainty is made up of interactions or components of which we either are unaware, or do not fully understand, increased complexity therefore brings greater uncertainty. Traditionally structuralist planning does not deal well with such complexity and uncertainty. Indeed, Boelens and de Roo (2016) see the growing interest in post-structuralist perspectives as a response to the limitations of the typically goal-oriented processes of both technocratic and participatory structuralist planning methods. Post-structuralist perspectives provide an important alternative planning approach: by focusing on 'processes of becoming'; post-structuralist planning shifts the focus from predefined end goals to processes of change (Boonstra & Rauws, 2021, p. 309), and is therefore better equipped to respond to the uncertain outcomes of contemporary planning challenges.

To understand further how a post-structuralist planning approach can assist with the complex and uncertain characteristics of contemporary planning problems, it is necessary to delve deeper into post-structuralism and complexity theory. In post-structuralism, meaning is multiple and relational; rather than set ideals of what a 'good' or 'sustainable' society should look like, such notions remain open for discussion (Boelens & de Roo, 2016, p. 44). This is a crucial way in which post-structuralist perspectives differ from structuralist planning approaches, which are driven by predefined notions of a 'better' society (Boelens & de Roo, 2016, p. 52). Instead, post-structuralist planning seeks to go beyond the traditional realm of governments and planning bodies and see how a wider range of actors can shape the planning process (Boelens & de Roo, 2016).

In setting out this perspective, post-structuralist planning draws from complexity theory. In complexity theory, multiple alternative futures are considered possible; the future that actually materialises is determined by social action (Byrne, 2003). In embracing multiple futures, the focus of planning activity within a post-structuralist mindset moves from planning content and processes, to the conditions in which planning activity takes place (Boelens & de Roo, 2016). These conditions include considering the specific location, institutional contexts, and constellation of actors involved to identify opportunities for shaping future outcomes (Boelens & de Roo, 2016). In a post-structuralist planning approach there is therefore a larger range of future possibilities and room for stakeholders to play a greater role in determining the outcome than in traditionally structuralist planning. Providing a greater role for stakeholders can be especially important where there is a high level of citizen engagement, such as in instances of self-organisation where spontaneous unplanned activity by individuals without common goals manifests in spatial change (Rauws, 2016). As an autonomous and emergent activity, the outcomes of self-organisation are difficult to predict and tend to fall outside traditionally structuralist planning processes. However, self-organisation should not be considered the 'opposite' of planning (Rauws et al., 2016, p. 5); rather, alternative planning approaches are required. In this instance, a post-structuralist perspective that is open to the participation of a wider range of actors provides an important way forward.

The case study of *platsutveckling* below includes encounters with self-organisation, complexity and uncertainty. A post-structuralist planning perspective provides a way to make sense of the case and forms a basis for proposing alternatives for practice that could better navigate these factors. As such, the remainder of this paper draws on a post-structuralist planning perspective in examining the case study of *platsutveckling* explored below.

Methodology

Methods and materials

For this case study of *platsutveckling* in Uddebo, a qualitative methodology was chosen because of its utility in addressing the complexity of practice-based situations (Ragin, 1987; Flyvberg, 2006). The primary mode of data collection was in-depth semi-structured interviews with citizens in Uddebo: of these sixteen were permanent residents, with the remaining interview a joint conversation with volunteers from *Världshuset*, a collaborative volunteer-based organisation in the village. Respondents were accessed through a combination of direct contact with individuals involved in citizen-led initiatives in the village and interview snowballing, where further contacts were gained by asking interviewees to suggest further participants. A summary of interviews undertaken is included in Appendix 1. Unless otherwise indicated, the interviews took place in English and in person during two field visits from April – May 2021. Not all respondents took part in the regional *platsutveckling* project, and only respondent R13 held a formal role in the *platsutveckling* project as the local process leader. The intention of the interviews was to access a broader sense of how initiatives and activities operate in Uddebo beyond the regional *platsutveckling* and provide a basis for reflecting on alternative place development processes. In addition, a series of informal conversations were held with a VGR representative from the cultural development administration involved with the *Hållbara Platser* project to access the practitioner perspective. These conversations were facilitated through a secondment which took place from April-June 2020[3].

Participation in the secondment also shaped the selection of Uddebo as a case study. Uddebo was one of four sites selected by VGR when the *Hållbara Platser* project was developed, and there was already a strong suite of citizen-led initiatives in the village before the *platsutveckling* project began. Although the other seven sites participating in the project encountered greater or lesser levels of success with their *platsutveckling* projects, during the secondment it became clear that in Uddebo they had encountered some challenges different to the rest. The differences between the VGR and citizen-led approach in Uddebo pointed to a wider planning issue of the interaction between stakeholders and practitioners, and presented a clear need to further explore the reasons for the divergence in approach to place development. Due to the high level and diversity of citizen involvement in the village, the case of Uddebo cannot be taken as a representative case of place development in Västra Götaland. However, the complexity of place development in Uddebo means that the village can be understood as an 'extreme case', which Flyvberg (2006, p. 229) argues can often provide more information than typical cases when selecting sites to study. Understood as such, Uddebo provides an excellent lens through which to examine the complexity of place development and discuss alternative perspectives on planning with uncertainty.

The interview material outlined above is complemented in this study by an analysis of VGR project and strategy documents connected to the *Hållbara Platser* project and regional development more generally. Access to these documents was facilitated through the secondment. The documents are in Swedish; aspects of the translation to English were checked during the secondment. Six documents were analysed, presented in Appendix 2. The analysis sought to understand how *platsutveckling* fits into and was shaped by the wider priorities of VGR. Using the qualitative analysis software *Atlas.ti*, key terms related to culture-

[3] During April-June 2020 the author was hosted for a secondment with *Västarvet*, part of the VGR administration for cultural development. The purpose of the secondment was to be introduced to the way the administration works with *platsutveckling*. *Västarvet* merged with *Kultur i Väst* to form the new VGR administrative body for cultural development on January 1 2020.

led development prominent across the different texts were identified and used to understand the evolution of cultural development strategies in the region. These provided a wider context for the framing of *platsutveckling* within the regional strategy for culture as a priority area for societal and business development. The knowledge overview *Hållbar Platsutveckling: Kunskapsöversikt Västra Götaland* (Björling & Ohlen, 2018) produced as part of the *Hållbara Platser* project was also a key text in understanding the VGR perspective on *platsutveckling*. The understanding gained from these texts and secondment forms the basis for the VGR perspective on *platsutveckling* discussed below.

Case study selection: Platsutveckling in Västra Götalandsregionen

The *platsutveckling* method developed by VGR during the *Hållbara Platser* project drew from existing planning and place making methods to develop a six-step process composed of two phases: a first phase focused on gathering information about the site and developing preliminary ideas, and a second phase focused on the development of a consensual place vision and an action plan for achieving it. The development of a target place image in each site was a major goal of the *Hållbara Platser* project. During the *platsutveckling*, support in the form of funds and advisory staff was provided from VGR but the emphasis remained on the local community to set the agenda and develop a future vision that met local needs. The intention was that the process would be community-led, and that the community would take responsibility for implementing the place vision into the future.

As a project-based initiative carried out within a limited time period, the *platsutveckling* differs from normal planning processes in Sweden. In Sweden, the municipality holds much of the planning power through the local level *detaljplan* [detailed plan]. These plans are valid until a new one is made to replace it; as this is costly in time and resources local plans can remain in place for many years before being updated. The generally top-down nature of the planning system provides opportunities for stakeholders to engage through the consultation phase of making a detailed plan. However, as this paper deals with a regional project-based planning initiative, no more will be said on municipal planning here.

Uddebo: background context

Uddebo is located in Tranemo municipality in the south east of Västra Götaland (see Figure 1). Once a centre for textile production, industry declined from the 1960s, and by the 1990s Uddebo had acquired a negative reputation, with many houses empty and in disrepair. Things began to change after 2009 with the inauguration of *Gula Huset*, a cultural organisation housed in a nineteenth century warehouse building that had been scheduled for demolition. Following this first initiative, interest in the village grew, and many new people moved to Uddebo, facilitated through a non-for-profit real estate brokerage operated by one of the residents to connect new owners with empty houses. There are now a plethora of self-organised initiatives taking place in the village, ranging from *Gula Huset* (which houses the village “free shop” and flea market) to *Väveriet* (the old textile factory repurposed as studio space and a bakery). The population of Uddebo has increased to about four hundred and fifty residents, two hundred of these being newcomers to the village since the early 2000s. In general, Uddebo has experienced an increase in population since the early 2000s and has one of the higher rates of population growth in the municipality (Statistikmyndigheten SCB 2021). The village remains home to a number of residents who were employed at the industrial textile factory which closed in 2012, but it has also attracted many newcomers from various parts of Sweden and beyond. As such the village has an unusual population composition compared to other settlements of a similar size in the region.

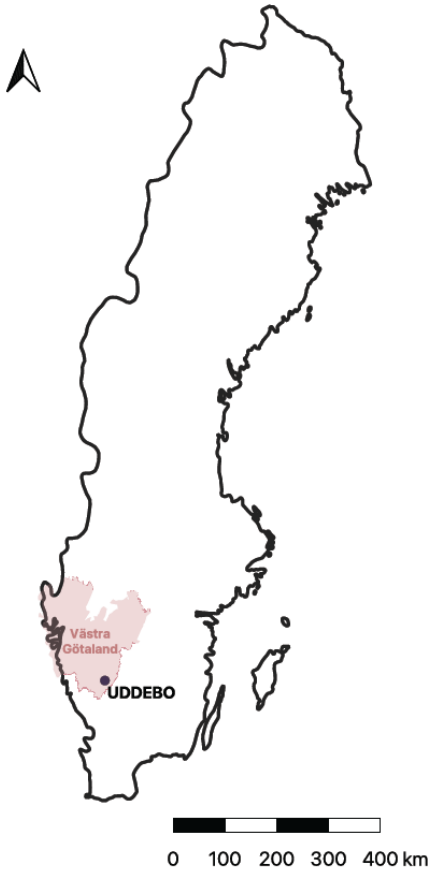

***Figure 1**: Location of Uddebo in Västra Götaland, south-west Sweden.*

Results

From the start of the study, it was clear that there was a mismatch between the process set out by the VGR *platsutveckling* project and citizen-led place development initiatives already happening in Uddebo. As outlined above, the *platsutveckling* process developed by VGR is explicitly goal-oriented: it centres around supporting community members to develop a target place image or desired future vision for their place. This agreed place vision functions as an overall goal to be achieved by the platsutveckling: it is designed to act as the focus point for action, to unite the community and to drive the process forward. In this way the *platsutveckling* process can be understood as a form of consensus-based planning. However, whilst the process facilitates community input in defining the vision, once defined the process focusses on the achievement of this predefined end state. This is clear in the second-last step of the *platsutveckling* process which involves committing to concrete goals and outlining a set of activities for how to achieve the target place vision. Such an approach is in line with a linear planning approach and remains within a structural framework that provides limited space for alternative processes and multiple interests (Boelens & de Roo 2016). This approach posed some challenges for the highly diverse range of individuals involved in a wide range of self-organised place development initiatives happening in Uddebo.

The challenges encountered during the *platsutveckling* project in Uddebo stemmed from a number of factors. One factor was a difference in how goal-oriented action was understood. Whilst the *platsutveckling* project asked for commitment to fixed goals to achieve a single, agreed future vision, this contrasted with what I found to be the emergent and shifting nature of citizen-led initiatives in Uddebo. Of the seventeen community members interviewed, three were explicitly against setting concrete future goals. For instance, *R1* expressed that in Uddebo, 'we have been really certain … that we don't want to have a goal'[4]. *R15* considered the action of defining visions and goals as 'counterproductive', and a process disconnected from reality, which creates 'a top-down perspective'. Indeed, the imperative to agree to a common goal in the form of a target place image was considered to have negative effects in Uddebo: as *R13* expressed, 'in Uddebo since there's so many…when we tried [to form a common goal] that's when [there] also starts [to be] friction because all of a sudden everyone has to agree on a common goal and everyone here doesn't have a common goal … everyone here doesn't want to have a common goal either'.

This is not to say that there is no goal setting in Uddebo: seven respondents expressed that they thought it was okay that different people and groups had their own goals in Uddebo and several interviewees formulated their own thoughts or wishes about the future of the village. This shows that there is not an unwillingness to work towards achieving future states; the issue was rather that a single place vision did not fit with the plurality of smaller interests and initiatives already occurring within the village. In contrast to the structured, single vision of the *platsutveckling* which sought to smooth over different interests through a process of consensus, the diversity of interests in Uddebo are instead considered positive elements that make the village an interesting place to live. This attitude is reflected in the words of *R14b*:

> 'people are different and want to do different stuff so I think for me that's one … reason to live in Uddebo … it's a lot of different people, some of them lived here their whole lives and some of them came recently and everyone comes from different backgrounds, some have different point[s] of view and … that's I think something that makes it possible to last as a community.'

Others expressed that they felt it was okay to 'say if you don't agree...you [can] have a discussion…then you maybe more understand why they want to do it and…you don't have to end up…thinking the same about it anyway' (*R11*). *R10* considered that there 'could be different goals and different people working for them'. It is apparent that the complexity of goals, activities and perspectives within the village, whilst encountered as a barrier to the consensus-based and goal-oriented platsutveckling, is in fact embraced by the villagers themselves and is considered an important part of life in Uddebo.

Furthermore, differences in ideas and goals in Uddebo is in fact seen as explicitly positive. Almost all interviewees expressed the importance of difference and diversity as a strength of the village. A number of these responses reflected on the fact that sameness 'gets a bit boring' whereas 'if you have differences…it gives more…air to breathe like…[it] makes it more … beautiful when [there's] differences' (*R9*). *R2* expressed a similar perspective, reflecting that 'if it's a very homogenous group…I think it becomes less interesting'. From this it is clear that Uddebo citizens and VGR hold different perspectives regarding consensus and diversity. Whilst the *platsutvecking* project aimed to achieve consensus on a future place vision for Uddebo, this was at odds with the value the residents placed on diversity and the freedom to define their own future visions; such a perspective clash is a core reason for the

[4] All quotes from interviews have been edited to remove the hesitations, filler words etc. to improve the comprehensibility of the text. The essence and meaning of the quotes has been preserved.

difficulties encountered during the project. However, when the lack of consensus in Uddebo is interpreted in a more positive light, a different perspective emerges. From this viewpoint the mix of people and initiatives in the village in fact forms a strong attraction point for the residents and is considered a core part in making Uddebo a good place to live.

The value of diversity in Uddebo is not limited to the fact that it makes the village an interesting place to live. Indeed, diversity is understood as an important factor in enabling the various initiatives to happen. *R13* expressed that when 'people can be who they want, say what they want, and no one is like, putting restrictions on thoughts views and ideas…that's when you get this creative melting pot'. These perspectives are very much in contrast to the *platsutveckling* project which focused on meetings and structured goal setting to achieve consensus. Indeed, from the perspective of VGR, the residents in Uddebo appeared disorganised, with the lack of consensus interpreted as a challenge to overcome.

Although diversity undoubtably has a positive connotation in Uddebo, it is also important to recognise that this meant activities in the village were less connected to each other. R5 characterised the different activities happening in Uddebo as 'small islands of engagement'. This was not seen as 'necessarily good or bad' but rather 'a movement that's happened because it's growing and it's hard to try to have one project for first ten people, then forty people, then eighty people'. The high diversity of initiatives in Uddebo was also described by *R4*, as 'a bit scattered', yet with the potential for transformation.

There is a further element of diversity in Uddebo that posed a challenge for the *platsutveckling* project. The high number of subcommunities within the village means that there are many different ideas about the place identity of Uddebo. This was problematic for the agreement of a common place vision or identity in the *platsutveckling* project. Throughout the fieldwork period, a number of respondents expressed a reluctance to align with a single common vision, even outside of the *platsutveckling* project. One example of this was the identity of Uddebo as an eco-village. The eco-village identity was perceived by some to be how Uddebo was predominantly perceived by outsiders. Although such a place identity was considered appropriate by some respondents, others strongly rejected it. A key part of the issue with a single identity was the sense that in such a circumstance, the freedom to do different things and think in different ways could be restricted. *R14b* for instance expressed that 'the strength of Uddebo or any village is that it doesn't have an agenda, that it doesn't have a contract that you sign, or you have to be like this or you have to think like this'. *R15* expressed a similar opinion, noting that 'a strength of Uddebo was that it was not…a value driven, utopia driven place…I would never ever have moved to one of these…eco villages where people try to define…a utopia and then they go there and then things tend to start to collide when people realise that their individual ideals do not match'. Recognising the importance of having space for these perspectives could be one reason why *R1* expressed that 'that's…the thing with Uddebo, I don't think we should define it'.

A final difference between the regional *platsutveckling* project and the Uddebo residents was a different perspective on change and future uncertainty. Whilst the VGR *platsutveckling* sought to minimise future uncertainty by setting out concrete visions and goals for the future, in Uddebo, there was a higher acceptance of future uncertainty. This became clear through the emphasis on openness. For instance, when asked what the most important factor for developing places, *R1* replied:

> 'Openness to things you don't know about, like to give a key to young people that you don't know, and to say ok, you can try to do this…you need to change it, you need to be okay with changing it, so give keys and be open to the changes that will come.'

This openness of Uddebo was perceived as an important element by the respondents. R6 noted that 'you just move out to this village and you can join whatever…it's very open, open-minded in some way, I like that. They…don't judge so much here, you can do whatever'. This sense of openness to future possibilities also underlies the feeling that the village is a safe place where residents are free to 'be themselves' (*R13*). As *R11* expressed 'I think it's okay to do a lot of things but of course…it's also a safe place so we take care of that'; *R11* felt this sense of safety is upheld collectively by the villagers.

The openness to trying new things is also a result of the opportunities present in the village. Not only is the village a safe place to be different, but there 'are…so many more opportunities because there is a lot of land, people have spaces, people…live very cheaply here…people have a lot of time in compared to the city…and a lot of things can happen' (*R2*). This environment of opportunity is an important part of enabling new initiatives – for instance, *R2* noted that 'many ideas … which maybe sometimes have been...growing in the city…now can flourish'. This sense of opportunity was expressed as a low threshold for trying new things: for *R10*, 'I would really like to keep this feeling of…that low threshold…making it easy to do things here and to live here as well'. This low threshold is also due to the low cost of living. For *R1*, 'it's really simple to live cheap in Uddebo because we are sharing so much'. This low cost of living means 'the barrier to do something is lower here' and 'you have so many things that makes it easier for you to try out your idea' (*R1*).

With a low barrier to trying out new ideas comes an acceptance of future change and uncertainty. May and Holtorf (2020b) argue that it is the uncertain future that provides the opportunity for creativity and transformation. This is seen in Uddebo where the opportunity aspect of uncertainty is fully embraced; the constant presence of change is recognised, even when the outcome of that change is uncertain. Indeed, this ongoing state of change or transformation is a key part of the fabric of Uddebo – in justifying why they don't have a single goal, *R1* argued that this is 'why Uddebo is still interesting for people, that's why we are still developing'. The uncertainty of an unfixed future is what brings life to Uddebo. By not having a single vision to achieve, people are 'okay with changing it', they are open to opportunity and transformation. Indeed, there is a preference for organic transformation over planned development – for *R6*, 'I like when it's organic in some way like...things happen because some people just love to do some things...that feels good when it is like that'. This mindset creates a dynamic environment in which change is not directed at reaching a predefined end point, but rather is an inherent part of society – it enables Uddebo to continue to be 'interesting' by continuing to transform in response to its environment.

This openness to change is matched with an openness to not knowing the future. As *R13* expressed, 'I think we have to be okay with not knowing because if you want to formalise, plan and know everything I think we lose a lot of the possibilities and a lot of traction like with being fast, being able, being available when change happens'. This acceptance of the unknown also includes an awareness of the way external factors influence the future of Uddebo. When discussing the gentrification brought on by the influx of new residents, *R1* acknowledged that 'everything that happens will affect the community', tracing the development of Uddebo from a small group that worked on everything together to 'hundred[s] of voices'. The increase in the population and diversity of the village has resulted in a transformation of the social fabric, with *R1* stating 'I don't think that there's any...need of trying to do as we did it before'. From this it

is clear that change is considered as natural as the way people grow and change over time, and 'Uddebo is a part of that' (*R1*).

Discussion: Interpreting Uddebo through a post-structuralist lens

It is evident from the above results that the linear, goal-oriented and consensus-based *platsutveckling* project administrated by VGR was not a good fit for the highly diverse and emergent nature of citizen-led initiatives in Uddebo. Although it would be possible to cast this simply as a lack of organisation on the part of the residents, something much more interesting emerges when we look closer and start to unpick how and why these initiatives are happening in the village. For this, a post-structuralist perspective on processes of becoming is useful. Indeed, by seeing the initiatives in Uddebo as ongoing, unplanned processes, it is possible to set out what a 'planning of undefined becoming' (Boelens & de Roo, 2016, p. 43) could look like in the village in contrast to the single vision approach of the regional *platsutveckling*. As explored above, the initiatives in Uddebo fit a post-structuralist planning of undefined becoming because of the reluctance to commit to common goals or a single outcome in advance. Instead, the emphasis rests on providing space for a diversity of goals and interests in the village.

In understanding the difference between the place development processes of VGR and Uddebo citizens, a difference in the way goal setting is conceptualised becomes clear. For instance, although adamant about not having specific goals for Uddebo, *R1* identified a degree of commonality on a wider scale, acknowledging that 'we have a common goal if we would say that we want to make Uddebo a good place for families and people to live at'. This differs from the *platsutveckling* place vision because it is fairly fuzzy and undefined, providing space for diverse interests. Such a statement implies there is scope for some level of agreement about the future of the village: the problem with the *platsutveckling* process was that it explicitly required consensus and the setting out of concrete goals to achieve the target place vision. These different attitudes about the future are reflected in the *platsutveckling* place vision that was eventually decided for Uddebo: titled '*Kan man göra så?*' – [Can you do it like this?], it provided space for experimentation and different ways of working in the village. Rather than a cohesive set of activities to achieve this vision, as intended by the *platsutveckling*, the activities that actually took place during the project included the creation of a village newsletter *Uddebo bladet*, the creation of *Småhusbyn* (the tiny house village), and an ecological food store. This proliferation of activities was undertaken by different groups in the village and therefore lacked the central organisation looked for in the *platsutveckling* project.

It is also possible to understand how the individual goals held by Uddebo residents differ from the *platsutveckling* goal structure. They are more open ended, and, coming from individuals, more flexible to change. Unlike the *platsutveckling* goals, which are placed within a structured framework within which success of the goals is measured, these low level Uddebo goals can be interpreted within a wider frame of emergence. Such fuzzy and individual level goals do not disrupt the overall focus on process but work within it. For instance, *R1* recognises that her vision for Uddebo to become more self-sufficient depends largely on the interests and focus of the other residents – she understands that it is unlikely to happen whilst residents with young families focus on their children but sees a potential opportunity when those children are older. These goals can be seen as emergent as they respond to opportunities as they arise in the environment, rather than being milestones to achieve as required by an external process.

Another difference is the attitude towards future initiatives. In Uddebo, uncertainty prevails. As *R1* explained, 'you can't say from year to year what is the focus and what people want to interact with', and every time 'somebody stop[s] doing some initiative, somebody else is creating a new one'. Although this attitude is incompatible with a goal-oriented planning mindset, uncertainty need not be seen in a negative light. In fact, *R13* considered this dynamism as something that made the village more resilient, because the initiatives taking place are not reliant on a single driven individual. Focussing on the opportunity facilitated by the uncertain quality of the Uddebo initiatives, it is possible to set out an alternative planning role for VGR inspired by a post-structuralist planning mindset of undefined becoming.

Alternatives to platsutveckling: place development of undefined becoming

As noted earlier in the paper, VGR has a long-term orientation towards planning, which is at odds with the emergent nature of initiatives taking place in Uddebo. Indeed, VGR staff found the lack of organisation and goal setting a challenge in implementing the *platsutveckling* project in Uddebo, with the high diversity of individual voices and interests perceived as a major reason for the lack of a future goal setting and allocation of responsibility. Not only was this divide between goal setting and emergence a major challenge for the *platsutveckling* project, but it carries further implications: without a commitment to long-term goals, VGR is less likely to provide funding support for future initiatives. It is clear there is a gap in understanding between initiatives that emerge in Uddebo without a formal process, and the more structured approach of VGR in meeting its strategic priorities. As Boelens and de Roo (2016) note, conventional planning strategies remain 'usually focussed on strategies for managing complexity, tackling non-linearities and reducing the impact of multiplicities and uncertainties' (p. 59). In this light it is clear that for places like Uddebo an alternative planning perspective is required.

The following section considers how VGR could incorporate an alternative planning perspective that embraces the mindset of uncertainty-as-opportunity in Uddebo. In discussing such an alternative, it should be remembered that Uddebo is unusual in its high level of self-organisation, and that the more structured *platsutveckling* process can be effective in other contexts. Nonetheless, the case of Uddebo provides an important opportunity to discuss what planning alternatives may be appropriate when working with highly engaged citizen groups.
One planning alternative that could be appropriate in contexts such as Uddebo is the 'co-evolutionary planning of undefined becoming' suggested by Boelens and de Roo (2016, p. 60), where the focus shifts from content and process to planning conditions. In a co-evolutionary planning mindset, planning is considered only one of the forces at play, and accepts that 'planning processes unfold in time, without a clear beginning or at least without a clear and definite end' (Boelens & de Roo, 2016, p. 48). This could be effective in allowing space for ongoing emergence and change in the initiatives undertaken by Uddebo citizens.

In considering how to apply such a post-structuralist planning framework to place development strategies in Västra Götaland, a number of factors could be considered. Firstly, by shifting a focus to the micro scale of the village it becomes possible to see diversity as a strength rather than a barrier to successful place development. This is possible through embracing multiple perspectives and actors involved in the local context. As Balducci et al. (2011) note, a post-structuralist approach aims to 'open-up' the planning process and 'explore possible advantages of working with multiple, interacting actors' (p. 491). Such a perspective provides an opportunity to reinterpret the high diversity of individual voices in Uddebo not as a barrier or as disorganisation but as a way to enable 'flexible, adaptive futures' (Balducci et al., 2011,

p. 491). In this perspective, high levels of diversity and difference provide a stimulating environment in which creativity thrives.

Part of recognising diversity could involve a balancing of different needs. An awareness of different needs is already held by residents in Uddebo. For *R9*, part of recognising that 'we're all different and we're always going to be different' includes acknowledging 'we have different needs'. A similar sentiment was expressed by *R17*, who in presenting her thoughts about the kind of planning processes that she would like to see noted that 'from an outside perspective it's difficult to know what this place needs' and argued that projects need to 'see the different needs'. Paying attention to the differing needs of actors and groups is a way to better understand the micro scale and also work with a better awareness of the impact of any interventions. Such an approach might also be more positively received by the residents, as suggested by *R17* who wanted to see more 'listening and mapping' rather than 'instrumentalising and kind of trying to control or steer in a certain direction'.

In addition, VGR could recognise the interest and capacity of actors to engage with initiatives independently of a formal process. The potential is clear in the responses from residents in Uddebo who pointed to initiatives taking place independently from the municipality. For instance, *R11* described how 'things can happen if you want, you can create it, you can always ask people if they want to join and do something together'. This was the case for the *Småfolketspark* [Little peoples' park] in Uddebo which was created by residents, so the village children would have a place to play, which was otherwise lacking in the village. In general, there is a strong sense of taking action in Uddebo independently of formal processes: for *R1*, 'all the things that we [have] been doing these three years [we] could do without *platsutveckling* projects'.

VGR place development planners could also look for shared interests. Throughout the interviews, a number of frequent concerns were raised. *R17* for instance considered that 'it would work really well to make some kind of plan when it comes to some things…I mean what we all have in common is … housing and gentrification'. Here the respondent was picking up on wider factors affecting the village and casting them as points of shared concern. *R13* also mentioned the traffic problem, noting that 'sometimes we joked about the only common idea that everyone here can agree around and can work for is trying to get the traffic down for the village'. The issues of traffic and housing were picked up by VGR during the *platsutveckling* process. However, rather than flagging them as issues for everyone on the village to agree on, an alternative might be to recognise that not all actors in the village will have the same perspective on how these issues should be approached.

The identification of shared interests could also take advantage of existing opportunities for and interest in collaboration with other actors. A number of respondents expressed a desire for greater collaboration with other actors in Uddebo, including *R4*'s characterisation of Uddebo as a 'pot that is slowly bubbling', expressing that greater collaboration and sharing of knowledge between groups 'would really make it cook'. *R17* also considered that more opportunities to meet and discuss common interests in the village would be productive. This should not be interpreted as a desire for consensus, as *R17* expressed a strong desire for autonomy, but rather an opportunity to be transparent about different perspectives and issues in the village. The underlying interest in connection points from the residents' perspective are examples of the opportunities a post-structuralist inspired place development planner could pick up on and cultivate where appropriate.

A final element of a post-structuralist planning approach would be to move away from goal-oriented processes to embrace uncertainty-as-opportunity and focus on supporting conditions for initiatives to organically unfold in Uddebo. This could involve moving away from formal processes and meetings. As *R13* noted, 'what I noticed was that when someone started to get too formalised and inviting [people] to meetings then people would stop coming to the meetings because they thought that…I don't want to go there because…I will get the formal role and that will kill the idea of why I wanted to be engaged…I think people here…want to you know meet, do stuff without being formalise[d]'. Finding other, less formal ways of working in this context becomes an important way to engage with the actors in the village. Recognising informal ways of working also fits in with the post-structuralist planning focus on the conditions of planning rather than on particular visions or processes. Focusing on conditions conducive to place development could include recognising the different interests and needs in Uddebo. Furthermore, recognising that Uddebo is always in a state of change and transformation, and embracing the uncertainty of what will happen in its future would help support an environment of openness and opportunity in the village which enables creative initiatives to blossom.

In sum, in this context of high citizen-led place development activity, there is a clear need for alternatives to the linear, goal and consensus based *platsutveckling* process implemented by VGR. As the case of Uddebo illustrates, in a highly diverse and emergent context a linear planning process that seeks to implement predefined goals is not effective, leading to frustration on the part of both citizens and VGR staff. The final section of this paper goes beyond the case study of Uddebo to make broader conclusions about the potential for a post-structuralist place development of undefined becoming in contexts of high self-organisation.

Conclusion

Although the case of Uddebo describes a scenario in just one village, the implications of the case are much broader. Perhaps the biggest learning from this case study is how changing the response to uncertainty can open up new opportunities to incorporate different planning methods. Instead of linear place development processes that can get stuck when met with diverse and emergent citizen-led initiatives, a post-structuralist planning approach could provide a more effective way of engaging with these complexities through a focus on process rather than predetermined goals or outcomes. In such instances, a mindset of uncertainty-as-opportunity can support existing self-organisation and open up opportunities for change and transformation from within the place. In this way, post-structuralist planning can better recognise and respond to activities that are already in place without imposing formalised processes or predefined goals.

In discussing a post-structuralist approach of undefined becoming, it is important to recognise that this is not the only possible solution or that it is always appropriate (Boelens & de Roo, 2016); indeed, this paper does not advocate for a wholesale application of a post-structuralist perspective to all planning contexts. Even within place development, it should be recognised that no two places are the same, and the planning approach should be adjusted to ensure a fit with the local context. Nonetheless, this paper has shown that alternate planning approaches such as a post-structuralist planning of undefined becoming should be recognised as part of a toolkit of viable alternatives for working with places, especially those with high levels of self-organisation, and in complex and uncertain contexts. In these instances, it may be worth opening up to uncertainty and taking the risk of undesired outcomes in order to seize beneficial opportunities.

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Appendix 1: Summary of interviews undertaken

RESPONDENT #	NOTES
R1	Resident [two interviews - online & in person]
R2	Resident [two interviews - online & in person]
R3	Resident
R4	Resident
R5	Resident
R6	Resident
R7	Resident
R8	Resident [interview in Swedish]
R9	Resident
R10	Resident
R11	Resident
R12a; R12b	Volunteers Världshuset [joint interview]
R13	Resident
R14a; R14b	Residents [joint interview]
R15	Resident [phone interview]
R16	Resident
R17	Resident

Appendix 2: VGR documents analysed

DOCUMENT	AUTHOR	DOCUMENT TYPE
Faktor X (2007)	Ottosson, A. & Öhrström, B.	Report on a pilot project for culture as a factor in development
Kulturella och kreativa näringar i Västra Götaland - Handlingsprogram 2014-2016 (n.d.)	VGR	Action program for culture and creative industries in VGR
Västra Götalandsregionens program för kulturella och kreativa näringar 2018-2020 (2018)	VGR	Action program for culture and creative industries in VGR
Västra Götalands Regionala Kulturplan 2016-2019 (n.d.)	VGR	Regional Cultural Strategy
Kulturstrategi Västra Götaland och regional kulturplan 2020-2023 (2019)	VGR	Regional Cultural Strategy
Platsutveckling i Västra Götaland – Så jobbar vi gemensamt att stödka platsutveckling (unpublished)	Västarvet	Summary document reporting on *platsutveckling*

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Reproduction of Spatial Planning Roles: Navigating the Multiplicity of Planning

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Planning scholars use complexity perspectives to account for unpredictable societal circumstances in an uncertain and changing world. Questions emerge not only about how planning communication and action can transform but more so about the planner's ability to navigate the complex relational dynamics of planning. To move forward, we use Gilles Deleuze's concept of assemblage thinking to frame spatial planning as a continually changing multiplicity of diverse entities and emerging dynamic relations among them. Niklas Luhmann's social systems theory then helps to promote a perspective on planners as a multiplicity of roles grounded in continuously evolving self-descriptions and self-developed meanings. Planners achieve the organisation (navigation) in an uncertain and complex environment through the reproduction of roles. This paper positions planning as a self-reflexive process that uses a multiplicity of role configurations that ultimately defines and transforms the meaning of planning itself.

Keywords: assemblage, Deleuze, Luhmann, roles of planners, social systems, uncertainty.

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Introduction

Complexity is being increasingly recognised as a condition relevant for various disciplines and scientific domains. In spatial planning, scholars emphasise the importance of complexity as well (de Roo & Hillier, 2012; de Roo et al., 2020a). Acknowledging uncertainty is understood as a fundamental requirement for planning to succeed in developing approaches to cope and to plan with complexity (Rauws, 2017; de Roo et al., 2020b). At the same time, this raises questions about the meaning of planning and the ongoing reproduction of meaning and of the roles which planners enact. We aim to contribute to finding answers to these questions by offering a perspective on planning as a multiplicity of roles that planners recursively define, redefine and take in the attempt to account for complexity. Thinking about planning in terms of continuously reproducing roles allows us to grasp the way planning is actualised (performed) against the background of the complex and uncertain world while planners simultaneously make sense of it. Said differently, planning actions (decisions) are more than attempts to organise space. They continuously redefine (differentiate) the scope of planning actions and the meaning of planning as a discipline.

We contribute to these debates in planning theory by combining elements of assemblage thinking of Gilles Deleuze and the social systems theory of Niklas Luhmann. The ideas of Deleuze have witnessed a rising interest of planning scholars over the last decade, particularly coming to light in the work of Jean Hillier (Hillier, 2005; 2007; 2008; 2011; Hillier & Cao, 2013), who suggests applying them to planning as a pragmatic way to deal with rising uncertainties, or a rising perception thereof (Balducci et al., 2011). Besides some sporadic attempts to include his ideas into the planning debate (Van Assche & Verschraegen, 2008; Van Assche et al., 2014; Mäntysalo, 2016), Luhmann has remained largely absent from the work of planning scholars. However, we believe that bringing Deleuze's philosophical project and Luhmann's social theory closer together opens a novel direction in planning research, one that shows a greater appreciation for uncertainty and complexity as the essence of spatial planning. It also allows grounding abstract Deleuzean ideas into more tangible theoretical concepts and thus helps to address the problem of their inconsistent interpretation and application to the realm of planning (Purcell, 2013).

For Luhmann and Deleuze, reality consists of a recursive repetition of events, and the notion of difference[1] by which they are reproduced is its basic generative principle (Van Assche et al., 2014). Moreover, they both 'acknowledge that discursive and material elements can co-produce reality' (Duineveld et al., 2017, p. 383). We apply Deleuze's concept of assemblage to frame our thinking about spatial planning as a continually changing and evolving multiplicity of diverse entities and emerging dynamic relations among them. Assemblage thinking prioritises the thoughts of unpredictability, fluidity and becoming over those of stability, durability and being. It disregards the ideas of end-states, essences, and outcomes, in favour of seeing the world through the process, change, and evolution (Hillier, 2007). The idea, however, is not to use Deleuzean concepts stemming from assemblage theory (if there is such) and apply them directly as analytical structures to the phenomena of the social world, but rather to adopt them as an approach to thinking about the reality and processes within it. In this way, we move away from the determinism of conceptualising assemblage as a theory to assemblage thinking – serving only to frame and give direction to thought and reflection. By doing so, assemblage thinking unveils a new perspective on reality and opens potentials for the transformation of planning in a self-reflexive process. We apply Luhmann's stance on social systems and complexity to create a space for thinking that makes it possible to work

[1] For Luhmann, it is the difference between the system and its environment, and for Deleuze, it is between the virtual and the actual.

towards Hillier's aim of 'not losing sight of structuring molar, social, cultural, and economic contexts' (Hillier, 2005, p. 292).

Building on these foundations, we promote a perspective on planning as a multiplicity of roles grounded in constantly evolving self-descriptions of planning as a discipline and of self-developed means of organising complexity (Luhmann, 1997; Van Assche & Verschraegen, 2008). Complexity means that a system exceeds the capacity to connect each element with every other one at any moment (Luhmann, 1987). Rather than one conceptualisation of planning, this leads us to a continuous self-reflexive process in which planners take roles and ultimately, even when unconsciously and unintentionally, define the scope (the disciplinary boundary) of planning itself. Reducing or eliminating such complexity deems impossible, so the focus shifts to make it accessible and organise it. At this point, organised complexity refers to building a second image of the existing system, i. e., a representation with a lower number of connections in which relations become relational (Luhmann, 1987). Such an image allows enacting known roles, though the actual system remains unknown, while its image shifts along (co-evolves) with every action taken. In the light of contemporary global social and spatial transformations, planning is continuously redefined by planners adopting a variety of ever-changing roles. Vice versa, who is a planner and what his or her planning role is, co-evolves in this same complex process and changes along with the definition and redefinition of planning boundaries.

The following section presents Niklas Luhmann's radical conceptualisation of uncertainty and the notion of assemblage thinking, inspired by Gilles Deleuze's work. In the third section, we offer a perspective on planning as a social system in continuous becoming that attempts to span between different systems of society. Planners do not have a fixed role in society but represent a multiplicity of potential roles. In the fourth section, we explain how planners performatively produce and reproduce these roles as means of transforming the uncertainties of crossing the boundaries between different systems into more manageable terms. The fifth section builds on this to explicate planning as a complex role configuration, arguing that planners, being infinite multiplicities, can hold various roles outside planning, which allows them to position themselves at the edge of different functionally separated social systems. In conclusion, we posit that planning can only be grasped as a continuously differentiating and evolving social configuration that is enabled by combining Luhmann's and Deleuze's perspectives.

Radical (un)certainty, assemblage thinking, and multiplicities in planning

Notions of uncertainty and complexity are increasingly important to approach and to understand planning. Some scholars go even further to argue for a 'complexity turn' in planning theory which should show a greater appreciation for adaptive planning approaches positioned at the interplay of certainty and uncertainty (Skrimizea et al., 2019). Since planning is about changing the (expected) future (Abbott, 2005), an adaptive approach should thus allow planners to respond to both expected and unexpected changes in the social environment (Rauws, 2017). It involves understanding and managing uncertainties that arise both from the planning environment and the actions of planning itself (Abbott, 2000; 2005). This could mean meandering between controlling uncertainty and creating more certainty (Abbott, 2005), but it can also suggest acknowledging and embracing uncertainty as a critical precondition for effective planning (Rauws, 2017). Paradoxically, planners must push the boundaries of possibility to look beyond the expected future, i. e., to increase perceived uncertainties first (Abbott, 2005). Only by doing so will they make it possible to adopt a variety of roles necessary for an adaptive planning approach to work (Rauws, 2017).

By bringing Luhmann and Deleuze into the picture, we can shed more light on planning's deep entanglement with uncertainty and complexity. We see German sociologist Niklas Luhmann's 'radical ecological approach to society' (Moeller, 2012, p. 7) as a fruitful way to conceptualise and understand planning. Planning scholars do not take up his work much, though significant parts are available in English translations. Notable exceptions are Mäntysalo (2016) on public-private-people partnerships and trading zones in planning, Van Assche and Verschraegen (2008) with an elaboration on planning ambitions and the limits of intentional steering, as well as Van Assche et al. (2014) focusing on power and contingency in governance and planning. While Luhmann's systems theory denies human agency as such and sees all systems (of which we potentially include planning) as operationally closed and self-referential, this does not deny the existence of a specific reality outside of a given system. On the contrary, Luhmann opens our eyes to the processes in which different roles are taken by actors within different social systems (Mäntysalo, 2016), how systems get in touch with each other, why they can be open for their environment while they are operationally closed and how they can be structurally coupled. Looking at planning, this helps accept the impossibility of intentional steering on the one side and see the potential to have influence in a society without a given centre on the other side (Van Assche & Verschraegen, 2008).

Luhmann's systems theory acknowledges a radical uncertainty: boundaries between systems can never be crossed. Uncertainty is a structural condition that enables the autopoietic reproduction of a system facing unpredictability (Luhmann, 1987). This turns the perspective around on changes from the within and available images of perceived expectations from the environment (which are other systems). What Luhmann notices for individuals in organisations could well be true for planners: 'career suggests a type of individuality in which the individual does not define himself through special, essential characteristics but individualises himself by observing how he is observed' (Luhmann, 2018, p. 86). He connects such second-order observation with self-reflection and other-reflection. This takes us interestingly close to observations about how planners are made based on shared communication using master signifiers (Gunder & Hillier, 2004) and planner's search for certainty and completeness in rationalising an inconceivable outside (Gunder & Hillier, 2009). In terms of Luhmann (1987), only unstructured chaos would be certainly uncertain. In contrast, every evolving structure, in which we include planning, transfers uncertainty into more or less certain expectations that can be dealt with in terms of decisions.

Similarly, we can adopt Deleuze's assemblage thinking (Deleuze & Guattari, 1987). In this perspective, planning is a process of continuous and constant becoming (individualising, actualising). In other words, it asks us to think of planners beyond their transcendent properties and focus on the process of their evolution, emphasising the emerging relations they enter and the immanent properties that they generate. By doing so, we can recognise their capricious nature and accept that they can evolve in different, often unexpected, directions. Likewise, complexity is about becoming – about a world in flow in which change and transformation are perpetual (de Roo, 2020). For Deleuze, assemblage thinking prioritises exploring the possibility of relations between the (seemingly) unrelated and deliberate about improbable becomings of the past – about that which did not actualise, but still incorporates the potentiality for actualisation. In terms of spatial planning, it asks us to think beyond mere path-dependency and see past events and decisions still able to establish unlikely connections and effect unexpected outcomes. Therefore, the becoming of planning is not about tracing the contours of predetermined over-coded categories (Hillier, 2007), but about mapping performance and potentialities of past and (potential) future becomings.

As such, planning exists as multiplicities and does not hold a constant nature that can be

described in terms of a policy or an institution. Multiplicity is primarily a philosophical concept. In terms of present research, we understand it as a whole spectrum of variations (roles) that planners take and may take, or a 'multiplicity of possibilities as simultaneously given' (Luhmann, 2018, p. 132). In Deleuze philosophy, multiplicity belongs to the virtual. The virtual entails all concrete forms of multiplicity that can be actualised. The actualisation process necessitates a dissociation of the virtual, a differentiation from which the actual is produced (Deleuze, 1956; 1966). In our case, this happens through the performances (communications and actions) of planning actors by which they continuously differentiate the boundaries of planning. In that way, the question that Deleuze poses to us is not what planning is, but what it does and what it might do (Hillier & Abrahams, 2013). The becoming (individuation) of planning, therefore, entails searching for more than presents itself in the actual, so new assemblages (roles of planners) can emerge and a richer world can unfold. As such, Deleuze's conception of the world is not that of orderly forms and patterns transcending the world of manifest difference, but that of assemblages creatively emerging in new and surprising ways from that difference (Deleuze, 1994; Tampio, 2010). The notion of virtual in assemblage thinking indicates the creativity and potentiality that characterise the individuation (becoming) of planners as something that is always unpredictable and indeterminate (Hillier, 2007). Virtual, therefore, implies the potentiality for the transformation of planning itself if we gain a good understanding of how planning is differentiated from other activities.

Planning as a (social) system

Social systems, taking the perspective of Luhmann, are built up by communication in an ongoing process of defining and redefining the boundaries between system and environment. Each social system uses a different mode of communication and its distinct dichotomous code, such as government and opposition in the political system or true and false in the science system. While Luhmann has been little taken up or criticised for being conservative, others have acknowledged his theory's radical potential. Moeller (2012) observes the radical departure of Luhmann, taking him from philosophy towards theory, and stresses the contribution to conceptualise that theory is simultaneously about society as it is within society. Theory always remains unfinished (Moeller, 2012); it is always in becoming. Theories may hold a crucial functionalist necessity but are not making progress in the sense of reaching a higher or more advanced stage. A theory in this sense can only emerge from within the society and theorise about the same society, and it evolves along as society evolves. It cannot predevelop and induce a specific change but is itself part of the ongoing societal change. That said, Luhmann himself acknowledges the impossibility to perceive another system as such and intentionally move towards it step by step, but he well allows for radical trajectories and system transformations. This further implies that social systems have the potential to engage with themselves on their own terms and influence their own trajectory. In Deleuze's words (Deleuze & Parnet, 2007), 'a relation may change without the terms changing' (p. 55).

While Luhmann does not deny the existence of materiality and biological systems, his theory stresses the impossibility to 'see' these systems on their own, to grasp their own reality, or even to transcend system boundaries. In his view, society is functionally differentiated into operationally closed systems that are reproduced according to a particular type of communication, based on the form of binary coding (Seidl & Schoeneborn, 2010; Seidl & Becker, 2006; Van Assche et al., 2013). Each communication through which a social system is reproduced differentiates itself from its outside environment (other systems) as a distinct social function that codifies all relevant relations according to that function. However, systems can be structurally coupled, and they can influence each other. More precisely, external events (situations where multiple systems get in touch) affect another system's internal mirror image.

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What happens outside of a system is transferred into the system's communication and its code. To use an example, the economic system uses the value of money, payment, or non-payment, as the basic code to build up its system. To understand and to deal with other systems, it needs to transfer them to its own code. If nature gets a monetary value attached to it, the economic system produces its own mirror-image and can deal with it. On the other hand, communications of the legal system, unlike other social systems such as the economy, codify something as legal or illegal. This means that different functional systems relate to and interpret reality through different perspectives grounded in a particular logic of dichotomic distinction (Luhmann, 2004; Seidl & Becker, 2006). If we understand planning as a distinct social function system, all planning communications could potentially carry the code of planned/unplanned. However, this does not mean that everything that planning is about comes down only to that what is planned and that the unplanned takes no part in it. There is a logic inherent to the planning system (if we perceive it as such) by which it refers to all relevant communications with its environment as either being planned or not.

Deleuze speaks of these systemic codes as a form of territorialisation. The territory is developed through processes that structure assemblage towards uniformity by reinforcing common features and reducing the individuality of its elements and connections between them. In other words, they can be said to strengthen the structure of assemblage by orienting it towards a standard function and consolidating the heterogeneity of relations that are constitutive of it (e.g., establishing principles of functioning). In the social world, territorialisation can be used to describe 'the creation of meaning in social space through the forging of coded connections and distinctions' (Brown & Lunt, 2002, p. 17) into some form of uniformity and consistency (Hillier, 2007). On the other hand, what Deleuze describes as de-territorialisation understands the process of destabilising the structure of assemblage by individuating elements and relations that constitute it, i.e., it is about the elements of assemblage taking on autonomy from it. The idea is to think of planning as continually changing and evolving both by structuring processes that strengthen its function and expand the system boundaries and by those that go against it, that want to break away and pull it apart. Indeed, Hillier (2007) writes that the Deleuzoguattarian frame is concerned with processes through which the existing forms of planning transform. We should think of this structural transformation as twofold. On the one hand, planning transforms through recursive processes of codifying (differentiating) what planning, the planner, or the planned is. On the other hand, it is concurrently transformed through processes that resist codification (differentiation), working to unsettle and remove the boundaries between planning as a system and its environment. Both types of processes appear continuously and simultaneously in the becoming of planning – they are intrinsic to its emergence.

Therefore, we see planning as such a system that constantly reproduces itself in diverse forms of communication (or territorialisation, in Deleuzean terms). Here, we include policy documents, strategies, and ultimately, plans. Mäntysalo (2016) uses Luhmann in a straightforward way and points to a significant problem from this perspective. Planning, in essence, tries to span between different systems and their modes of communication. Taking the core of Luhmann, this is an impossible endeavour and almost certainly doomed to fail. Indeed, we cannot comprehensively and unambiguously say what contemporary planning is, but only what we expect it to be. Luhmann, therefore, emphasises the need to acknowledge contingency into planning (Van Assche et al. 2014). However, this does not need to be contradictory in more hands-on thinking. Suppose we perceive planning as a not or not yet fully functionally separated system of society (a system in becoming). In that case, the planner itself is not a role but a configuration of a multiplicity of potential roles.

Planners, individually or collectively, can take roles and the associated modes of communication and codes of other systems. However, this has limitations. If planners continue to take a specific role related to, e.g., the economic system, they remove the boundary between the planning system and the economic system, and ultimately, planning ceases to exist. The discipline's constant struggle to self-define and self-position emphasises that planning tries to achieve the impossible and is thereby characterised by ongoing role struggles and turns in the wheel of possible or desired roles across spatial and temporal scales.

> 'Without uncertainty, there would be nothing left to decide; the organisation would come to an end in a state of complete self-determination and would cease to exist for lack of activity.' (Niklas Luhmann 2018, p. 159)

Luhmann's theory of social systems poses challenges to planning thought that we see as cornerstones to reconceptualise planning as a continuous process that is like navigating uncharted waters (Lamker, 2019b). For systems that are only structurally coupled, intentional steering gets impossible. Traditional conceptions of public planning administration, but also the internal composition of large university planning schools in Europe, resemble the double challenge. People with different backgrounds are brought together physically (or organisationally), and the communication – or system-building – that occurs between them is then termed planning. However, little certainty is reached about the implied almost magical processes of 'intra-discipline interdisciplinarity'. To date, system/environment differences seem to exist as much between different departments within planning administrations or planning schools as from them individually to other systems. While the positive aim might be to achieve the best possible openness and coupling potentials between rolling wheels of roles, this can lead to the highest level of complexity. For Luhmann, a system is hypercomplex if it seeks to grasp its own complexity and thereby produces new options for reactions (Luhmann, 1987). Planning becomes hypercomplex if it plans not only itself but also its effects in its system. If society is a hypercomplex system (Luhmann, 1997), planning aims to be a steering force in society by mirroring this hyper complexity in its own system.

Reflexive reproduction of roles in planning

Taking a system's perspective leads to considerations on reflexivity and the potential for uncertainty absorption and reduction as well as the concept of roles to capture communication and action. Being reflexive is to produce additional options for comparison (Luhmann, 1966) and transform uncertainties into more manageable terms (Luhmann, 2018). Mechanisms get reflexive when applied to themselves, for example if we plan planning (Luhmann 1996). Such reflexive mechanisms enhance effectivity. They add to decision-making by increasing the ability to act in complex conditions. In more practical terms, this means sharing responsibility, separating tasks, or bringing different skills and knowledge capacities in interaction (Luhmann 1966). This way, more space for process innovations emerges, and the capacity for acting in complex real-life situations enhances without leaving the system's boundaries (Lamker, 2016). Being reflexive in planning relates to planners themselves and how they produce and reproduce alternative options for comparisons within planning. In other words, how they actualise the multiplicity of the virtual. This takes us further to what Mark Purcell (2013, p. 29) describes as the 'new land' for planning with its rhizomatic multiplicity and properties of becoming, flow, and desire. Luhmann's perspective helps us understand why uncertainty is not a problem, as it is something to be reduced in many accounts of planning, nor is it only something that planning needs to embrace and use. It is more than that: it is the fundamental precondition for any organisation to exist. Therefore, without uncertainty, we would not have planning and we would not be able to recognise it.

Luhmann borrows the classical concept of uncertainty absorption from March and Simon (March & Simon, 1958) to explain that 'uncertainty absorption takes place when inferences are drawn from a body of evidence and the inferences, instead of the evidence itself, are then communicated' (p. 165). This means that decisions (including planning decisions) do not communicate the uncertainties of a decision situation, but only the decision itself – the choice among alternatives, which becomes the point of departure for subsequent decisions (Seidl, 2005). While this dramatically simplifies decision-making complexity, it does not mean that uncertainty is ultimately recued when a decision is made. Since decisions are contingent on subsequent decisions, there is a constant need for planning and planners to produce them. Every decision generates the need for further decisions (Luhmann, 1992; Schoeneborn, 2011). This creates a chain of reductionisms that does organise the complexity of decision-making but at the same time also increases uncertainties that surround it.

We can shed more light on this issue by recalling the Deleuzean concept of virtual. Since a decision is only actualised through subsequent decisions connecting to it, it can be asserted that decisions exist in two forms: actual – connected to other decisions, and virtual – on the way to actualisation (Baecker, 1999; cited in Seidl, 2005). To remind the readers, for the virtual to be actualised, it must be individuated, dissociated. In planning, a range of alternatives has to be reduced to a single choice (a decision). By doing so, something that is not communicated in an actualised decision always remains. Therefore, the actualisation of the virtual is never complete (something always remains to be actualised), which is why a decision continues to be both virtual and actual[2]. Uncertainties that are absorbed by an actualised decision continue to be part of the virtual (awaiting their actualisation) and are in that way preserved in autopoietic systems. Absorbing uncertainty is a decision process that creates uncertainty for future decisions (Luhmann, 2018). For autopoiesis of planning, this indicates that every decision can connect not only to previously actualised decisions, but also to virtual decisions that are not yet actualised, which can lead to new and unexpected directions of planning reproduction.

Such a system's perspective on reflexivity leads to critical questions about the potential of agency within planning. To move forward, focusing on the actual and potential roles of planners opens useful connections. Luhmann's social theory does not use a human agency as such and leads us to abolish the idea of a given role for a specific person altogether. In early writing, he criticises structuralist philosophies of society and advocates for a political philosophy based on roles (Luhmann, 1970). Roles are mere actions of someone that can be perceived by many and interchangeable other human beings (Luhmann, 1987). They represent 'a comprehensive pattern of [expected] behaviours and attitudes, constituting a strategy for coping with a recurrent set of situations' (Turner, 1990, p. 87). In a functionally differentiated society, human beings do not hold a specific position (like aristocrat and peasant) but take on distinct roles that can be observed and described (Luhmann, 1977). This is both a precondition for a functionally differentiated, complex society that opens the potential to communicate a public opinion about, and especially against, structurally prescribed roles (Luhmann, 1970). A role is built up by communication and action along a boundary that continuously produces and reproduces itself. The term role is open to transcend in two directions of abstract values and concrete persons, but is neither of them (Luhmann, 1977). Production and reproduction of roles allow for temporary stabilisations, though uncertainty remains an irreducible structural condition. As Luhmann names it, any structure's function is to reproduce a system in autopoietic terms especially considering uncertainty (Luhmann, 1987). Luhmann's systems theory sees reflections on the abstract level as crucial to gain

[2] Which is opposite to what Seidl (2005) suggests, i.e., that decisions cease to be virtual once communicated in ensuing decisions.

options for comparisons (Luhmann, 1996). A structured procedure, such as those established in planning, can produce both critique and alternative within an own complex system (Luhmann, 1983).

Following the Deleuzean lines of emergence, a role appears as a performative function of planners and planning. That is, instead of assigning them pre-defined roles founded on the conformance with a set of a priori determined competencies, planners become designated with (they claim) distinct roles by performing their actual capacities. Surely, this conceptualisation entails the dangers of reductionism (the issue of signifier vs. signified, i.e., narrowing down a performance to a role), but this happens to a much lesser extent since a planning role is defined by the performative 'what it does' rather than by the determinist 'what it should do'. In that way, the complexity of decision-making may be decreased, which results from the understanding that performance is collectively recognised as a specific function (a role) within a given assemblage, but uncertainties nonetheless remain.

Taking planning forward: planning as a complex role configuration

Luhmann's and Deleuze's ideas enable taking a perspective on planning as a multiplicity of roles grounded in constantly evolving self-descriptions and self-developed meanings. Furthermore, operational closure first allows for a diversity of roles to be taken outside of the respective system (Luhmann, 2018). Anyone having planning roles within planning can have various other roles outside of planning in which she or he does not hold the same mastery (Luhmann, 2018). Even more, 'the concept of person presupposes that every person can play many different roles' (Luhmann, 2018, p. 68). Luhmann does not deny the existence of persons as such, but he denies the existence of a unitary and autonomous 'thing' like a person. In any empirical prospect, it remains impossible to combine psychic and social operations (Luhmann, 2018). On the contrary, and concerning career paths, he even asserts that a person 'individualises himself by observing how he is observed' (Luhmann 2018, p. 76). Such a second-order observation regularly draws and changes boundaries between the person and its environment (other persons).

Roles are factual and temporal interpretations (Luhmann, 2018). This enables conceptualisations of planning that use distributed and networked leadership by enacting different roles even in highly regulated public administrations (Lamker, 2019a). Such a perspective on (potential) roles of planners inspired by Niklas Luhmann is better equipped to cover contemporary perceived realities than previous clear-cut conceptions about planning as means to achieve pre-defined ends. Jean Hillier observed that Deleuze takes us forward to using theory and practice together because of their non-linear and not straightforward relation (Hillier & Abrahams, 2013). In the same line, Luhmann develops a theory of society, the most ambitious goal possible for a sociologist, but comes closer to actual perceptions about the messy and non-linear day to day planning practices that aim to provide certainty in an inherently unpredictable world (Gunder & Hillier, 2009). To be even more explicit: 'Spatial planning […] requires theories that seek to directly engage with the world, as it is, not what is ought to be' (Gunder & Hillier, 2009, p. 193).

This opens our perspective to understand why we continue to talk about planners over decades but tend to imply rather different people and focus on rather different roles. Decades of planning scholars have tried to narrow down definitions of what 'a planner' is or what '(spatial) planning' distinguishes from other activities. This reminds of Alexander's (2016) statement that there is no planning as such, but only planning practices. However, instead of separating planning into a set of divergent practices, we see it as a complex configuration of

roles at the edge of different functionally separated systems. What Luhmann describes for social systems does also hold true within planning. Planning faces systematic and irresolvable problems of intentional societal steering with a fluid definition of planning itself and planners' roles in society (Van Assche & Verschraegen, 2008).

We must note here that we use a definition of planning that is broad and narrow at the same time. It is broad in the sense that we see planning as a social activity happening within society. Therefore, it can be done through a multiplicity of specific planning roles. We see an ongoing differentiation process to form a planning system with its own codes but have not yet arrived there. In minimal terms, what we recognise as planning practice fulfils the societal function of setting topics, thereby absorbing uncertainty, and providing a structure to deal with it (Luhmann, 1970). Such a view situates planning within society and would not separate it as a distinct system. Studies using Luhmann to look at planning practice – like Wenk (2012) for Germany – see planning as something in a societal discourse that works in a diversity of forms and under versatile codes (Wenk, 2012). This would be impossible for Luhmann in a pure understanding. It may, however, be that planning is either still evolving as one or that different planning systems have evolved using the same term 'planning' and therefore causing some of today's confusion about the potentials of planning to tackle global challenges. Suppose planning's goal is to coordinate and steer other systems. In that case, success could at best be distinguished between influencing and not influencing (in a determined direction, also understood as planned/unplanned in a hands-on way), with many empirical questions left about causality and about recognising a direction as such. Perceiving planning as a complex configuration of roles solves this tension insofar as it allows to open up Luhmann's theory for use within planning theory as they help analyse how planning constantly aims to find overlaps to role configurations in other systems – and how and where tensions arise.

Conclusion

The evolution of planning represents a self-reflexive improvisation process heralded by intuition and contingency and framed with uncertainty, multiplicity, and complexity. Success in planning should be seen much more in relation to self-steering results within planning than in light of the planning environment (cf. Van Assche & Verschraegen, 2008). In other words, planning changes through a varied search for meaning and understanding of planning. Developing options for comparison needs inclusive processes, open communication, a strong process to connect them, and transparent and, therefore, contestable decisions. Luhmann (1970, p. 23) has early noticed that participation in building public opinions is nothing like straightforward and, in practice, more 'participation by management' and involvement of those who know how to valorise their information, constellations, connections, and their votes is needed. A problem that has, until today, puzzled a generation of communicative planning theorists. Luhmann stayed brutally analytical and would emphasise the limits of planning as intentional steering and the flawed image of pre-thinking a better future and then realising it. On the other side, his work holds radical ideas that open pathways to challenge otherwise non-questioned structures (Moeller, 2012). Even more, planning is most plausible considering ecological crises, and society should not be regarded as unchangeable (Luhmann, 1997). That said, Luhmann does not advocate against planning but sees it as one of many social processes that influence spatial development (Lamker, 2016).

Mäntysalo (2016) provides a convincing switch for planners that first sounds harder to implement, but is a turn that allows supporting agreement on planning steps: 'It is thus not just a question of 'should I agree?', but 'am I entitled, in this role, to agree?' (Mäntysalo, 2016, p. 155). It is not a question of being a planner or not, as we see roles as factual and temporal

interpretations (Luhmann, 2018). This change opens the potential to align roles with other systems and points to the diverse nature of planning. Planning can neither be grasped as its own functionally differentiated system nor in a specific role. On the contrary, an evolving and changing configuration of roles within planning allows for influencing other systems in the constant transformation along the boundary between what is deemed planning and what is not recognised as such. Planning, as well as utopia, are escapes to a not yet actualised and uncertain future with the implicit hope for alignment in society as the future becomes present (Luhmann, 1997). This way, planning realises a future in today's communication by blurring boundaries between what is past, present, and future – and ultimately what might become and 'what might happen, if…' (Hillier, 2011, p. 515).

Finally, Niklas Luhmann's theory provides us with a message of hope. We can never stop planning. Otherwise, planning as an organised social system of communication and action would cease to exist for the impossibility of distinguishing between the system and its environment. As long as we continue delineating planning from other activities, will the planning be a lively practice. At the same time, Deleuze's assemblage thinking offers us a novel and valuable perspective to reflect on this. It tells us to 'revamp flows and dare to think bringing differences together, emphasising tensions and creativities... connectivities, relationalities, and their foldings and unfoldings' (Hillier, 2007, p. 1). Only by doing so can we recognise the complex uncertainty of emerging relational dynamics of spatial planning and think of novel roles for planners in the process (Hillier, 2007). Assemblage thinking, therefore, refers to a type of thinking 'which allows disparate points of view to coexist; which has a concern for indeterminate essences rather than contoured, ordered ones; for dynamic or emergent properties rather than fixed ones; and for allowing intuition and uncertainty, multiplicity, and complexity rather than systematic certainties' (Hillier, 2005, p. 291). This may not sound simple for those looking for idealised end-states to be imagined, developed, and implemented (in a linear manner). The challenge is how to bring together a dynamic perspective on planning which evolves with the complex context and its surrounding uncertainty, with planning practice that is perceived as rigid and slowly evolving. Still, it gives motivation to all those who engage in the complex and uncertain endeavour of planning. Above all, it is valuable to notice that the final words of Hillier's article (2005, p. 293) still provide a hopeful message for the future of planning: 'Work in Progress'.

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The mechanics of drawing: helping planners use serious games for participatory planning

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Participatory planning is a way planners can gather valuable information and improve the planning process. To engage citizens in participatory approaches, planners should explore new interactive methods. Combining drawing as a communication activity, and games as an engaging approach can be one of the participatory methods. We propose to explore games that planners can use as tools for this purpose. We searched for analogue games with core drawing mechanics, where planners could learn how to build their serious games. *Board Game Geek* (BGG) allowed us to explore the most successful modern board games that use drawing mechanics, focusing on examples of how they engaged players. We discussed these, proposing the Modding Drawing Games for Planning Process (MDGPP) framework, and arguing how these core and auxiliary game mechanics could help planners to make game-based planning approaches. With this contribution, we hope to provide a process to help professional planners deliver engaging experiences to collect data for participatory planning approaches.

Keywords: Board Games, Drawing, Participatory Planning, Serious Games

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Introduction

Planners need new tools to respond to the increasing demand for participatory and collaborative planning processes. There is a need to have interactive tools to foster participation in planning and capable of generating useful data. Planners need to develop and experiment with new tools of and for engagement (Ampatzidou et al., 2018; Fainstein & DeFilippis, 2015; Wilson & Tewdwr-Jones, 2020). Games can be a solution because they can be very diverse and engaging (Tan, 2017). Serious game approaches provide some supported frameworks for practical applications (Mayer et al., 2014). Through serious games is possible to engage stakeholders with different backgrounds and perspectives, allowing them to share their perspectives in meaningful ways to support negotiation and collective decision-making. This playable participation happens in meaningful and pleasant ways that support collective learning, negotiation, and decision-making

Nevertheless, these are not unquestionable guidelines planning professionals can apply to implement serious games. Using interactive tools like games is not an easy endeavour for planners. Planners might not have the necessary game design skills and be far from mastering the appropriate facilitation techniques (Crookall, 2010). Planners need to also overcome some prejudices about game usage for serious purposes. Showing results from game-based planning processes help dismount these prejudices (Koens et al., 2020). In a recent experience, the local planning authorities of Marinha Grande (Portugal) were surprised by the easiness to engage participants and the outcomes of one fast serious planning game that approached the local transport system (Sousa et al., 2022).

Planners require a guiding process to begin dealing with game-based approaches. Learning from modern board game design can be a solution to help planners start exploring the game-based approaches for participatory planning practices (Sousa, 2020a, 2021b). These analog games are easier to adapt and modify to serious game approaches (Sousa, 2021b; Zagal et al., 2006). But the variety and quantity of modern board games are overwhelming. How can planners find game elements and design solutions to support their game approaches? Can focusing on a specific type of game or game mechanism be a solution?

We propose to use drawing games as core game mechanisms to help planners build their serious games for participatory and collaborative planning. Departing from these design principles (mechanisms to experiences/outcomes), we will focus on drawing games as core game mechanisms to help planners build their serious games for participatory and collaborative planning. Once the game mechanisms are the building blocks of game design (Engelstein & Shalev, 2019), focusing on one specific game mechanic could be a valid starting point to develop serious game approaches. Our work proposes to explore existing commercial ludic board games created for entertainment purposes. We focused on drawing, and how these games can help participants express ideas during the planning processes. We identify the characteristics of drawing games, looking at the most popular modern board game database platform (BGG). This search will allow to explore how the selected games, and their drawing mechanisms, can be transferred to participatory planning practices. We argue that professional planners can modify games to support participatory planning. By modifying core game mechanisms like drawing, planners can avoid some of the challenges of building new games. This way, planners can access and develop new instruments to refresh participatory planning methods, which help continuously engage stakeholders in an evolving and highly uncertain context.

Section 2 of this paper frames the participatory and collaborative planning approaches and relates them to serious game approaches, while section 3 introduces the benefits of drawing for participatory planning. Section 4 explains the methodology, data gathering and presents the results. Section 5 discusses the findings related to drawing games, also going beyond their core mechanics. Section 6 proposes a simple explanatory framework about the main findings, introducing the Modding Drawing Games for Planning Process (MDGPP) framework. Conclusion, gaps, and future research appear in the last section.

From participatory and collaborative planning to serious games

Citizens are willing to participate in the collective decision-making processes, mainly in processes that concern their daily lives and where local collaboration is achievable (Healey, 1997; Innes & Booher, 2018). Increasing the participation levels can help improve planning process and the ability address problems and formulate alternative solutions (Cilliers & Timmermans, 2014; Smith, 1973). But participatory planning is lacking processes and tools for citizens to express and affect decision-making (Legacy, 2017). Planning processes tend to be complex and difficult for citizens to grasp (Baker et al., 2007). Additionally, planners need new tools to help visualize and interpret the complexity of contemporary spatial systems (Rauws & De Roo, 2016). The unpredictability and emergent nature of game systems can be a way to overcome these problems, gather data and allow citizens to express their ideas and learn during interactive processes that are not scripted (Dodig & Groat, 2019a; Mayer, 2009). Game designers must let players decide their moves and actions, which can be unpredictable, especially in multiplayer interactions. Game designers define the game mechanisms and rules to balance these emergent behaviours and interactions, delivering experiences and outcomes according to predefined ranges of results. Despite these opportunities, the unpredictability of games (Costikyan, 2013) can make decision-makers and planners suspicious about game usage for planning (Tan, 2016). Player agency in an interactive game system with multiple feedback loops (Fullerton, 2014) generate unpredictable outcomes. Allowing players to change the game state (e.g., information in a map) during continuous multiplayer dynamics generates unpredictable results. However, games can deliver and frame different levels of controlled environments (Salen & Zimmerman, 2004). The unpredictability of games resulting from players' agency in multiplayer game sessions can foster creativity and new ways of expressing ideas. (Sousa, 2021b, 2020b), while the game designers have the power to combine mechanisms to control the game outcomes. Adding human expert mediation can increase the control and conduct the game dynamics for specific purposes (Brömmelstroet & Schrijnen, 2010). Defining game goals according to the purposes of each planning process is an obvious strategy to follow serious games principles. It also helps to evaluate a particular serious game approach.

Games are emergent systems that foster player agency (Salen & Zimmerman, 2004). This agency is a relevant trait of games to bring to participatory planning practices. Planners can design the game process and act as facilitators (Forester, 1999). In analogue games, the potential for fostering collaboration and players' agency is even higher. This effect results from the lack of automatization in analogue game systems (Zagal et al., 2006). The physical dimension of the components also helps participants and planners to nudge and bounding.

Exploring modern board game designs should allow us to benefit from their design innovations that engage new players every year (Sousa & Bernardo, 2019). Keeping up-to-date is hard, but planning with gamers in local gatherings, conventions and visiting BGG helps. Although these modern board games are becoming popular as entertaining games and a leisure pastime, using them for developing planning practice activities should be done carefully.

Planners should analyse which game elements (e.g., mechanisms) are useful and which are not. Champlin et al. (2021) recommend delivering game-based planning activities that provide mediated structured dialogue between planning professionals and experiential knowledge of citizens in multiple ways. These requirements relay in following co-design approaches, which allow participants to critique and influence the ongoing planning processes. Co-design principles are a way to test the most adequate game elements for each planning process.

From the many game-based approaches and strategies to transform games into tools to achieve predefined goals, serious games have been a growing trend in planning (Dodig & Groat, 2019b; Tan, 2017; Vanolo, 2018). But few of these approaches profit from modern board game designs (Schouten et al., 2017). Planners can adapt these modern board games or use their distinctive game mechanics for their own games (Sousa, 2020a, 2021b). As Constantinescu et al. (2020) stated, the game mechanics can determine the effectiveness of serious games. Game mechanics can be defined as core elements of any game system (Adams, 2014). Core mechanisms are the primary way players activate the game system, generating interactivity and building emergent experiences that can be unpredictable (Costikyan, 2013), although framed according to the design options taken during the game development. Game mechanics are the building blocks of games (Engelstein & Shalev, 2019; Zubek, 2020). They are the blocks that planners need to combine to develop their games. For this work, we will use game mechanics and game mechanisms as synonymous. In the game design literature, it is common to use the two terms as synonymous. But in the analogue game industry and gamer community, mechanisms are the current standard term due to the concept of the building blocks of game design (Engelstein & Shalev, 2019; Sousa, Oliveira, & Zagalo, 2021).

In order to achieve a serious game, as those games developed to engage participants in pleasant and meaningful activities while delivering predefined goals (Dörner et al., 2016; Michael & Chen, 2005), defining correct game mechanics is of the most importance. Games have mechanical systems that define what payers can do and how the outcomes may emerge. Serious game frameworks like the Design, Play, Experience (DPE) (Winn, 2009), which depart from the Mechanics, Dynamics, Aesthetics (MDA) (Hunicke et al., 2004) framework, are based on the cascading effects of mechanics to deliver experiences. Despite its applicability, the DPE framework was adapted by Sousa (2020a; 2022) to incorporate the facilitator role, which is essential to teach, support and do the debriefing process with analogue serious games (Sato & de Haan, 2016; Sousa & Dias, 2020). The previous frameworks highlight the importance of the mechanics in serious games. They reinforce the mechanics/mechanisms as building blocks planning professionals must manage when modding or building their serious games.

From the many available analogue game mechanics, we will focus on the drawing mechanics. We will follow this approach because it is something planners are more familiar with. Drawing is a natural way to express and communicate. Plans have graphical elements, and they usually are the most tangible elements of a planning process. Arguably, graphic representations have a higher potential to establish relationships between planners and citizens in a given planning process. The tangibility and easiness to adapt an analogue game (Zagal et al., 2006) promises to deliver ways to foster flexible co-creation processes that fuel communication between planning professionals and stakeholders (Champlin et al., 2021). As Wilson & Tewdwr-Jones (2020) found, allowing citizens to draw and talk makes participation in planning more effective. These authors also found that other ways of interaction and expression are valuable for future participatory planning approaches. We argue that games can be these interactive complementary processes.

Let's draw

Drawing is a human enact ability. While children draw naturally without being afraid of judgement, some adults say they are proud not to draw at all (Whiteford, 2009). It seems that above a certain age, individuals lose the habit to express themselves through drawings. Adults tend not to consider drawing as a serious way to communicate (Anning, 1999). Adults tend to misdraw objects due to bias and accumulated experience about the shapes and forms (Matthews & Adams, 2008).

Drawing can communicate spatial ideas, essential in a planning process. Drawing mind maps and schemes can be powerful communication techniques and efficient ways to express complex ideas (Eppler, 2006). Even annotations and free sketching can improve communication and facilitate gathering useful data for process improvement (Eppler & Pfister, 2010; Tanaka et al., 2009). Drawing can support discussions and verbal expressions, ideas, and foster collaboration (Tang, 1991). Allowing participants to draw and sketch helps them to focus and express their ideas (Bly, 1988). Participants that might not be comfortable doing public speaking can express their insights through drawing. So, during a participatory planning process, allowing citizens to draw can be immensely important to make their ideas more tangible and meaningful for other participants and planning professionals.

Usually, planners try to engage participants by showing images of their planning proposals, but this passive communication can be ineffective. The 3D representations and simulations can be too complex for citizens to grasp (Salter et al., 2009). We can overcome some of these challenges by using simpler graphic representations and allow participants to represent themselves and their understanding of issues at stake by drawing. Drawing workshops can help participants to express ideas and learn from planning professionals (Goodspeed, 2016). Modern board games can deliver the mechanics to profit from the advantages of drawings and the engagement games provide. We consider engagement as the ability for citizens and stakeholders to invest time into a process, doing pleasant and meaningful activities that fits their preferences (Zagalo, 2020).

Before entering complex drawing activities, adults need to practice before in order not to disengage (Knight et al., 2016). Small "ice-breaking" games can be a way to train drawing expression and gradually immerse participants in the planning process. Adults might have some prejudices about game usage for planning (Ampatzidou et al., 2018). These introductory approaches might deliver a solution while showing elected decision-makers and planners that playful activities can deliver workable results (Nijholt, 2020).

Identifying games to learn drawing game mechanisms

The quantity of existing analogue games is overwhelming. It is necessary to find a game database to start from and gradually understand the state of the art of analogue game design. In order to find and identify drawing mechanisms, we consider *Board Game Geek* (BGG) (www.boardgamegeek.com) database because it is the primary source of information about modern board games, with more than 125.000 games registered and 3 million users from all over the world that fuel the website daily (Rogerson & Gibbs, 2018; Sousa & Bernardo, 2019). At BGG, we can find a list of game mechanics (or mechanisms).

Method for selecting games

In the browse section of the BGG website top bar, there are several grouping classifications.

It is possible to directly choose the “Mechanisms” or the “Families” game typologies. We can find the “paper and pencil” and “line drawing” mechanisms which revealed games where players write and do schemes but do not draw any type of ideas. This unappropriated result leads us to find in the available game families a better match. The “drawing: mechanisms” revealed games where more free drawing was the core activity player do.

After obtaining a list of games that use this drawing mechanism, BGG allows organizing the list by rank, showing the games the BGG users play the most and provide the best experiences according. This process was tested previously for other serious game processes by Sousa et al. (2021).

Although BGG provides extensive data and classification about the games, the abstraction of some game mechanisms could difficult a direct analysis. To select games where players draw ideas that can lead to complex representations each game must be analyzed carefully. The rules of play of every game were analyzed in detail to understand the gameplay, components, mechanisms, and other relevant traits. BGG provides links and files with the rules of the games and many explanatory videos. The criteria to consider the games resulted from the crossing of the highest rank, which proves the game is engaging, and the game mechanisms that allow drawing expression. The author selected the top 10 rank BGG games with these features, reading the rules and directly testing each game. Ten games provided a sample of different game systems.

Exploring the games and the respective players' feedback at BGG confirmed that the games deliver the expected experiences: the ability to let players express and communicate ideas through multiplayer interaction and drawing.

Figure 1 expresses the process of selecting the game to analyze based on their core mechanisms and the appreciation rank. This process allows to identify the games by different core mechanisms and other features are necessary (e.g., complexity, duration, number of players) that deliver serious game objectives (e.g., allowing participants to express ideas).

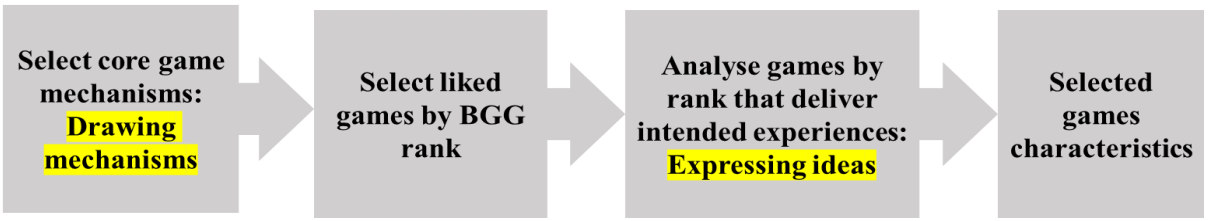

Figure 1. Searching for game on BGG with specific core mechanisms that deliver predefined dynamics to find their characteristics.

The results

Table 1 shows the top 10 games from BGG that allow free drawing expression. We did not consider games that were just about pointing to answers, highlighting objects, or drawing paths. Many of these games were related to the “paper and pencil” mechanism. We were looking for examples of games with game drawing mechanisms that lead players to express ideas by drawings with as much freedom as possible. This ability is valuable for planning professionals because they can use these game mechanisms to provide citizens and stakeholders with different ways of expressing themselves.

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Table 1. Characteristics of the Top 10 BGG games with "drawing: mechanism" that allow free drawing.

Game	BGG rank	Duration (minutes)	Player count (Players)	Platform to draw	Challenge
Telestrations (Användbart Litet Företag, 2009)	265	30	4 - 8	Individual notebooks	Interpret words and drawings to maintain the idea.
Fake Artist Goes to New York (Sasaki, 2012)	660	20	5 - 10	One collective draw space	Add drawing elements and combine with storytelling to find the player that does not know the idea.
Pictomania (Chvátil, 2011)	746	25	3 - 6	Individual draw spaces	At the same time, drawing and bet to guess other players drawings.
Duplik (Jacobson & Kohout, 2005)	1452	45	3 - 10	Individual draw spaces	Players draw described ideas and are evaluated by achieving predetermined criteria.
Pictionary (Angel, 1985)	4700	90	3 - 16	One draw space	Teams try to guess words based on drawings made by teammates.
Artbox (Lis, 2019)	6014	25-45	3 - 8	Individual draw spaces	Players draw pictures by using limited shapes and then try to guess each player drawings.
Subtext (Warsch, 2019)	6088	20-40	4 - 8	One draw space	A player deal cards to another player, but only one know the word also. All players will try to guess the objective. Only one player will successfully guess.
Luck of the Draw (Scott, 2006)	8334	30	4 - 8	Individual draw spaces	Each player tries to represent a painting masterpiece in 45 seconds, and then all players vote to determine the best drawing.
What's Missing? (Sirieix, 2020)	10215	20	3 - 6	Individual draw spaces	Draw above transparent paper to complement a given drawing. Other players must guess what is missing.

Table 1 reveals some common traits of the selected drawing games, which help to understand the game dynamics. The most enjoyable drawing games tend to be party games (Sousa & Bernardo, 2019). These party games allow higher player counts, on average from 4 to 8 players. But some like *Pictionary*, *Fake Artist Goes to New York*, and an alternative version of *Telestrations* for 12 players allow more persons to participate in the game simultaneously. The sample reveals low-complexity games according to BGG classification. Any person can play these games without demanding high game experiences. Only *Pictionary* requires more than 45 minutes to be played. *Pictionary* is the oldest game of the sample (1985). All the other games were released after 2005. Since this sample gathers top-ranked games, it is relevant to state that there are two games from 2019 and one from 2020, which means that new games

are engaging players. This BGG ranking system provides a selection of games that thousands of players enjoy (were engaged by the games). Considering these game characteristics are valid indicators of enjoyment that can guide the development of other serious games.

Our sample shows games to play in less than 30 minutes, like *Telestrations*, *Fake Artist Goes to New York*, *Pictomania*, *Luck of the Draw* and *What´s Missing?*. Three games rely on a simple draw space, and only one of this transform this space into a collaborative activity (*Fake Artist Goes to New York*). All other games provide players with individual drawing spaces. Although we must highlight that *Telestration* provides each player with a notebook since the game generates sequences of words and draws to generate a logic chain. Most of the games rely on “guessing” as a challenge. The “guessing” is more a dynamic than a mechanism according to the MDA framework. These "guessing" games demand players to draw for others to understand ideas (this is the classic example of *Pictionary*). But more modern games like *Pictomania* and *Fake Artist Goes to New York* add other layers of complexity and excitement. Players do several simultaneous tasks, like in *Pictomania*, drawing while trying to guess other players drawings. *Fake Artist Goes to New York* establish a collaborative activity that fosters trust and distrust, relying on drawing exercises and storytelling. *Telestrations* build sequences of convergence and divergence ideas that fuel imagination (Sousa, 2021b). Besides the guessing, many games of the sample, directly or indirectly, establish democratic processes to do the decision-making process or demand to choose the best performance. Only *Pictomania* is not a turn-based game. All the other games determine turns for the players to activate the game mechanisms. In theory, all players have the same opportunity to participate and influence the game state in a turn-based game (Engelstein & Shalev, 2019).

Figure 2. Example of the result from playing Railroad Ink: Deep Blue edition.
Source: authors

Going beyond the ten selected games, we highlight other cases. *Railroad Ink: Deep Blue Edition* (Hach & Silva, 2018) is a game where players express how they would create a transport network made of railways, roadways, and waterways (Figure 2). In this game, all players have the same resources, determined by dice rolls. But at the end of the game, every player board will be different. Players draw in their player board the dice images that represent transportation infrastructure. Players do the drawings following schematic representations of each type of infrastructure in a squared grid. This layout and options help players use meaningful graphic expressions and adopt the same scale. Games like *Railroad Ink: Blue Edition* are not traditional party games. They are more like eurogames (Woods, 2012). Players are competing, avoiding direct confrontation, by choosing the best option to score the most points.

Another example of strategic drawing games is the “crayon series”. *Empire Builder* (Bromley & Fawcett, 1982) is one of these games where players draw their networks over the board game maps, aiming to be efficient. *Roads and Boats* (Doumen & Wiersinga, 1999) is another game where players draw transport connections in a transparent paper over a territory. These are games more about efficiency, although they demand creativity to find solutions. Therefore, our selection of ten games based on the “drawing: mechanism” seems valid to foster creativity and expression on complex ideas.

Going beyond core mechanisms

Drawing mechanisms appear in several successful modern board games, those that many thousands of persons enjoy playing. Drawing is associated with party games, a type of game known to be simple and engage large groups of players simultaneously (Woods, 2012). Playing these party games deliver different forms of collaboration among players, by playing in teams, playing collaborative or just by the social contract that emerges from playing an analogue game (Duarte et al., 2015) But the transposition of these game mechanisms to participatory planning activities might not be evident. Planners need to have game literacy or to work with someone with this knowledge. Even simple and fast games like those presented in Table 1 can be challenging for inexperienced players (Sousa & Dias, 2020). Starting with simpler games that can be learned and played fast can be a successful strategy. The goal can be profiting from the engagement and creativity these games can bring to planning practices.

These games could inspire ways to address bias and discuss important issues that emerge through the drawing expression. The drawing mechanisms help participants to express their ideas graphically, fostering creativity. It introduces challenges to the player (participant) that is drawing and to the other players (participants) that are interpreting the shared ideas. The available options the game system provide can help to frame problems and solutions in a language all can use and relate with. Games can define what shapes to use, how many lines to draw, predefine a grid to fill, define forbidden or mandatory words to represent and many other combinations of restrains or supporting tools. Drawings are compatible with storytelling as an expression of the author or as the interpretation from other participants in the game. Citizens and stakeholders can discuss in a positive, safe, and humorous environment, mediated by professional planners that can explore these drawing games. Table 2 expresses the features associated with the games that explore drawings as core game mechanisms.

Table 2. Features of drawing games planners can replicate in planning.

Game	Foster			
	Expression though free drawing	**Framework to draw uniformly**	**storytelling**	**Participants' interpretation**
Telestrations	●			●
Fake Artist Goes to New York	●		●	●
Pictomania	●			●
Duplik	●	●	●	●
Pictionary	●			●
Artbox		●		●
Subtext	●			●
Luck of the Draw	●			
What's Missing?		●		●

The explored games allow players to express ideas, but the games we presented here rely on predefined concepts and words to be represented through gameplay. Guessing and having the most votes for a successful representation is the way players are engaged. In some cases, like in *Telestrations*, players may ignore the voting/scoring system and enjoy the funny interpretations and misleads. It becomes a humour exercise. This humorous mood may happen in most of these games. This kind of enjoyment is one of the reasons these games are classified as party games. When played in a planning process, these games can generate different data. Planners can use the drawings, the discussions, and the debriefing outcomes. At this stage, the challenge is how to organize this data. These methodologic limitations complicate, even more, the overall difficulty of transforming participation into fruitful enjoyment.

The survey revealed 10 games with high potential but many others that seemed also relevant to inspire game-based planning processes should not be neglected. Maybe the focus on one core mechanism is just the starting point of the approach. Considering other mechanisms might bring new ways to build adapt and develop serious games for planning practice.

One way to profit from the drawing party games to support game-based planning dynamics is to modify them. Planning practitioners can do simple modifications to support citizens to express their ideas (Sousa, 2020b). But games tend to have more than one mechanism. We considered the drawing as the core game mechanism, but others are necessary to support the game dynamic, usually called auxiliary mechanisms (Sousa, Oliveira, & Zagalo, 2021). Drawing mechanisms allow expression, while other game mechanisms can help mediate the participation. The turn-based game mechanisms allow equality of participation. The game mechanisms can frame how players should do the drawings. This guidance can restrain freedom but can level player skills and allow all participants to draw their ideas. Limiting the available forms and time to make drawings can create tension and reduce the game duration. These limitations are some of the challenges that can engage more participants.

To benefit from the game usage for planning processes, we propose to follow the modding approaches (Castronova & Knowles, 2015; Sousa, 2021b, 2020c). Planners may replace the cards, dices, or other randomizing systems to predetermine the issues and subjects at stake. By doing this, planners can frame the process and conduct the participants to work and express ideas related to specific planning issues. For example, planners can define game-based planning processes to address urban sustainability problems (Sousa, 2020a). The

guessing and voting systems led participants to analysed other players expressions. Acknowledging other participants claims is essential to enter a decision-making process that fits the collaborative planning approaches and collective decision making (Innes & Booher, 2018).

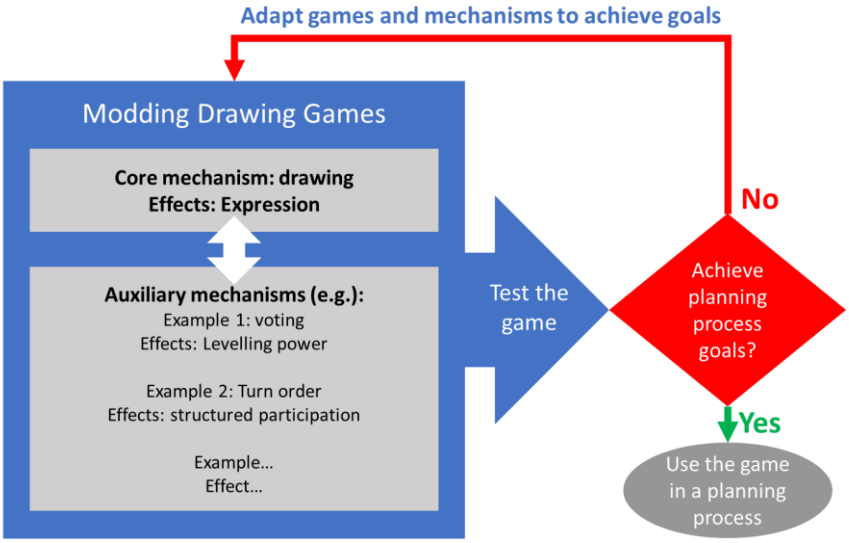

Figure 3. Modding drawing games for planning processes (MDGPP)
Source: author.

Figure 3 proposes a simplified framework for modifying existing games that have drawing as the core mechanism as well as several auxiliary mechanisms. The proposed framework establishes the relationships between game mechanisms and effects applicable for participatory planning processes. Planning professionals can follow these recommendations, adapting and playtesting the games before using them in a planning process. This proposal is an interactive proceeding that simplified the Mechanics for Engagement Design Protocol (MDEP) (Sousa et al., 2021). Our Modding Drawing Games for Planning Processes (MDGPP) framework reduced several steps of the MDEP, focusing on the effects of using specific mechanisms and the testing before using the games in practice. Even though the modding approach reduces the need for planners to master game design, aiming only on one core mechanism might not be enough. Using serious games might demand higher game design knowledge than initially expected.

Serious games also demand the game to help players achieve goals. In the case of participatory planning, the game must be engaging, support communication and data collection. Table 2 highlights four main features planners can use to develop games or simple dynamics to foster active creativity and interactions. The games that allow free drawing expression foster creativity and express ideas that might be difficult to emerge othewise. Giving the participants time to do their drawings alone explore their individual participation. Constraining the things and how they can draw and where to draw helps uniform the language. Storytelling can be a complementary activity to enrich the drawings meanings, which can be done by the author of the draw or by the other players interpreting it. The last feature refers to the ability of players to interpret what other participants have done or added. The interpretation incentivizes players to understand other participants ideas, claims or concerns. This simple shift fosters active participation and considering others.

The selection of the 10 top BGG games with drawing mechanics assures that engagement is

achievable. By playing the game, participants should have a better experience than in traditional planning processes. The game should provide planners with relevant and unique data. These are the goals considered in the Figure 2 decision box. Failing to achieve these goals lead to new game modifications and testing.

Conclusions

Game design is hard to master but using existing analogue games can be a solution for planners to enter game-based planning. We dove into the modern board game design to find how drawing games could help planners use game-based approaches for participatory planning processes. Drawing mechanisms can be simple to use and fuel serious game dynamics that are engaging and support planners' activities.

Although using games demand specific knowledge, we proposed a method to benefit from simple game approaches, following a simplification of the MDEP protocol. Arguably, profiting from existing game mechanisms and successful game implementations are easier approaches than developing a new game. This proposal establishes a first approach that planners can undertake to explore modern board games. But continuous testing and experimentation are recommended as planners dive into analogue serious game usage. Analyzing how other core mechanisms support a specific planning process seems a promising path. Despite being less complex, the modding approach demands planners to deal with some game design issues. The MDEP demanded searching for game mechanisms to develop new games, while the Modding drawing games for planning processes (MDGPP) supports modding existing games.

Knowing how to search for game mechanisms can help planners do their serious games. Core drawing mechanisms appear in many different games. These mechanisms are not rigid. They are implemented according to the way they are combined with other auxiliary mechanisms. We realized that focusing only on one core mechanism might be very constraining because a game has many mechanisms. Even the simpler ones have two or three auxiliary game mechanisms to build the playing experience. The concept of core mechanisms and auxiliary mechanisms help define what modifications to do and what effects to expect. Planners can adapt analogue games to their planning process, but playtesting is necessary due to the unpredictability of combining different mechanisms and how participants will react to them.

Despite the process of searching games by the "drawing: mechanism" and selecting a sample of the highest raked ones revealed a meaningful list of games to discuss, many other games were missing. BGG also define "paper and pencil" and "line drawing" mechanisms. There are several overlays in our sample, games that share these mechanisms. "Paper and pencil" and "line drawing" can be considered more abstract ways of doing graphical representation related to the drawing games.

Nevertheless, modding games is less expensive and time-consuming than developing new analogue games and digital games. Or, when aiming to create a digital game, analogue prototyping is a proven way to deliver the first steps for digital game development (Brathwaite & Schreiber, 2009). Despite analogue game potentials, these games have their own restrictions to achieve detailed simulation while demanding high facilitation (Sousa, 2020a). But mastering the analogue game mechanisms also allows planners to transfer the same dynamics to online game-based activities (Sousa, 2021a).

Drawing games are among the lowest complexity modern board games to play. Their party

game nature allows fast engagement and low barriers of complexity to enter a ludic experience. Planners can use these game mechanisms to provide participants with multiple experiences: creative expression, debates, empathy, negotiation, and decision-making. Games can deliver these experiences, depending on how their mechanisms are combined and activated. We believe these games can provide valuable "ice-breaking" exercises for a planning process or to establish specific serious games that aim to be a planning process by themselves. These approaches are being used successfully during the development of *Urbsecurity* (www.urbact.eu/urbsecurity), an *Urbact* project. The literature on serious games for planning also shows that this is viable to some extent (Ampatzidou et al., 2018; Dodig & Groat, 2019b; Tan, 2017; Vanolo, 2018). Despite the notion that serious games have a high potential for planning applications, the specific traits of modern board games are far from being explored.

The analytical dimension of serious games is imperative to consider. Finding ways to analyze the data from the drawings, the discussions and debriefing processes is relevant. We recommended future research to deal with these challenges.

Games offer infinite possibilities for planners to use in their practices. Modern board games innovations are no exception and can allow planners to go beyond traditional game usage. The analogue dimension of these games provides tangibility and flexibility to adapt their mechanisms to participatory planning approaches. The drawing mechanisms seem to be one of the mechanisms with a higher potential for fostering creativity. Drawing allows participants to express themselves in multiple ways, generating tangible outputs, and comprehensive frameworks that help other participants interpretations (Table 2).

By modding games where drawing is a core mechanism, professional planners also need to deal with the effects of auxiliary mechanisms, gradually entering the game design. Using games demand specific knowledge of game development, like considering the users' experience. Besides this game design general challenges, developing serious goals obliges creating games that achieve specific goals beyond fun and entertainment. Departing from existing games can simplify these processes.

We believe the Modding Drawing Games for Planning Process (MDGPP) framework help planners find games and game mechanisms to develop their own serious game approaches. Drawing games and their specific core game mechanisms are among the most simple and flexible ones to use. Mastering these designs can lead planners to complex game approaches, especially when adding other auxiliary game mechanisms.

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Open Access Journal

Is Covid-19 going to change our relationship with space? A paradigm from Greece

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As Greece was in lockdown, the Greek cities resembled ghosts, and their cityscapes reminded us of dystopian movies. Empty streets and motorways, people afraid to go outside, and an uneasy cloud hanging above, encapsulating the minds of people living in these unprecedented times.

Space is inherently connected with infectious diseases. In this context, the pandemic crisis posed new challenges to how we perceive and interact with space, both indoors and out. So, the aim of this article is twofold: to discuss whether the relationship with space has changed due to Covid-19 and the confining measures and to contribute to the knowledge base on the field by reflecting on the Greek reality.

Greece has been hit by the virus similarly to other European countries: counter-urbanization, quiet urban environment, lifeless streets, etc. Covid-19 brought a disturbance to the everyday lives of people as well as a shift in urban balances. As a result, uber trends have emerged in how we use space, which have altered the interrelation of citizens with urban space.

All in all, what is common is the uncertainty of the future, while the level of change regarding how we use and perceive space is unknown yet.

Keywords: Covid-19; impact; cities; space; planning

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Introduction

Every once in a century, humanity comes to a turning point. While this article was being written, the world was facing the second wave of Covid-19. The concept of pandemics can be traced all the way back to ancient times. However, modern society was only familiar with these chronicles and was unprepared to act under such unprecedented circumstances.

February 2020 was the crucial date, after which the entire globe seemed to be stuck in a loop. The virus propagated worldwide in such a short period of time, ushering in a new reality. People were forced to adjust to a new way of life, which resulted in a shift in their routines and, as a result, their connection with space.

COVID-19 caused a disruption in daily living as well as a shift in urban equilibrium. The confining measures taken during the lockdowns[1] for the protection of public health and quarantine introduced new living norms: a total ban of traveling and social gatherings, empty halls, citizens afraid to go out, a decrease of downtown activity, in-person gave way to online, shared spaces were closed, contacts were minimized or abolished and the open spaces were empty.

As James (2020) points out, infectious diseases are inextricably linked to space. In this context, the pandemic crisis imposed new challenges to how we perceive and engage with space, both indoors and out. As a result, uber trends in how we use space are emerging. Even restrictive directives such as "remain at home" and "social distance" were unable in many circumstances to persuade citizens that the urban environment was safe (James, 2020). Furthermore, they have altered citizens' interrelation with urban space.

There is a debate over whether pandemics, in addition to imposing a burden on humanity, contribute to the development of new and improved methods of using and/or designing space. What is certain is that changes are occurring, and we should utilize them to our benefit. The question is how substantial these changes are and whether they will last long-term.

Greece has been affected by the virus on a national scale: counter-urbanization, quiet urban environment, and lifeless streets. The impact of Covid-19 is visible in all aspects of everyday life, with various dimensions (Honey-Rosés et al, 2020). All in all, what is common is the uncertainty for the future, as the extent to which our usage and perception of space will alter is unknown.

Greece, in particular, ranked first among 53 countries for having the strictest lockdown and the least movement of people (-47,7%) while scoring 84,25 out of 90 regarding the dictatorial state (Chang et al., 2020). The restraint measures themselves violate international human rights legislation. How much more so when the majority of the response to Covid-19 is authoritative? International Amnesty has received a large number of complaints by many countries, among them Greece, related to police incidents of violence in case individuals didn't comply with the 'protective measures' (amnesty.org., 2020).

The aim of this article is twofold: to discuss if and to what extent the relationship with space has changed due to Covid -19 and to contribute to the field's knowledge by representing the reality in Greece during the pandemic.

To achieve this, the article is divided into six (6) chapters, the first of which introduces the

[1] 1st lockdown 13 March – 18 May 2020, 2nd lockdown 7 November - 17 May 2020

study's topic, followed by the theoretical framework, which includes a discussion of the relationship between pandemics and urban planning. Next is the methodology chapter. The 4th chapter is the analysis dedicated to the European and Greek experiences during the health crisis. Finally, in the discussion chapter main findings and conclusions of the paper are summarized.

The new reality requires us to adapt our lifestyles to the emerging challenges, re-valuing our relationship with space, a subject that entails high scientific interest and is considered appropriate for research due to its impact on everyday life. It is important to understand how people are experiencing and behaving in space under all these conditions.

Theoretical framework

History of pandemics and urban planning

Infectious diseases have a lifelong existence. It has to be clarified at this point that the purpose of this chapter is not to provide a chronological account of pandemics, but rather a statement of their impact on humans' relationship with space. The design of the cities reflects the major cultural and technological trends, as well as major crises. The next few paragraphs will focus on how pandemics manifest themselves in the built environment.

The mobility of people and interaction with different populations, living conditions, and animals have caused waves of widespread illnesses. Officially known as pandemics, they have plagued humanity many times. The word derives from the Greek Pandemic /pandemik/, which means a disease that affects an entire country or the entire world (LePan, 2020).

Old enough is also the concept of quarantine. First practiced in Italy during the 14th century, the port authorities of Venice forced ships coming from places where infectious diseases had been detected to moor for 40 days before landing, targeting the protection of the coastal cities against imported diseases (CDC, 2020). Thus, quarantine originates from the union of the two Italian words *quaranta giorni* meaning forty days (CDC, 2020).

Urban design and planning evolved under the threat of pandemics and other disasters. Starting in the 14th century, urban renaissance practices (i.e. decongestion of overcrowded areas by expanding the boundaries, creation of larger public spaces) were a response to the bubonic plague. Similarly, yellow fever in the 18th century was confined by widening boulevards and developing the early suburbs (Lubell, 2020).

The city is the real focus of infectious disease in the 19th century (Wintle, 2020). To reminisce, the eradication of cholera was made possible by the development of cutting-edge methods for cleaning up overpopulated areas. London's modern sewer system allowed for the transformation of acres of marshland into the parks, boulevards, and other open spaces that have come to define the city's skyline (Wintle, 2020). Glaeser (2020) confirms that in order to contain infectious diseases, many municipalities had to invest heavily in their water infrastructure. These planned urban interventions were implemented to stop contamination.
In the nineteenth century, new building codes centered on natural lighting and ventilation were established as a result of the industrial revolution. Overcrowded poor neighborhoods in Europe saw an increase in respiratory illnesses, prompting the creation of new building regulations to help prevent or at least lessen the severity of the problem (Berg, 2020). The construction of railroads and the widening of highways were two major legacies of the age of industrialization, which had a far-reaching effect on the nation's urban infrastructure. Suburban sprawl and

massive urban agglomerations emerged as cities grew to accommodate them.

Modernism trends – well-ventilated and clear spaces, single-use zoning, along with waste management, re-organization of residences, and slum clearance were all established in the 20th century to control the spread of communicable diseases like tuberculosis, typhoid, Polio, and Spanish Flu (Glaeser, 2020).

Over time, cities have become safe places to live thanks to advances in technology, access to healthcare professionals, public health programs, and improved sanitation. "Urban planning and city design have always been influenced by health concerns", as Moritz Maria Karl so eloquently puts it. Whereas, Wintle (2020) acknowledges that today's cities are partially the outcome of the history of pandemics.

More people moved from the countryside to urban areas as a result of urbanization, further increasing urban density. Infectious diseases spread more quickly in polluted, overcrowded urban areas (Matthew & McDonald, 2006), so it stands to reason that most pandemics are fundamentally anti-urban and anti-social.

The vulnerability of large urban areas to infectious diseases and their high density are recognized as disadvantages by many analysts (Matthew & McDonald, 2006; Sharifi & Khavarian-Garmsir, 2020). These disadvantages are apparent now and will worsen if no steps are taken to prevent future disturbances of a similar nature. It is in this context that the idea of urban preparedness comes to the fore (Matthew & McDonald, 2006). This is because, as Glaeser (2020) puts it, "the Covid-19 pandemic strikes at the heart of our urban world," which is why it causes so much uncertainty.

Methodology

The effects of pandemics on humanity are discussed at length. The full extent of the damage caused by the newly discovered Covid- 19 virus has yet to be determined. Because of Covid-19's brief existence, its scholarly literature is limited. This paper is an attempt to add to the body of knowledge in the area.

To achieve this goal, a combination of qualitative and quantitative data from primary and secondary sources was used in the research process. This means that all primary data came from site observations, while secondary data came from a variety of desk studies.

This research focuses on a more theoretical analysis of how Covid-19 modifies our perception and utilization of physical space. Since combining the two would "produce more complete accounts of the social reality and enhance confidence in findings," this strategy was chosen over using either quantitative or qualitative research methods exclusively (Bryman, 1998, pp.126).

According to a number of sources, including Stepchenkova (2012, p. 452), it is appropriate to use pre-existing data given the nature of the topic and the field of social sciences to which it belongs. Since the 'how' and 'why' are often intertwined in real life, it follows that a combination of secondary quantitative and qualitative research methods is required to achieve the study goals.

Data collection and analysis

Primary data was acquired using the space observation method, to be more accurate. The study was undertaken in the writer's home nation and city, Volos, Greece. Traveling and personal contact for the distribution of surveys or any interaction of human subjects were made difficult due to the lockdown and restriction orders. As a result, space observation was picked as the best approach for reflecting reality in Greece. The author was given a more specialized understanding of the conditions and insight into specific circumstances, resulting in a greater awareness of the problem under consideration (Unwin, 2006, pp.108).

Secondary data gathered from textual sources is also included in the study. Books, eBooks, journal papers, newspaper stories, reports from government and other organizations (International Amnesty, for example), relevant Internet pages, academic journals, and weekly news magazines were used to acquire information. In terms of categorization, secondary quantitative data was largely received from organizations and government accounts, whilst qualitative data was taken through reports and other relevant material. The information for this project was chosen from recent English and Greek bibliographies.

Procedure

The procedure for the preparation of the study is mirrored on the article's structure and writer's approach to scaling down the usage of space from the city level, to open spaces and personal space. The analysis chapter is organized accordingly, including information devoted to European and Greek experiences aiming to demonstrate the whole picture.

Reliability and validity are likewise important. Thomas (2003, pp.59) confirms that the way of data collection and analysis of documents are valid techniques of research. In terms of data reliability, Stepchenkova (2012, pp.450) points out that most information is authentic nowadays, and even easily available blogs are reliable sources.

Ethical considerations – Limitations

Even though the current research doesn't involve direct human contact it is still likely to face some ethical concerns about privacy. The limitation of the study is precisely this: the inability to conduct primary research. However, the novelty of the thematic and its significance for society, urban planning, and future steps make the study subject to further research once the restrictions are lifted.

Analysis

Le Corbusier said, "Hygiene and moral health depend on the structure of towns. Truer than ever before is the adage "without cleanliness and moral health, the social cell gets atrophied" (Wintle, 2020). With the Covid-19 pandemic, humankind's place in the cosmos has taken on new significance. Experts in the field — architects, designers, planners, and social geographers — are currently investigating the scope and shape of future changes in the way space is transformed and utilized.

The history of public space as we know it now begins in the nineteenth century, when people began to shop and socialize openly on the streets of major cities like Paris, London, and Barcelona. The first things to be impacted by the pandemic and social isolation measures are these pursuits. As a result, not only has pedestrian traffic decreased, but the impacts can be

seen in the public sphere and in the commercial and economic sectors of the local community (window shopping, coffee shops, etc.). If this trend continues, the areas may lose their identity, which is a major concern.

The prevalence of and damage caused by Covid-19 will vary by location, health care system, and other factors. In an effort to contain the spread of Covid-19, governments around the world have instituted restrictive policies, including travel bans, restrictions on public gatherings, telecommuting, and quarantine. Which varied in intensity and duration from place to country but shared a common root: alienation from one's social circle. Since most infectious diseases tend to avoid metropolitan areas, it's important to know how people in these areas have been making use of the space they have.

Counter-urbanization

To start with, a significant matter that may not be so obvious at first glance is how safe citizens feel in their cities. It is not coincidental that people started to leave urban centers, where the transmission rates got higher due to the population's density, once the first outbreaks were announced. Londoners and Parisians preferred to relocate from the city to more natural and less crowded areas (Bender, 2020). The London exodus started in 2020 with almost 700.000 people leaving the capital, while a recent study revealed that 55% of young Londoners were considering leaving their home city post-pandemics (Urban Jungle, 2021). The same survey evidenced a 73% increase in those moving to more rural areas. Furthermore, correspondence between the distance from the city of London and outbreaks has been proven, with Sheffield, Birmingham, Leeds, and Manchester documenting fewer cases of COVID-19 (Ghosh et al., 2020).

In Italy, returnees are estimated to number between 80.000 and 100.000. De-populated villages across the Italian countryside are gaining life again. Incentives are given by the authorities (grants, programs of regeneration, national strategies, and investments in rural planning) aiming at making these areas viable on an annual basis and making efforts to keep the returnees as permanent residents (D'Ignoti, 2021). At the same time, the real estate market recorded a 20% increase in the demand for properties in these areas. The result was the regeneration of depopulated areas (D'Ignoti, 2021).

On the contrary, "emptying the city" isn't trending in Berlin despite the high outbreaks (Shepard, 2020). The lower percentage of Berliners leaving the city during the March–July 2020 period in correlation to 2019 is remarkable (Scholz, 2020).

Massive escapism indicates that citizens felt threatened in their own homes, seeking protection from risk to the safety of big cities' surroundings. As an illustration, Greek cities resembled ghosts while the cityscapes during the lockdown reminded one of dystopian movies. With empty streets and motorways, people were afraid to go outside while scenes of irritation weren't missing, having in mind the frustration of people experiencing such harsh conditions for the first time.

The busiest and most congested streets and highways in Athens and Thessaloniki were like deserts; cities remained silent (Figures 1(a) and 1(b)). Many Greeks left the urban centers, returning to their hometowns. In detail, a total of 154,621 vehicles exited Athens before the second lockdown, reaching a peak in November 2020 (Ministry of Citizen Protection, 2020). This figure has more than tripled since the first lockdown (50,597 vehicles) (Ministry of Citizen Protection, 2020). The fear and exhaustion felt by the Greek population during the second

lockdown accounts for these numbers. It is widely acknowledged that negative emotions like tension, fatigue, and despair can be triggered by a city's frenetic pace (Tulumello, 2017). Under this spectrum, the choice of city dwellers to escape from the new ‘normal’ is justified.

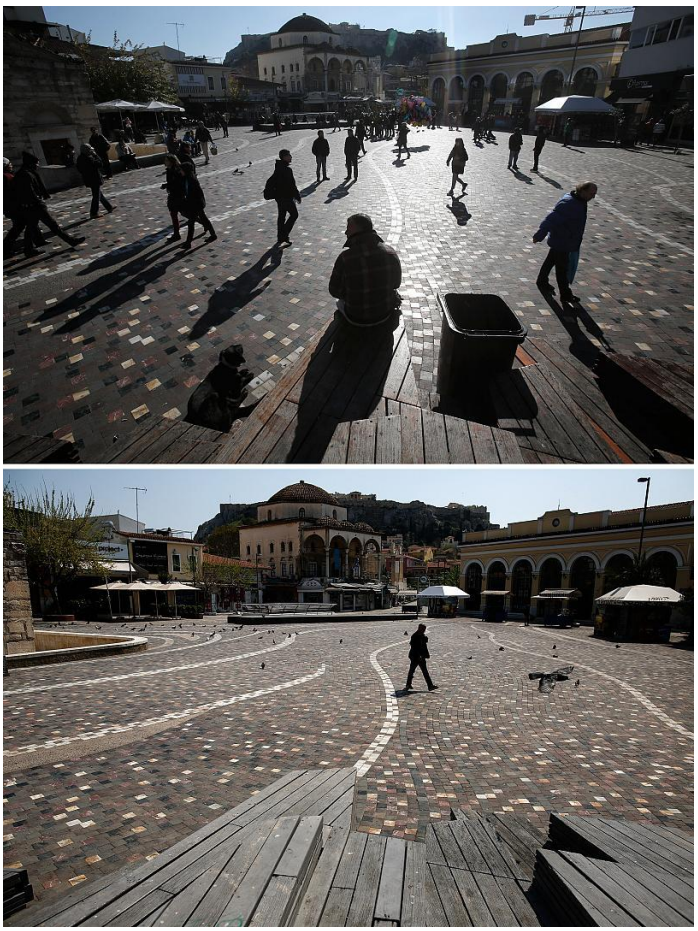

Figure 2(a). Monastiraki square before the lockdown
Figure 1(b). Monastiraki during the lockdown Source: Σαίτας, 2020

James (2020) denotes how one's sense of security might be affected by the behavior of others in the same area. However, instead of the safety and assurance that a city offers via the provision of services, products, and supplies, the threat of a killer disease spreading in the urban tissue prevailed. Even the confining orders failed to make citizens feel safe in their environment. Because of the congestion and crowding in major cities, individuals started looking for new areas to call home.

Open spaces

Moving forward, the use of open spaces displays different patterns depending on the context and city. What is concerning during a global pandemic is the way people interact within a specific geographical space, as pointedly James (2020) cites. Individuals’ responses to the emerging environment are unique experiences, altered by their view of COVID-19 varying in time and space.

The lack of human presence in public space and the resulting decrease in social interaction is a profound effect of COVID-19 (Garrido et al., 2020). The decision to use public, semi-public,

or private spaces is no longer a personal one, but is dictated by power structures (governments) (James, 2020). The Greek Government decided to reduce the amount of available green and open space (m2 per citizen) by restricting or blocking access to major spacious areas. Isolating the usage of well-ventilated public places in urban areas as an argument in favor of the general health and wellbeing of the population has no basis in science (Leontidou, 2020). Consequently, the presence of open spaces in the form of clusters may have been minimized while individual visits have increased.

Activities in public spaces include, among others, gatherings in public transport stops, meeting points such as street corners and seating areas, crosswalks, etc. As more people stayed at home or worked remotely, there was less time for small talk, going out to restaurants or bars after work, or even getting some exercise (James, 2020). According to Galloway (2020), fewer office workers imply less street traffic.

During Covid-19, most of us experienced a reduction in the perceived density and crowding (Glaeser, 2020). Waiting in long queues or sharing common urban infrastructure like parks, cultural places, etc. was drastically reduced or eliminated (Glaeser, 2020). Other than these activities, cities in the time of Covid–19 have nothing more to offer besides dark landscapes and overcrowded health service infrastructure. Free public and shared spaces constitute an antidote to the pandemics in the cities; restricting the access to them drove the population to congest within the apartment buildings causing a suffocating urbanscape.

The aforementioned observations indicate people's fear of the disease. They don't want to put themselves in unsafe situations (where high population density is sighted) due to the risk of infection. Most importantly, they are worried about the impact of their actions on others (spread of infection) (James, 2020). As a result, people are starting to shift their habits and visit public spaces outside of typical rush hours, which are considered unsafe.

Another phenomenon is the increased popularity of cycling. Increasingly, municipalities are investing in bicycle and pedestrian infrastructure by building new paths and extending existing ones. A few of the first to be mentioned are Bogotá, Berlin, and Mexico City (Null & Smith, 2020). Transformative urban solutions were also implemented in Milan, Paris, and Barcelona to reclaim the streets from cars and decrease reliance on public transportation. These solutions included increasing walking and cycling space, providing a bike-friendly design, creating superblocks, and improving the use of public space (Knight, 2020). Milan is expanding permanent sidewalks and replacing vehicle lanes with 35km of bike lanes (Honey-Rosés et al., 2020). The most important thing is the permanent character of these urban interventions.

During the lockdowns, Danish cities were the exception to the rule of "closing the open spaces." The approach of keeping public spaces open and allowing outdoor activities was grounded on their vital role in a healthy civic life. Instantly, Copenhagen's public spaces drew more visitors during the March and April 2020 lockdown compared to the fall 2020 pro Covid--19 (Gehl, 2020). In essence, the presence of people indicates how healthy and functional a public space can be.

Results from Gehl's survey (2020) on public life before and during the spring 2020 lockdown are presented below. They emphasize the importance of accessibility of public spaces.

- Increased use of recreation, play, and exercise in comparison to a decrease in downtown activities (shopping, etc.).
- Popularity of local establishments increased, resulting in increased pedestrian traffic

in more remote areas outside the city center.
- An increase in the use of public spaces by children and the elderly.

Conversely, in Greece, more anti-democratic ways were chosen to combat COVID-19. Everyone was proud of how the pandemic was handled during the first wave because the figures (mortality rates) were better than in other countries. Indeed, Greece ranked among the least affected countries in the EU during the first wave (Crego & Kotanidis, 2020). However, the picture was fictitious, with the situation quickly spiraling out of control, proving the measures ineffective (Λινού, 2020). In the second lockdown, curfews, demonstration bans, and increased fines were added to the list of restrictions, making Greece one of the worst places to live during pandemics.

In light of this, a widespread fear prevented Greeks from moving freely in the first place, in case they encountered police and were fined. However, social human nature triumphed over repressive tactics. As citizens reconnected with nature and its healing power, there has been an increase in mobility in open spaces – urban and peri-urban parks, forests, watersheds, and so on. Individuals were seen alone or in pairs, and in most cases, they did not congregate, exhibiting social distancing.

The key point is the re-discovery of open spaces in Greece. Because of the Mediterranean climate and proximity, Greeks took green spaces for granted, believing that they could go outside whenever they wanted. This was suddenly no longer the case. Being denied access to public spaces taught Greeks to value their existence. The desire to be outside was strong, and people traveled to even the most remote parks to escape confinement.

Many Greek cities led the way in providing better urban environments in the context of the new reality. During the first lockdown, Farkadona, Karditsa, and Rethimno were the first to reclaim public spaces for their citizens. Specifically, the latter were ranked first and second among 3,136 European cities in the categories of small and big cities, respectively, during the European Mobility Week. Furthermore, ten more Greek cities were awarded the Sustainable Urban Mobility award on July 9, 2020: Igoumenitsa, Larisa, East Samos, Agios Dimitrios, Nea Propontida, Heraklion, Alimos, Trikala, Grevena, and Neapoli-Sikewn (Naftemporiki.gr, 2020).

Outdoor gyms, for example, were constructed in Farkadona to promote physical activity and safety during lockdowns (Herk & Aivalioti, 2020). While Karditsa is one of the most bike-friendly Greek cities, with 20,000 bikes, the city plans to expand the cycling and pedestrian network by adding 20km of sidewalk lanes that meet the most recent standards, including disabled specifications (Pouliopoulos, 2021). The goal is to be friendly and accessible to all cities.

In contrast, some municipalities restricted access to the public seating areas (Figure 2), while the municipality in Katerini decided to remove urban furniture from the piazzas (Figure 3). This repressive action claimed to prevent social gatherings and over-crowding, but actually it was violating citizens' institutional right to use public space. On the same note, access to the seafront in Volos was prohibited by the General Secretariat for Civil Protection.

Figure 2. Blocking access to public urban furniture, Greece
Source: author, 2021

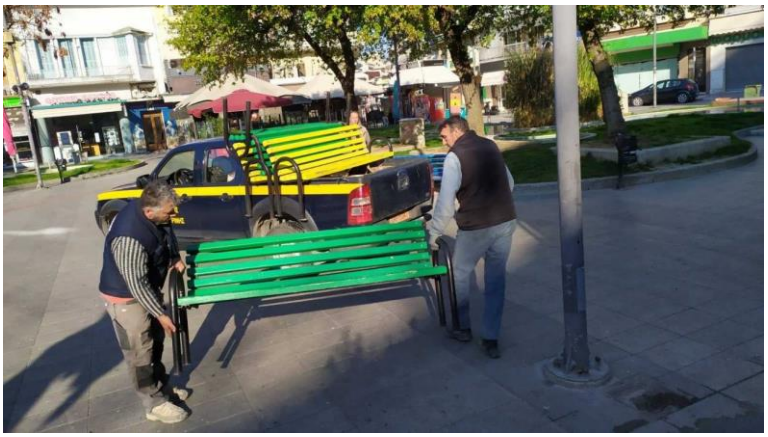

Figure 3. Benches' removal in Katerini, Greece
Source: cnn.gr, 2020

Since parks and open spaces allow effective social distance due to their scale, it is unclear whether these hygiene rules prompted the sealing of forests, Athens' major parks (Pedion Areos, National Garden), organized beaches, seaside fronts of Thessaloniki, Volos, Patras, and the removal of urban furniture in Katerini.

The Greek government and the Hellenic Ministry of Environment and Energy took advantage of the crisis to vote for a series of new policies and regulations that otherwise would have been difficult or impossible to implement. The new planning law – 4759/2020 New Special Planning Bill will have a direct impact on space and the environment. Some of the regulations concern, among other things, specific timelines for the drafting of local urban plans, initiatives promoting organized business activities, and energy and environmental upgrades to buildings.

What is more, an enhanced urban and regional planning framework was introduced to address long-standing inherited issues in spatial planning. Nonetheless, the proposed fragmented spatial interventions are raising many concerns among professionals regarding the new planning law's validity, due to their short-term and long-term environmental effects. Most of

the concerns center around the ministry's decision to loosen restrictions on construction outside of the urban planning zone. This was a shortcut to the formal process of establishing city plans for expansion and allowing residents to legally build (Constitution Article 24).

Working – personal space

Covid-19 and the preventive measures impact both indoor and outdoor activities. Telecommuting and working from home ushered in an entirely new professional landscape. The best office spaces in the urban centers, which are currently vacant, were previously sought after by the large corporations.

The employees in closed workspaces must now overcome new challenges. They must deal with newly designed workspaces in addition to the masks they must wear at all times for everyone's safety. Companies had to adjust interiors to safeguard physical distance based on the directives to 'stay sufficiently far apart' and 'minimize person to person contact'.

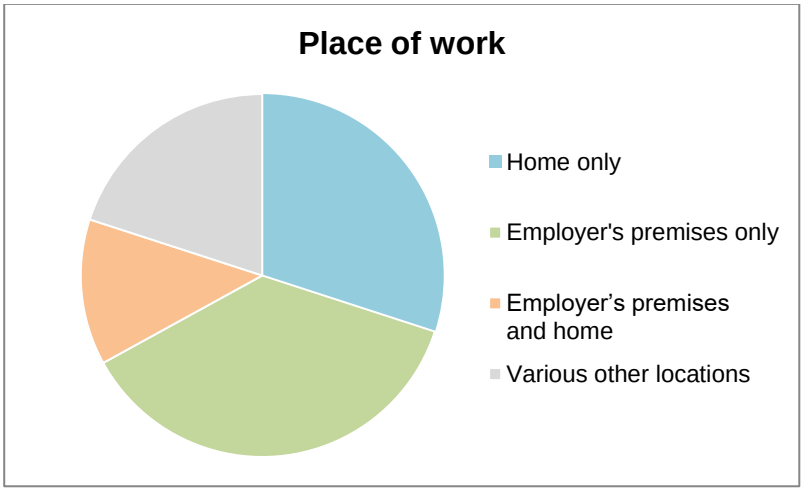

Figure 4. Teleworking in Greece during pandemics
Source: Eurofound (2020), self-edit

Numbers speak for themselves when it comes to remote work, showing an increase once the pandemic broke out. Official statistics show that during pandemics, 40% of the working population in the EU engaged in some form of telework (Eurofound, 2020). Evidence from the same survey, Eurofound (2020), also indicated that remote work was more urban-based, indicating that employees living in large cities rather than rural areas had a greater potential for homework. Figure 4 illustrates how Greece adheres to the broad pattern mentioned earlier.

Many Greeks benefited initially from homework but later felt exhausted and insecure as a result of it. Recent studies have shown that 65 percent of those who were surveyed experienced a negative impact on their mental health due to their remote work status (star.gr, 2021). Psychologists explain that employees working at home lose track of the working schedule and don't have the full sense of their working and personal space as their boundaries are the same. Working from home entails going through different phases throughout the day within a specific space.

Hence, opinions regarding home working vary (Eurofound, 2020). Many people enjoy it, while others do not. In many cases, people would rather work remotely than in an office because it allows them to avoid the hassles of commuting and allows them the flexibility to do their jobs

from the comfort of their own homes. On the other hand, many people look for ways to revamp their personal environments because they grow tired of staying in the same place for the majority of the day. Most people who have tried teleworking have found that it is a positive experience, suggesting that it may become the norm after the crisis in locations where it is feasible.

Discussion

The primary focus of many governments during the pandemic was combating the virus. In the case of Greece, the goal was to minimize the spread of COVID-19. Access restrictions to parks and other green areas were implemented as a government response to the COVID-19 pandemic, but this proved to be counterproductive. Open, spacious areas within the urban tissue, as described in the theoretical section, help to overcome pandemics, in addition to health measures. Historically, urban planning has been used to slow the spread of disease, and open, green areas were prioritized.

Now, the Greek government has taken a completely opposite stance, oblivious to history's lessons. Instead of being able to be outside in the fresh air, the citizens were trapped on narrow pavements and polykatoikies. Closing parks added to people's confinement, and teleworking caused them to congregate in high-density downtown areas and overcrowded apartments (Kalandides, 2020). During the confinement period, which was marked by exclusions, restrictions, and monitoring, public urban space was transformed into a getaway space. The negative feelings deriving from the experience of urban space have created escapism trends in the suburbs.

Access to space was strongly restricted during the severe lockdowns. The first wave of the virus was successfully controlled by Greece, but it had an effect on citizens' freedoms—day-to-day life and social interactions were affected. Greek cityscapes under military rule and curfew, as well as the suspension of constitutional human rights law and cultural needs, were the immediate results (Constitution Article 5). Citizens alone were expected to bear the burden of civic responsibility. There comes a time when the general public is viewed as the enemy (Tufecsi, 2020).

This is why regrettable outcomes are always a possibility: many scientists, medical professionals, and political figures later acknowledged that the decision to impose such a prolonged lockdown was flawed, demonstrating that its effects were worse than those of the virus itself, including mental health problems, domestic violence, suicides, home auctions, etc. (Λινού, 2020).

It is clear from the data presented above and the author's own first-hand experience with the urban spaces in the post-Covid 19 city that there is a need for revitalizing the urban landscape to make it appealing and secure for its residents. Berg (2020) recognizes a lack of investment in areas like sufficient and affordable housing, widened public spaces, and pedestrian-cyclist-friendly mobility systems; Covid-19 could be seen as a wake-up call to address these and other areas of concern. Although some Greek municipalities made attempts to respond to the new reality by creating a more hospitable urban environment for their residents, the pandemic ultimately revealed a lack of public spaces, walking and cycling facilities.

Land use, transportation planning, movement and access, open spaces, production and consumption of basic goods, and human-centered strategies for evacuation and quarantine are all crucial areas in which planners and planning have a role to play and should collaborate

with the private and public sectors to ensure appropriate urban defense (Matthew & McDonald, 2006).

Thereupon, the urban landscape and densities will have to adjust to respond to the challenges. Cities can only function at a certain population density; any reduction in that number has an immediate effect on the efficiency with which essential services can be delivered (Kimmelman, 2020). an alternative solution needs to be invented to deliver a more sustainable urban reality. Concurrently, if we don't want home work to be established, we should redesign buildings to implement physical distancing regulations.

By all means, old design techniques must be replaced by integrated planning and new management approaches. The ultimate goal is to fortify our cities in all aspects of daily life (transportation, housing, public spaces, etc.) against similar crises.

Cities should take advantage of the crisis to re-build and re-imagine their spaces in a more environmentally friendly post-COVID manner.

Conclusions

Overall, the objectives of this article were to investigate our relationship with space and demonstrate the reality in Greece during the COVID-19 crisis. From the author's perspective, the significance of these issues lies in the trends that they disclose and which impact not only on individuals but also on society and the urban planning and policy-making process in general. Further research could reveal how long the effects last and/or how permanent they are.

This study attempted to highlight the changes in the use of space during COVID-19 by presenting the impact of pandemics on shaping the urban landscape over time and by providing international examples as well as the Greek experience.

Therefore, it was found that our use of both indoor and outdoor space changed during the pandemic. The role, purpose, and security of public spaces were what changed the most in Greece, aside from how people used their private spaces (such as their homes, offices, and personal spaces) (Vatavali et al., 2020). Covid-19 has had the most significant effect on those aspects of social interaction that are inherently spatial. As a result, the restrictions have changed how people interact with their surroundings.

Changes in urban equilibriums were also noticed during COVID-19. Fear of the unknown, insecurity about the future, unequal access to safety, and a widening gap between nations are all hallmarks of the new normal. The recent economic recession has exacerbated all of these symptoms in Greece. As a result of the health crisis, economic recovery was stymied. As a result, the effects of COVID-19 can be seen in every facet of modern life. To avoid future post-apocalyptic scenes, it is crucial that cities prioritize sustainable, human, and decentralized growth.

With all these feelings emerging, one couldn't help but wonder if we are being transformed into a transitional society in the midst of the pandemic's unknown future. Although the concept of pandemics is not new, the components of the virus we are currently dealing with are still being studied. As a result, no one can be sure of tomorrow.

What is known is that the new routine has a direct impact on the use of space. Nonetheless,

the following remains unknown:

- The extent to which changes in public spaces will be visible and transformational (Honey-Rosés et al., 2020).
- The level of change regarding how we use and perceive public space.
- The future social interaction process and
- How will social interaction take place in public places?

Berg (2020) emphasizes the pandemic's consequences and their impact on the social and physical organization of cities. A design renaissance is required for the revival of the cities. Urban areas should be reshaped to accommodate the new dynamics, with a focus on public health as well as economic viability.

Citizens' and local communities' roles in using public space during the confinement period have become more important than ever. Cities and citizens must be armored in order to be effectively protected against all potential threats. As the current reality reintroduces the issue of protecting human life within the urban environment, we all have the responsibility and power to secure and shape the future of the cities in which we live.

In the hope that present-appropriate urban space management will define the future, urban planning should prioritize the prevention of such crises, which are inherently linked to infectious diseases. It is time to use urban planning to directly link well-being, quality of life, and health to the use of public space.

The perception that pre-crisis social and lively public spaces have been lost as a result of preventive measures is shared globally, despite differences in country and city conditions and response mechanisms to the health crisis. It is important to remember that, in addition to physical appearance, humans have emotional attachments to places. In any case, closing and reopening the parks is not regarded as a viable strategy for combating the pandemic.

Despite a clear shift in approach to the use of space on a neighborhood and city scale, the trends emerging in the urban landscape are concerning, at least in Greece. Staying at home has prevented a full manifestation of those until now. Individuals do their best to protect themselves, particularly in national circumstances. Still, one can see that Greeks aren't as mobile as they were in the pre-Covid era. One could also argue that they are afraid of being/going outside. Of course, the government's management is directly responsible for this behavior.

While people's perceptions of public space vary and are influenced by a variety of factors such as age, gender, region, city, country, disease impact, and others, one thing remains consistent: appreciation during lockdowns.

To summarize, if the emerging trends are to become the new normal, a complete shift in our perception and relationship with space is possible. The pandemic should be viewed as an opportunity to put in place an integrated planning framework that prioritizes humans and their safety. Of course, pandemic patrol isn't one of them. While there are still unknowns about the use of space for the public good, urban space should not have a negative impact on public health. What we do know is that we should have faith in our cities. Eugene Ionesco’s saying, "You can only predict things after they have happened." sums up the situation perfectly.

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