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EDITORIAL

In summer 2017 during the Annual AESOP Congress in Lisbon we were delighted and proud to present the inaugural issue of *Transactions of the Association of the European School*. Starting this journal took the editorial team on an enjoyable (ad)venture where we discussed format innovations, approaches, and procedures that would be suited to encapsulating the very inclusive, open-minded and nurturing character of the AESOP community while also measuring up to academic standards and scrutiny. It was a venture that was co-created by a mixed gendered team of complementary strengths, experiences, and competencies – as one would expect from a functional team.

The papers in this issue of the journal again embrace the diversity of planning cultures in Europe and beyond. They address themes ranging from transport to open space planning. Interdisciplinarity, qualitative and quantitative analytical approaches, design and strategy, and research and education are all covered in varying depth and breadth. (Post-)modern planning is diverse, and requires flexibility and openness to change; in our complex world the future is not predetermined but shaped and evolving.

This fourth issue is a good example of this diversity; with a geographical focus spanning from Mexico, Portugal to Russia and Italy, it explores planning approaches (resilience-based planning) as well as knowledge management issues and social behaviours.

In particular, this issue includes six contributions and, continuing with a tradition established in the inaugural issue, opens with an invited essay by Simin Davoudi. This essay takes us on a journey of reflections to the imagined historical and cultural regions of Europe, the 'Europe of the regions' and what spatial demarcation into regions may mean politically and in planning terms as they are rescaled and thus re-imagined over time.

This timely and provocative essay is followed by five articles. First, Elena Gilcher and Gerhard Steinebach's contribution looks at issues of knowledge management and effective systematic sharing mechanisms from pilot projects in planning. They conclude that comparable structures and information sharing enhance accessibility of information and foster the reuse of existing knowledge.

The second article by Vishnu Baburajan and João de Abreu e Silva explores the influence of land use characteristics, and information and communication technologies (including social media) on the choice of locations for social activities based on a cohort study of university students.

Third, Adriana Galderisi and Giada Limongi present a case study of the Basilicata region (Italy) illustrating initiatives around resilience-based planning approaches which aim to enhance the capacity of small villages to cope with intertwined threats such as earthquakes, landslides, and linked hazards.

The fourth contribution by Emma Regina Morales explores the proliferation of middle-class gated communities in Mexico in the context of global polarization. In a discussion of macro-economic policies and micro-level practices she seeks to identify future risks and challenges arising from the normalization of exclusionary places.

The fifth and final article by Anna Kharkina examines the strategies of heritage-making in the late Russian Empire which were simultaneously supported by different civil society groups and cultural enthusiasts.

Not only for this issue, but for all the published issues as well as those in progress, we need to acknowledge the hard work of the volunteer article reviewers as without them we could not succeeded in publishing a quality

journal. A wide range of AESOP conference papers has been submitted to the journal, furthering AESOP's mission to promote excellence in research. Critical reports from the Excellence in Teaching Prize winners and nominees have found an outlet in the journal too. In addition, the journal has also attracted a number of independent submissions. In its initial years, *Transactions* has received a total of 75 papers. We would like to thank all those contributors.

In the past year, the *Transactions* journal webpage had 14.215 visitors; 8094 were 'unique visitors' (first time visitors). During that period, there have been 16.597 downloads from the journal's webpage, some downloading complete issues, and some downloading individual papers. This interest in, and support for, this AESOP publication is exciting and indicative that this project is worth continuing.

Two and a half years after publishing the inaugural issue, the test and startup phase of the journal is coming to a close. There is of course much room for the journal to evolve further. At this stage however, the editorial team is looking to hand over to a new editorial lead to take the journal to the next stage. The editor(s) will inherit a good number of contributions in the pipeline (i.e. papers that are under review or revision) as well as two special themed issues which are being guest-edited and nearing completion over the next few months.

It has been a privilege and honour to partake in the development of this new voice of AESOP.

Kind regards

Ela Babalık, Andrea I. Frank, Nikos Karadimitriou, and **Olivier Sykes**

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IMAGINARIES OF A 'EUROPE OF THE REGIONS'

Simin Davoudi[a]

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Introduction

> "I have not come here this evening to talk to you about a utopia; no, I am here to talk to you about an adventure ...: the federating of Europe."

These are the words of Denis de Rougemont (1948, p.1), the Swiss philosopher and scholar, given at a talk on 22nd of April 1948 at the Sorbonne, Paris. He was advocating for the cultural, historical regions to become the sub-European political units instead of nation states. I start this essay with his statement not because I necessarily agree with his views, but because he is the person who coined the term 'Europe of the regions' in his book The idea of Europe, which appeared in English in 1966 (de Rougemont, 1966). Donald Tusk (2016), former President of the European Union (EU), called him "a philosopher of regionalism" and "a pioneer of the EU moto of 'unity in diversity'". I also started this essay with de Rougemont because of his take on what constitutes Europe. In his book, he traces the history of the idea from the Greek myth of the abduction of Europa by Zeus to the 18th and 19th century federalist ideas of Napoleon and the 1960s European Community, and concludes that the search for Europe is to build Europe; that, Europe is only to be found in the process of creating it (de Rougemont, 1966). This relational perspective somewhat resonates with what I am going to discuss about 'the region' and a 'Europe of the regions'.

Ever since the birds-eye view of Chicago adorned the cover of Daniel Burnham's Plan for the city in 1909, regional space has been subject to multiple and competing imaginaries. Many geographers have emphasized that, "there is no such thing as a single, uniquely defined 'region'" (Duncan, 1960, p.402) out there waiting to be defined and demarcated; and that, "there is nothing ontologically given about the traditional divisions between …. urban and regional, national and global scale" (Smith, 1993, p.73). Nevertheless, the ontology of the region is still often taken as a given, and 'the region' is conceptualised as a bounded territory that is neatly positioned in a nested hierarchy from global to local, like Russian dolls. Moving beyond this conceptualisation

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as well as beyond the territorial versus relational space, I draw on my previous work on the concept of imaginary (Davoudi, 2018a) and suggest that, at any point in time and space, there are multiple imaginaries of the region which are jostling to find a central position in the political processes of scalar fixing which is pursued by both the EU and nation states. Examples of these multiple imaginaries include seeing the region as a: cultural space of shared rituals, social space of everyday life, political space of advocacy and resistance, biophysical space of ecological interconnections, virtual space of information flows, and functional space of economic exchanges (Davoudi, 2008, 2018b). However, I would argue that despite this diversity, the economic imaginary has prevailed and has, since the 1990s, become co-constitutive of a neoliberal political project. This, to some extent, explains the limited success of the European regionalisation goal. Before elaborating on this, I briefly sketch the main features of the two concepts that are central to my argument: imaginary and scalar fixing (for a full account see Davoudi and Brooks, forthcoming).

Imaginary

There is a growing literature in which the term imaginary is used or implied, but rarely engaged with conceptually. This is despite the fact that, as a concept, imaginary has a long intellectual history. I have provided a fuller account of this history elsewhere (e.g. Davoudi, 2018a; Davoudi and Brooks, forthcoming). Here it suffices to reiterate Charles Taylor's definition of social imaginaries as "the ways people imagine their social existence, and how they fit together with others…" (Taylor, 2004, p.23). Seen in this way, "social imaginary is that which produces a community, holds it together by giving it temporary coherence and identity, and subjects it to change" (Davoudi, 2018a, p.100). More relevant to the focus of this essay is the concept of spatial imaginary which was first introduced by Edward Said's Orientalism (1978). In this pioneering work, Said showed how the spatial imaginaries of 'the Orient' were constructed and propagated through a plethora of both ideas (narratives, stories, travelogues) and artefacts (paintings, maps, transcripts) to achieve colonial goals. What Said added to the established mental mapping traditions of behavioural and environmental geographers, was a Foucauldian view which turned his imaginative geographies into "profoundly ideological landscapes whose representations of space are entangled with relations of power" (Gregory, 1995, p.474). So, rather than seeing spatial imaginaries as static linguistic representations of actually existing places out there, he saw them as performative acts which through a nexus of power, knowledge and geography, call certain scales, such as the region, into being, and legitimise certain political goals, such as European regionalisation.

Scalar Fixing

The critical questions are: what motivates regionalisation as a political goal? Why do we witness periodic reshufflings of government structures, or re-allocation of power to different tiers of governance? In addressing these questions scholars have drawn upon the concept of the scalar fix which is an extension of David Harvey's (2000, p.54) provocation that, "capitalism cannot do without its spatial fixes". He argues that the endemic crises of capital accumulations are temporarily resolved by reconfiguring space and the rescaling of governance powers and responsibilities. Inspired by the work of Henri Lefebvre, he suggests that, "the inner contradictions of capitalism are expressed through the restless formation and re-formation of geographical landscapes" (Harvey, 1985, p.150). This restless search for scalar fixing is, of course, a contested political process that is infused with tensions and contradictions and has uncertain outcomes.

Since the 2nd World War, in Europe and in many nation states, regions have been key candidates for rescaling. Imagined as economic spaces, they have been periodically invoked as the 'right' scale of governance, using a variety of rationalisation but with two distinct ideological bases. One is the cohesion-oriented welfare state rationality and the other is the competitiveness-oriented neoliberal rationality, as discussed below.

The Cohesion-Oriented Rationality of Regionalization

In the postwar, Fordist economy and Keynesian welfare state, regions were invoked as the right scale for the distribution of national economic growth and the reduction of territorial disparities. Emphasis was put on directing development opportunities, public funding and private investments towards economically

disadvantaged regions. A classic example of such policies is Jean-François Gravier's 1947 book Paris et le Desert Français in which he promoted the creation of growth poles outside Paris. At the European level, this was clearly reflected in the Treaty of Rome, 1957 which aimed to "reduce the differences between the regions and the backwardness of the less favoured regions" by promoting a "harmonious development of economic activities" and "a continuous and balanced expansion" (Article 2). It was also echoed in the early EU regional policies which aimed to "improve the harmony of regional structures in the Community" (CEC, 1969). Regions were imagined as Keynesian economic spaces, enacting the egalitarian ideals of the so called European social models (Davoudi, 2007). However, many such constructed regions remained "subordinated to distributive imperatives of the centre" (Martin and Sunley, 1997, p.280), and served "primarily as transmission belts for national economic and social politics" (Jessop, 2002, p.71). At the European level, nation states 'called the shots' and remained in charge of the negotiations over the allocation of European Regional Development Funds which was introduced in 1975.

The Competitiveness-Oriented Rationality of Regionalization

In the late 1980s, the rationalisation for economic imaginaries of the region began to change in response to post-Fordist crises of globalising capitalism, which in Europe were compounded by the introduction of the Single European Market and the Economic and Monetary Union. Both of these were expected to increase regional disparities, as clearly stated in the following excerpt from the ESDP (1999, p.7).

> Competition in the Single European Market is one of the driving forces for spatial development in the EU … Regions … compete with each other … however, not all European regions start from a similar point.

Thus, throughout the 1980s and 1990s, the EU, like many nation states, tried to re-energise regional rescaling, and actively pursued the 'Europe of the regions' goal through a number of direct and indirect mechanisms (such as those listed below), notably the creation of the Committee of the Regions which was enabled by the Maastricht Treaty in 1992.

- Engaging directly with regions in member states
- Doubling the structural funds and using its allocation to demand regionalisation in member states
- Setting up:
  - Regional Policy Committee of the European Parliament, 1980s
  - Association of European Regions, 1984
  - Consultative Committee of Local & Regional Authorities, 1988
  - Committee of the Region, 1994
  - The INTERREG program for cross-border activities
- Publishing regional discussion documents such as:
  - Europe 2000, 1991

Through these and other material and discursive practices, the economic imaginary of the region was circulated and performed to solidify the region as the scalar fix of post-Fordist crises in both Europe and nation states; but this time with a radically different rationalisation which put greater emphasis on: economic competitiveness, promotion of endogenous growth, entrepreneurial governance and 'regions for themselves'. As reflected in the following ministerial statement in Britain, regions were brought to the fore, or called into being, on the basis of these neoliberal rationalities.

> Bringing "regions to the fore" would "help improve the competitiveness of our firms, and boost entrepreneurial spirit (DETR, 1997, p.7).

Even in social democratic countries such as Denmark, traditional egalitarian values were dismissed by the Ministry of the Environment as outdated political goals:

> It is the government's view that the earlier form of development pursued by the nationwide goal of equality is outdated...Attention must be given to harnessing the development potential of the regions to strengthen Denmark's position internationally (Quoted in Davoudi et al., 2019, p.25).

Influential figures, such as Tony Blair, former British Prime Minister, criticised the European social model as outdated, and urged the EU leaders "to make a definitive stand in favour of market reform" (quoted in The Economist, 2000, p.17).

'New Regionalists' Legitimation

A major contributor to neoliberal legitimation of regional rescaling and its dominant economic imaginaries was the theoretical rationalisation by influential economic geographers who were implicitly promoting a Europe of the regions, as is shown in the following examples:

> As Europe becomes a unified market, with free movement of capital and labour, it will make less and less sense to think of the relations between its component nations in terms of the standard [national] paradigm of international trade. Instead the issues will be those of regional economics (Krugman, 1991, p.8).

> Competitors in many internationally successful industries, and often entire clusters of industries are often located in a single town or region within a nation (Porter, 1990, p.154).

According to Charles Taylor's definition, "imaginaries are not theories or doctrines per se, (but) they may start by discursive practices of theorists" (Davoudi, 2018a, p.102), and as these practices become embedded through citations and repetitions, they "generate more and more far reaching claims on political life" (Taylor, 2004, p.5). This is exactly what happened in the 1990s when neoliberal economic imaginaries of the region were promoted and legitimated by a distinct epistemic rationality called 'new regionalism' (a term first used by Keating, 1998 and Lovering, 1999). This orthodoxy was underpinned by three claims about: the primacy of economic agglomeration, the determining role of the so called institutional thickness, and the hollowing out of nation states. Together, they enacted the region as: "the agent of wealth creation", "the 'crucible' of economic development in post-Fordist era", and "the 'prime focus' for post-Keynesian governance and planning" (Davoudi and Brooks, forthcoming). Some commentators even predicted that by the 1990s we would "leave the Europe of competing nationalisms behind us", the nation state would break up and "a European federation of equal regions" would be created (Kearney, 1988, p.8 and 15).

These widely circulated 'new regionalist' ideas rationalised and essentialised the region as the optimal scalar fix of a neoliberal political economy and by so doing, they helped to ingrain 'the region' in the elites' imagination, as reflected in this statement by an EU official:

> The Europe of the regions is already a cultural reality and in the new European single market there will soon be an economic one. Why not turn it into a political reality too? (The Chef de Cabinet to the Regional Commissioner, cited in Harvie, 1994, p.59)

New regionalists also ignited a host of normatively charged claims not only about what a region was, but also about what it ought to be. Some regions were glorified: as 'success stories', as 'basic motors' of global economic growth, and as "the leading-edges of the contemporary post-Fordist economy" (Scott, 2001, p.818). Others were stigmatized as lagging behind, peripheral and beyond salvation. Idealized imaginaries such as these divide the world into Orient and Occident, Europe into core and periphery, and countries into north and south, or east and west. These dualities are mediated and performed through myriads of practices such as: cartographical demarcations of boundaries, colour coding and zoning, metaphorical significations (such as the European 'Blue banana' or 'Pentagon'), and calculations and classifications (such as the classification of regions under the EU's Cohesion Policy). They disseminate narratives of their own inevitability and become "self-fulfilling prophecies" (Watkins, 2015, p.513). Moreover, places that do not live up to these imaginaries no longer matter, as was bluntly suggested by Tim Leunig, a British economist. He told a conference full of Liverpudlians that Liverpool had no future; that

> if we really want to give people in Liverpool, Sunderland, and so on the opportunities that people in most parts of the south-east take for granted, we need to let many of them move to the south-east (Leunig, 2008).

Some people dismissed his remarks as laughable, but as others noted (Liverpool Echo, 2013) it was not a laughing matter at all. On the contrary, it was a terrifying glimpse of a neoliberal strategy for cutting back public spending in places that were considered to be beyond salvation.

'New regionalism' and experts' rationalisations, such as the above, helped to depoliticise the 'Europe of the regions' project by giving it scientific legitimacy but, it could not entirely eradicate the politics of rescaling and the political struggles for coalition building (Jessop, 2010), as is clearly evident in the reactions to the Europe of the regions project. The project has attracted a spectrum of proponents and opponents at all levels.

Proponents of a Europe of the Regions

Among the proponents are firstly, those who support regionalisation as a pathway to devolution of power and enhanced local democracy. They resonate with what Dente (1997) calls, 'cooperative federalists' who look for shared competencies and joint policy making in the EU multi-level governance system which does include nation states.

Secondly, there are the so called 'regional-nations', such as Scotland, Corsica, and Catalonia, with a strong sense of cultural identity and historical desire for self-determination and sovereignty. They support European regionalisation because it offers them a gateway to independence while lowering its costs, given that they continue to benefit from their association with a larger political collective. This is clearly reflected in a 2018 speech by the Catalan separatist leader who wants Catalan "to be a nation inside Europe with the tools of a nation" (Carles Puigdemont, quoted in euobserver, 2018). This view became even more explicit in the 2019 speech by Scotland's First Minister who stated that, "Norway is a shining example of how small, northern European nations which are independent have been able to use their powers, not simply to improve the lives of their citizens at home but to play a constructive part on the world stage" (Nicola Sturgeon, quoted in The Scotsman, 2020).

Regional nations epitomise Benedict Anderson's (1991) 'imagined communities' and demonstrate that, "a nation exists when a significant number of people imagine themselves to form a nation, or behave as if they have formed one" (Seton-Watson, 1977, p.5). Their socio-spatial imaginary not only brings their region into existence, it also shapes their own individual and social identity. They see themselves as an imagined regional community. A third group of supporters are what Dente (1997) calls 'competitive federalists'. This group includes, notably, the rich regions which are seeking a devolution of tax power and an enhancement of their own competitive advantages.

Opponents of a Europe of the Regions

Among the opponents of a Europe of the regions are firstly, the nation states which consider themselves as the losers of its changing power geometries. Secondly, there are the anti-EU parties which, over the last decade, have almost doubled their votes and significantly contributed to the deterioration of public opinions about the EU and distrust of its institutions (Dijkstra et al., 2018).

The biggest irony is that both the supporters and opponents are effectively undermining the Europe of the regions project; one inadvertently, the other deliberately. The opponents are inadvertently undermining the very project that they support because, their desire for independence is interpreted as the beginning of political instability and the dismantling of the EU economic integration which has always been a core political goal. As the euobserver (24/1/2018) put it, "fears of Balkanisation and more Brexits have killed off an earlier ideal of a Europe of the regions". The opponents are deliberately undermining not only a Europe of the regions, but also the whole idea of Europe and its political as well as economic integration.

Geographies of Discontent

There are many reasons for the contemporary rise in anti-EU sentiments but, one important factor, which is of utmost relevance to spatial planners, is the growing geography of discontent or, as Andres Rodrigues-Pose (2017) puts it, 'the revenge of the places that don't matter'. To understand this phenomenon, we need to look more closely at the neoliberal approach to inequalities and its reliance on the 'invisible hand of the market', rather than democratic development intervention. For Fredrick Hayek, a key intellectual architect of neoliberalism, the ideal solutions for tackling disparities was the self-organizing dynamic of the markets which he called a "theory of spontaneous order" (Hayek, 1969, p.97). It is this rationality that underpins Leunig's view, mentioned above, and also reflected in the following claims by the Economist journal (2013, p.15):

> Fairness is not the right measure by which to judge an urban policy. Scarce resources should go where they will generate the greatest returns. Trying to resist the agglomeration effects of big cities is not just a waste: it is actively harmful to Britain's economy. Better to do the opposite and encourage London and other successful cities to keep growing.

Neoliberalism dismisses fairness as a value, considers any intervention in agglomeration forces as a waste of resources, and suggests that the best we can do is to let the growing regions grow further until the market corrects the imbalances. But, the neoliberal obsession with agglomeration economies and its trickle down claims are not working. On the contrary, they have widened inequalities (Blanchet et al., 2019) and have led to some places being not simply 'left behind' – as Teresa May, former British Prime Minister, put it in the 2017 Conservative manifesto – but, actually kept behind. They are kept behind by decades of neglect and the failure of neoliberal economic policies to tackle persisting territorial inequalities.

The growing disparities have been a factor in the limited success of European regionalisation but not the only factor. There are equally important socio-cultural factors. So far, a Europe of the regions has remained an elite project, motivated primarily by economic imaginaries of the region and performed through technocratic practices which are not sufficient for creating imagined political communities. What has been missing are social and cultural practices (Paasi, 2001) that assign meanings to particular places; practices such as: cultural traditions, rituals, legends, languages, stories, and memories which can bind together heterogeneous and spatially dispersed people into imagined regional communities. While many such communities exist all over Europe, their spatial imaginaries do not always correspond with governments' or EU's constructed regions. An example of such a mismatch came to the fore at the height of regionalisation in the 1990s when the UK government tried to institutionalise the regional scale by using the official demarcation of the so called 'standard regions'. This led to strong oppositions in Cornwall which is an area in the south west region of England with a deep sense of Cornish identity. The following statement by the chair of the Cornish Constitutional Convention is a good indication of the mismatch between governments' and people' imaginaries of what and where the region is. He said:

> Before we go down the road of deciding what we want to do, we ought to ask ourselves what it is we mean by the term region. … Because we have a very strong sense of ourselves, our geography, our culture, and of our constitutional position in Britain… (quoted in Jones and MacLeod, 2004, p.443).

As I mentioned above, 'new regionalism' provided scientific legitimacy for the Europe of the regions but, in so doing, it replaced its traditional cultural principle of unity in diversity with a neoliberal economic principle of fragmented competition where the winners take all. So, in some ways, new regionalist rationality killed off the regionalisation project, whilst its prediction about 'the death of the nation state' proved to be greatly exaggerated (Anderson, 1995). On the contrary, nationalism, in various guises, is on the rise and if nation states have lost autonomy, this is not because their power has 'gone upwards' to the EU. It is because it has 'gone sideways' to multinational corporations, or as Strange (1994) puts it, it has 'gone nowhere' or just 'evaporated' given that political controls over multinational corporations has diminished substantially.

Concluding Remarks

Going back to the regionalisation project, it is important to note that even successful rescaling can only offer a temporary solution to the crises of capitalism. This means that the search for a new scalar fix and its constitutive scalar imaginaries continues; as does the tension between different rationalities for legitimating them. In the UK, for example, attentions have already moved away from the region to the city-region as the new article of faith for tackling the endemic crises of capitalism and growing spatial inequalities. Similarly, the search is also ongoing for the researchers who seek a better understanding of: how spatial imaginaries emerge, circulate and solidify; why certain imaginaries become dominant; what kinds of rationalities legitimise them; which political projects they serve; and crucially, what are the implications for justice, democracy and sustainability?

These are not 'blue sky' academic questions; they have profound practical implications because the way we imagine space and scale greatly influence the way we govern social relations and plan for the future. As Said (1994, p.7) argued, "the struggle over geography is not only about soldiers and cannons, but also about ideas, forms, images and imaginings". Adding to this insight, the struggle is also about planning policies and practices which are at once the progenitors, the mediums, and the outcomes of spatial imaginaries.

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SYSTEMATIC SHARING OF KNOWLEDGE OBTAINED IN PILOT PROJECTS IN SPATIAL PLANNING

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Abstract

Pilot projects are implemented to obtain results and knowledge that can be reused subsequently. In this paper, we address the question of the efficient and effective distribution of insights between pilot projects. We present detailed considerations on the structures which are required to share the results and knowledge obtained through evaluations of the stages of pilot projects. By establishing such structures, the reuse of existing knowledge is significantly simplified. A common structure for pilot projects allows for information sharing between equal stages of simultaneously running pilot projects. If the obtained knowledge of these individual stages is easily accessible, the need to review a comprehensive final project report is eliminated. For future pilot projects and large-scale projects, the costs associated with reusing existing knowledge is reduced and the cost-benefit ratio improves. We exemplify this by investigating systematic information sharing between equally structured pilot projects.

Keywords

Pilot projects, sharing of knowledge obtained in pilot projects, knowledge management, process management, project management

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1. Introduction

Spatial planning often has to deal with novel challenges where no experience or know-how pre-exists – either specific or general. In such scenarios, it is common scientific practice to create a model and test a hypothesis through it. Models reduce the complexity of reality and are simplified projections of the real systems or issues they help to understand. Simplification is characterised by illustration, reduction and pragmatism. If a developed model turns out to be too simplistic with respect to a specific aspect, it is usually refined. Afterwards, examination is repeated on the more elaborate model that, in turn, might reveal decisive weaknesses in a different aspect. Then, the process is repeated. After the model's accuracy is assessed positively and if obtained results are promising, real-world tests are conducted.

In spatial planning, however, this approach is usually destined to fail as the model cannot be refined to a level that allows for sufficient certainty. Spatial planning activities are always embedded in a socio-cultural environment. They involve many participants who are linked by complex structures. Neither the participants nor the structures can be captured appropriately in a simplifying model. Therefore, spatial planning implements pilot projects – small-scale, short-term real-world studies. They constitute the preferred instrument approach for novel challenges in spatial planning.

Pilot projects are an important research tool and an innovative working form in urban and regional planning in particular (van Buuren and Loorbach, 2009). For these planning activities, the objective is to obtain novel, individual (sub-) projects in a definite period of time that can be reproduced.

Pilot projects are a popular policy instrument, as they allow decision-makers and innovators to test new approaches under realistic conditions but with decreased or removed risk. Similar to several other areas, spatial planning faces various challenges which emerge from factors such as demographic change, climate change, globalisation, and digitalisation. Due to the novelty of these challenges, new approaches and solutions need to be developed in order to mitigate negative effects, to adapt to new circumstances, and to grasp opportunities that arise. The new approaches are elaborated and tested as well as being incrementally implemented in pilot projects. Pilot projects "are also popular with decision makers because they provide an elegant means of sliding out of a policy process" (Vreugdenhil, 2010, p.3).

Pilot projects are starting points for large-scale changes or policy innovations. Novel ideas can be implemented on a small scale as a preliminary practice. After a positive evaluation of the outputs, outcomes, and impacts, the novel ideas are often implemented in their entirety (van Buuren and Loorbach, 2009; Vreugdenhil, 2010). Additionally, pilot projects focus on innovations, enable the development of knowledge in policy impacts, encourage participation, and bring participants involved in the novel challenge together. In a collaborative learning process, the participants obtain innovative solutions for persistent problems in a specific area and gain experience in applying innovation and cooperating with other stakeholders. In this way, pilot projects contribute to overcoming existing yet insufficient patterns in spatial planning practice. Based on the encouragement of policy or societal discussions and changed behaviours, pilot projects allow to practice change and in this way to possibly change existing practices (van Buuren and Loorbach, 2009; Vreugdenhil, 2010).

Although pilot projects possess significant potential for developing new approaches to face novel challenges, their initiators, participants, and evaluators are often disappointed with the overall results obtained. In many cases, pilot projects continue to be a detached event that do not broadly implement the innovation as anticipated. Criticisms are that policy-makers are not open to learning, that funding for further studies is missing, that participants are going back to their usual business, and that numerous unresolved conflicts emerge during the term of pilot projects. Nevertheless, for some participants it could even be of interest to diffuse negative results or messages to help to exclude certain policy options. Reasons for this kind of diffusion are that the innovation could harm the participants' interests, or that relationships have worsened so much that a subsequent cooperation is no longer possible (Vreugdenhil, 2010).

Academic and/or private institutions scientifically monitor pilot (sub-) projects in order to identify generally valid results that highly qualify for reuse in other municipalities, regions or on a larger scale (Gilcher and Steinebach, 2018).

The importance of monitoring already indicates the significance of its result: project evaluations. In previous work, these evaluations were presented in final reports that focused on determining the following two aspects:

- Were the initial (sub-) project goals achieved?
- Are there results that can be reused on a larger scale?

However, our monitoring experience (Steinebach, Gilcher and Felz, 2018) revealed that this overall evaluation of entire pilot projects does not necessarily cause reuse of knowledge in subsequent (pilot) projects. The final report is often too large a unit to share knowledge efficiently. The comparison of existing final reports with an ongoing (pilot) project is associated with too much effort and thus the cost-benefit ratio becomes negative. Therefore, we established a common structure for pilot projects. This work introduces six stages which every pilot project should experience. The common structure reduces the cost of sharing knowledge. To that end, they aim to perform intermediate evaluations of projects at the end of each stage.

In this paper, we contribute detailed considerations of the structures that are required to efficiently and effectively share the knowledge which is obtained through these intermediate project evaluations.

Evaluation is necessary as it can contribute to better planning practice. It helps to justify individual projects and their results to citizens, politicians, researchers, and planners. Evaluation also promotes an effective planning dynamic, "in which suggestions for changes or reviews in planning products and processes are supported by the results of evaluation exercises" (Oliveira and Pinho, 2010, p.354). But most importantly, it enables the construction of planning practice based on a continuous learning process which contains sufficient mechanisms by enabling the permanent exchange of data between theory and practice (Oliveira and Pinho, 2010).

To obtain an effective evaluation, planning practice should be evaluated as a whole. Thus, the evaluation methodology should assess the different stages of a pilot project and also contain a continuous process of learning and diffusion with effective mechanisms facilitating the durable transfer of data between theory and practice. Furthermore, the planning process and the evaluation process have to be developed together from the start as both are cyclic processes. Therefore, a number of correlations between both should exist. In so doing, it is possible to provide a set of contributions and results that can be used in due time. It follows, that the evaluation has to comprise the whole life cycle of the project and that its processes have to involve ex ante, ongoing, and ex post dimensions (Oliveira and Pinho, 2010).

To learn from and ensure the applicability of evaluation results in planning practice, it is crucial that the results are presented in an understandable way to different audiences (Oliveira and Pinho, 2010). To achieve this, a model incorporating a systematic interaction between project participants as well as a central collection of knowledge is required. The collection of knowledge should be open to the public and freely available.

We show that structuring pilot projects into stages and systematically linking them to knowledge management activities is decisive for pilot projects' success in achieving an efficient and effective distribution of knowledge.

2. Background

2.1. Pilot Projects in German Spatial Planning

Experimental research in the form of pilot projects is particularly useful if current or future research questions cannot be adequately clarified in a different way. Furthermore, pilot projects may be initiated for urgent current challenges in order to develop transferable solutions for other regions or municipalities facing the same issues. They are specifically designed for such challenges and are evaluated with reference to them. In order to do so, a detailed appraisal is carried out to determine whether the originally defined objectives have been achieved and whether the results can be reused on a larger scale. Pilot projects differ from classic product- and result-oriented research assignments that primarily include a reflected conception and systematic preparation as well as evaluation of existing experiences and know-how. Pilot projects focus on the process-accompanying

analysis of research questions and objectives, implementation strategies as well as the realisation of measures. Thus, pilot projects are rather process- than product-oriented.

Within a single pilot project, various regions or municipalities carry out different (sub-) projects over a predefined period of time. The regions or municipalities interested in participating have to formally apply. Participants are selected by the initiator on the basis of different criteria. Thus, pilot projects are a competitive tool for spatial development. "The compelling application of the principle of competition ensures more innovation and a higher quality of the pilot projects" (Gatzweiler, 2006, p.689). However, the principle of competition and, in particular, its execution also possesses a negative aspect; it may lead to premature bidding regarding ambiguous conditions. Furthermore, there may be unsatisfactory selection procedures in the case of a limited number of participants, and a disproportion between work expenditure and income may emerge (Becker, 2010). Additionally, the success of pilot projects is not automatically guaranteed, but can be positively influenced by the selection of potentially innovative ideas of the applicants.

During the execution of a pilot project, obstacles may arise challenging the various stakeholders. Obstacles are, e.g., the involvement of external authorities, a lack of expertise in the subject area, or a too short preparation phase. The concept of a model municipality or region can fail during the course of a pilot project. For this reason, multiple municipalities or regions should participate in pilot projects to increase the probability of achieving successful results. In this way, the suitability of the acquired problem solution can be tested in practice (Einig, 2011). Another benefit of participation of as many model municipalities or regions as possible is the exchange and sharing of various experiences.

During the execution of a pilot project, exchange of experiences between the participants involved in the pilot project is organised and may include reporting upon the current progress of the given pilot project. In this way, the process orientation becomes evident. The selection of pilot projects aims to ensure a safe generalisability and transferability of the obtained results to other regions and municipalities with similar challenges (Steinebach, 1992; Gatzweiler and Runkel, 1997; Wiechmann, Mörl and Vock, 2012).

Academic or private institutions scientifically monitor pilot projects in order to identify generally valid results that show potential for general validity and thus reusability (Gilcher and Steinebach, 2018). The initiator finances the scientific monitoring. Continuous appraisal of activities implemented in the (sub-) projects is most important. Therefore, cooperation between the scientifically monitoring institution and executing local stakeholders is a priority task. Creation of an extensive network of individual (sub-) projects is another goal of this activity. In particular, regular briefings of all involved parties about the results of all projects in the research field are important as they ensure that an exchange of experiences takes place. Scientific monitoring also includes the preparation and transfer of the results of individual (sub-) projects to different target groups as well as the undertaking of networking with relevant national and European research activities. On the basis of the gathered experience, indications for the preservation or further development of the federal planning and housing policy frameworks of the Federal Republic of Germany are derived (BfLR, 1992). Academia takes a more important role compared to the established conception processes of the federal government and the federal states in Germany (Einig, 2011).

We identified a common structure for pilot projects to efficiently share knowledge: identification of a novel challenge, project initiation and public bidding, applications of potential participants, evaluation of applications by the initiator, execution, final evaluation (Gilcher and Steinebach, 2018).

The phases of a pilot project methodically follow the phases of project management: initiation and definition, planning, execution, and closure. The number of project phases and the formalism used for their implementation clearly depends on the nature, scope, risk and importance of the given project as well as the influence of the client (Kuster et al., 2015; Project Management Institute, 2017).

Each stage of a pilot project is now briefly described in order to provide the first contribution of this paper: a pilot project's lifecycle resembles the non-iterative waterfall model.

1. *(Identification of a new challenge)* The federal government or states apply pilot projects if a novel challenge of spatial planning is identified and its research questions cannot be answered in a different way. Such a challenge is characterised by its having a significant impact on spatial planning, e.g. demographic change, economic structural change, sustainable development, climate change and climate protection as well as environment protection. These challenges have several consequences at federal, federal state, regional and municipal levels, and solutions to them have to be found (Gilcher and Steinebach, 2018).

2. *(Project initiation and public bidding)* The application process consists of two stages. In the first stage, meaningful project outlines have to be submitted for each project proposal. The received project proposals are evaluated according to various criteria such as the quality of the approach, innovativeness, the qualification(s) of the partner(s), application potential, the applicability of the results for other German municipalities, and issues of transferability. The received and peer review-enabled project proposals are assessed according to the listed criteria, potentially with the help of external reviewers. Based on the reviews, the project ideas which are deemed appropriate for funding are selected. In the second stage of the application process, the promoter asks the applicants of positively evaluated project proposals to submit an official application for funding. In a final appraisal, it will be decided if the project is to be funded (Gilcher and Steinebach, 2018).

3. *(Applications of potential participants)* The public bidding of a pilot project attracts many applicants from various stakeholders that are intended to take part. Depending on the public bidding, it is possible that stakeholders may apply individually or in groups (Gilcher and Steinebach, 2018).

4. *(Evaluation of the applications by the initiator)* The initiator evaluates the received applications on the basis of various criteria. The most important is the innovativeness of the application's proposal in order to cope with the novel challenges researched in the project. The criteria also include if the municipality can serve as a comprehensive example (Gilcher and Steinebach, 2018).

5. *(Execution)* During the execution of the pilot project in the selected municipalities, research questions are examined and strategies as well as measures are implemented. To ensure the process-orientation, a collaboration of the participants, an exchange of experiences between collateral pilot projects, and a continuous communication of running pilot projects to an expert audience take place (Gilcher and Steinebach, 2018).

6. *(Final Evaluation)* A pilot project is completed with a final presentation and a final report written by the academic or private institution entrusted with the scientific monitoring. Furthermore, generally applicable criteria have to be identified and transferred to large-scale problem solutions (Gilcher and Steinebach, 2018).

These stages occur in a sequence and each stage is executed only once during the life of a pilot project. Thus, the lifecycle of a pilot project resembles a waterfall-model. The waterfall model was first defined by Winston Royce in 1970 in the context of software development (Royce, 1970). However, it is more generally applicable and its fundamental insights on sequential, non-iterative processes are transferable to other scientific disciplines such as the urban and regional planning context of this paper. The model takes its name from a waterfall because the progress is seen as flowing steadily downwards (like a waterfall) through the different stages (see Figure 1). The number of stages varies depending on the project, but there is a clear transition from one stage to the next once the previous stage is completed. Thus, requirements for the next stage are known before they are entered. Each stage has a predefined start and end point and proceeds in order without any overlapping. Originally, feedback to previous stages of the process could only be applied to the immediately preceding stage, yet, in spatial planning's pilot projects this is not the case. As this is a linear model, it is easy to implement and, as a result, many projects besides software development and spatial planning contexts follow this waterfall lifecycle model. A further benefit of the model is the minimal amount of resources that are required for its implementation as it is neither iterative nor possesses overlapping stages. For pilot projects, this also allows for different stages to be executed by different stakeholders as outlined in the brief descriptions above. However, these two properties also impose weaknesses. Foremost, the waterfall model is unsuitable for projects with many unpredictable factors that require more flexible adaptations. Furthermore, errors in early stages are often only visible at the end of a project – another fundamental similarity between pilot projects and the development of systems that we utilise for this contribution.

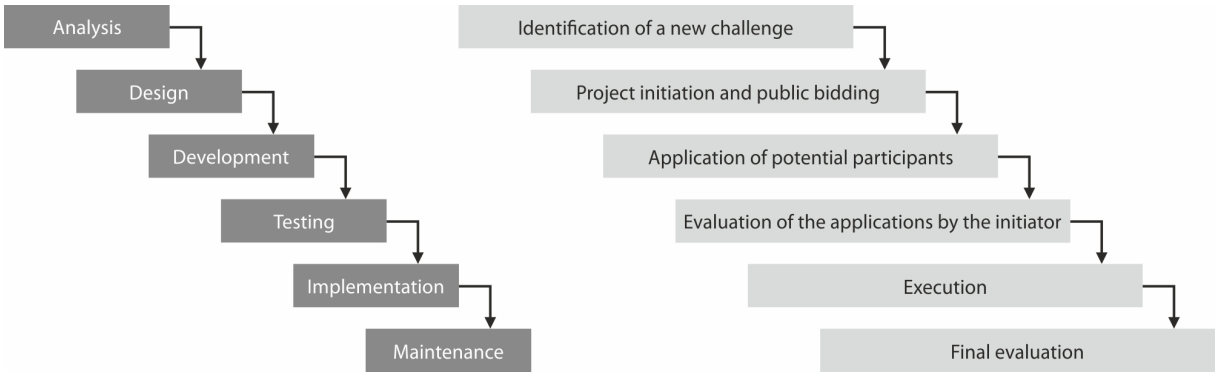

Figure 1 - Waterfall lifecycle model and stages of a pilot project
Source: Authors' illustration, based on Royce (1970).

2.2. Knowledge Management

The main aim of pilot projects is the reusability of previously obtained knowledge in future (pilot) projects as well as spatial planning practice and potentially even legislation. However, thus far existing knowledge has not been saved in a format or a central place that allows for efficient and effective sharing as the final report is too large and not application oriented to efficiently share knowledge. Comparison of existing final reports with an ongoing pilot project's setting is associated with too much effort. i.e., the cost-benefit ratio is negative. It follows, ceteris paribus, that the reutilisation of knowledge is not guaranteed. For this reason, we aim to develop a structure to store knowledge centrally which makes it more readily available. The established stages of a pilot project process are one part of the foundation needed to achieve this goal. In the following, we turn to the second part that is crucial in our context: knowledge management. It consists of three fundamental aspects:

- knowledge
- knowledge management
- the knowledge management process

We first define these and then contribute their integration into the waterfall lifecycle model of pilot projects in *Section 3*.

2.2.1. Knowledge

The hierarchical model comprises the differentiation of data, information, and knowledge (see Figure 2). These terms cannot be sharply distinguished from each other, as transitions between them are blurry. We distinguish these terms as follows:

Data are facts and figures that relay something specific. Data does not exist by itself, it depends on observation (Wilkesmann, 2004). However, they are unorganised, unprocessed and therefore provide no further meta information regarding patterns, context and so on. Thierauf (1999) defines data as "unstructured facts and figures that have the least impact on the typical manager". For data to become information, it must be contextualised, categorised, calculated and condensed (Davenport and Prusak, 2000). Information is data with relevance and purpose (Bali, Wickramasinghe and Lehaney, 2009).

Knowledge is the set know-how and skills that individuals use to solve problems. It includes theoretical insights as well as practical rules of daily life and instructions. Knowledge is based on data and information, but unlike these it is always bound to people. It is built by individuals and represents their expectations about cause and effect relationships (Probst, Raub and Romhardt, 2012).

Knowledge emerges when information is linked and turned into skills through application. It can be incorporated into individuals' actions (Mescheder and Sallach, 2012).

In addition to action orientation, the attachment of knowledge to individuals is of central importance. Knowledge emerges in processes of interaction and is connected with the context of creation. Therefore, it is not neutral, but influenced by interests.

The development process itself is multi-level. It starts with sensory experience and limited understanding. Individuals absorb aspects of reality (environment) through their senses and put them into a context. In these contexts, they recognise laws and generate an individual knowledge of relationships. Over the course of time, various mental models are built to sort and classify past experiences. The expression of the models depends on the intellectual abilities of individuals as well as the social and emotional influences that they are subjected to (Mescheder and Sallach, 2012).

Therefore, knowledge is more than the mere cognisance of a fact. Rather, it forms the basis for purposeful action and solving problems. Combined with experience of judgement and decision-making, this knowledge matures into personal competence. In this context, the bond to individuals becomes particularly clear as mental models as well as the ability to act and decide are bound to people. Beyond the realm of human beings, knowledge can only be partially mapped using objects from structured data and information. The bond to individuals means, in particular, that only small sections can be limitedly represented in the explication or externalisation of knowledge. Another important focus must be placed on the development of personal competence (Mescheder and Sallach, 2012).

Knowledge consists of skills, know-how, and understanding; each are linked to human experiences, insights, feelings, values, and intuitions. Furthermore, knowledge is the theoretical or practical understanding of a subject. It is an intangible asset, whose value is increased through use and sharing. Thus, it can only be assessed in retrospect. It is more complex than unvalued information and cannot be easily stored and processed due to the factors that define its value.

Figure 2 - Differentiation of Data, Information and Knowledge
Source: Authors' illustration.

Various kinds of knowledge can be differentiated from each other and may be designated by contrasting conceptual pairs. Examples include: tacit and explicit, demonstrative and intuitive, and individual and organisational. In the area of knowledge management, the categorisation into tacit and explicit knowledge is most significant. Tacit knowledge is defined as not publicly accessible individual knowledge that it is only accessible to a single organisation. In contrast, accessible knowledge is referred to as explicit knowledge (Bali, Wickramasinghe and Lehaney, 2009).

2.2.2. Knowledge in the Spatial Planning Process

Spatial planning studies differ from many other scientific disciplines as the close relation between theory and practice is their essential and characteristic feature. Scientific studies of spatial planning focus on specific experiences in practice and are therefore highly interwoven with societal networks in order to examine practices. This prioritisation brings more sophistication and intelligence in the scientific elaboration and analysis of spatial planning studies (Salet, 2014).

However, social practices are characterised by extreme ambiguity, complexity, and irrationalities. Therefore, planners have to deal with elusive as well as multi-interpretive aspects of social reality. Planning science cannot aim for presumed certainties of cognitive knowledge and should search for strategies to fundamentally deal with complexity and uncertainty (Salet, 2014).

Their direct engagement with practical experience lets spatial planners realise the multi-faceted nature of knowledge. Thus, in addition to the systematized knowledge, planning knowledge also incorporates other layers such as 'reflection', 'experience', 'emotions' and 'political rationality'. It is often observed that cognitive knowledge is not so practically relevant in the social processes of planning. Therefore, "planning sciences should be aware of investigating the impact of different sources and rationalities of planning knowledge" (Salet, 2014, p.296). Furthermore, spatial planners have learned to see planning processes as target-oriented, but also as open-minded and open-ended processes and to organise them as learning processes (Salet, 2014).

Due to the different properties and levels of knowledge, it is hard to discuss the main core of planning knowledge. As a consequence, a double valorisation of planning studies in practice and in science is necessary. This can happen in two ways: via the regular accountabilities of the scientific world or by those of professional practices. This may be a challenge as these two ways of valorisation are extremely different. According to different traditions and rationalities, different languages and different platforms of dissemination, the same output of research has to be valorised and disseminated. Practical validation of planning knowledge is generally based on networks of cooperation with professional practices and requires a specific language (Salet, 2014).

Whereas scientific research is validated internationally and interdisciplinary. The requirements of scientific validation are criticized as biased to certain scientific cultures and selective to anglicised dominancy (Salet, 2014). In this context, "it is argued that planning studies should define own disciplinary norms of combined practical and scientific accountability" (Salet, 2014, p.302). However, there is no other possibility than the double valorisation as the definition of own disciplinary norms is not compatible in the multi-disciplinary world of science (Salet, 2014).

Spatial planning studies should keep their practice-oriented mission as practical experiences are the main core of planning knowledge. At the same time, however, researchers must present this on the highest platforms of scientific validation (Salet, 2014).

These explanations show that knowledge is bound to people and that knowledge in spatial planning is gained, in particular, from practical experience. In the context of pilot projects in spatial planning, the obtained knowledge is often not shared publicly and is at most only accessible within a single pilot project. A cause of this circumstance could be the lack of an adequate model or framework. We show with our developed structure how knowledge can be transferred between participants of consecutive pilot projects.

2.2.3. Knowledge Management

Knowledge management tries to turn tacit knowledge into explicit knowledge and vice versa. Hence, we share this goal with knowledge management; it demands structured development, distribution, and the utilisation of knowledge. In current times, efficient and effective processes for implementing these management tasks are even more important as the volume of knowledge is not only increasing rapidly but also becoming obsolete faster. Furthermore, a stronger trend towards specialisation in professional environments requires adaptable and convertible knowledge. The resource knowledge should be used consciously to capitalise on it and

gain competitive advantage. In theory, the implementation of knowledge management promises multiple advantages that we also aim to achieve for pilot projects:

- less effort for seeking existing knowledge on a subject
- better application of existing knowledge
- more time for generating novel ideas and innovations as reliable foundations are reused
- better internal and external communication
- quicker project activities and better collaboration with partners by transparency of structured and current knowledge

The actively pursued tasks of knowledge management are expansion, utilisation, and the protection of knowledge in an organisational unit. These processes take place on a superior meta-level. In spatial planning these levels are nationwide, regional, municipal or – as in our forthcoming example of sharing between two consecutive pilot projects – project-based.

2.2.4. Knowledge Management Models

Over recent time, interest in learning and knowledge creation processes have grown. As a result, several theoretical models pretending to explain how knowledge is created and transferred have been developed. There are a number of different Knowledge Management models which cumulatively cover the various different perspectives of knowledge. In the following overview, the main models of knowledge management are described.

Knowledge Management Model by Nonaka and Takeuchi (1995)

An established example of a Knowledge Management model is the SECI model of knowledge dimensions originally developed by Nonaka in 1990 and later further refined by Takeuchi. It is a model of greater diffusion and has had a great impact in the academic world. It considers knowledge management as a knowledge creation process and presumes that knowledge consists of tacit and explicit elements. The model assumes that knowledge is created through the interaction between tacit and explicit knowledge. This allows the postulation of four different modes of knowledge creation (Nonaka and Takeuchi, 1995).

In this model, tacit knowledge (subjective) is defined as nonverbalised, intuitive and unarticulated. Knowledge of experience (body) is tacit, simultaneous knowledge (here and now) as well as analogue knowledge (practice) which tends to be tacit. Whereas explicit knowledge (objective) is articulated and can be specified in, for instance, writing, drawings, and computer programming. It encompasses knowledge of rationality (mind), sequential knowledge (there and then) and digital knowledge (theory). At the core of the theory is a description of the functionality of the model. It is based on the four dimensions of knowledge transformation which are the driving forces behind the knowledge creation process: Socialization, Externalization, Combination, and Internalization (Nonaka and Takeuchi, 1995).

The model assumes that tacit knowledge can be transferred into tacit knowledge through a process of Socialization, e.g., sharing tacit knowledge face-to-face or through experiences. Tacit knowledge can become explicit knowledge by formalising a body of knowledge or through a process of Externalization. Explicit knowledge can be directly transferred into explicit knowledge by combining various existing theories, known as Combination process. Internalization is the process of understanding and absorbing explicit knowledge into tacit knowledge undertaken by individuals (Nonaka and Takeuchi, 1995).

This knowledge management model presumes that knowledge transfer in organisations is simple and straightforward. However, knowledge transfer in organisations can be more complex. The individual modes of knowledge conversion may create knowledge independently from each other. However, the organisational knowledge creation processes only occur when all four modes are managed so that they interact dynamically (Nonaka and Takeuchi, 1995).

This highly iterative process constitutes a 'knowledge spiral' (see Figure 3) which occurs mainly through informal networks of relations in an organisation starting from the individual level, and then moving to the collective level before eventually to the organisational level. It creates a 'spiralling effect' of knowledge accumulation and growth which promotes organisation innovation and learning. In order to achieve organisational knowledge development, the knowledge has to be made accessible again through Socialization. As a result, the spiral restarts (Nonaka and Takeuchi, 1995).

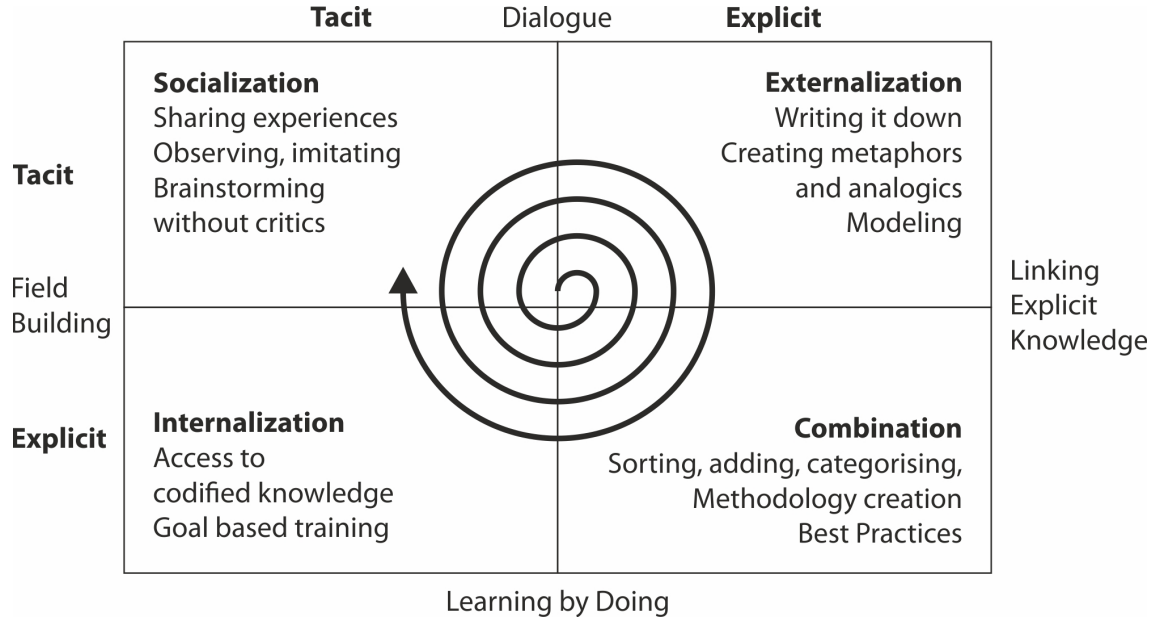

Figure 3 - Knowledge Spiral
Source: Authors' illustration, based on Nonaka and Takeuchi (1995).

The Boisot I-Space Knowledge Management Model (1998)

Another example of a knowledge category model is the approach taken by Boisot (1998). He added the extra dimension of 'abstraction' to the model of Nonaka and Takeuchi. Boisot's model asserts that knowledge can be generalised to different situations. Two main points are proposed

- That the more easily data can be structured and converted into information, the more diffusible it becomes.
- That the less that structured data requires a shared context for its diffusion, the more diffusible it becomes (Dalkir, 2011).

These propositions underpin a simple conceptual framework – the Information Space or the I-Space KM model. Data is structured and understood through the processes of codification and abstraction. The model can be visualised as a three-dimensional cube with dimensions for degree of codification, degree of abstraction and degree of diffusion (Dalkir, 2011).

Boisot suggests a *Social Learning Cycle (SLC)* using the I-Space to model the dynamic flow of knowledge through a series of six phases:

In the phase *Scanning*, insights are gained from generally available *(diffused)* data. The knowledge becomes *codified* in the *Problem-Solving phase* by giving it structure and the insights, coherence. The newly codified insights are generalised to a wide range of situations. Accordingly, in this phase knowledge becomes more and more *abstract*. Further, knowledge becomes *diffused* by sharing the insights with a target population in a codified and abstract form. In the phase of *Abstraction*, the newly codified insights are applied to a variety of situations which, in turn, produce new learning experiences. Overall, knowledge is absorbed, produces learnt behaviour, and becomes uncodified or tacit. In the last phase *(Impacting)*, abstract knowledge gets embedded in concrete practices such as artefacts, rules, or behaviour patterns (Dalkir, 2011).

The SLC-model (see Figure 4) links content, information, and knowledge management in an effective way. The dimension of codification is connected to categorisation and classification, the abstraction dimension is linked to knowledge creation, and the dimension of diffusion is connected to information access and transfer.

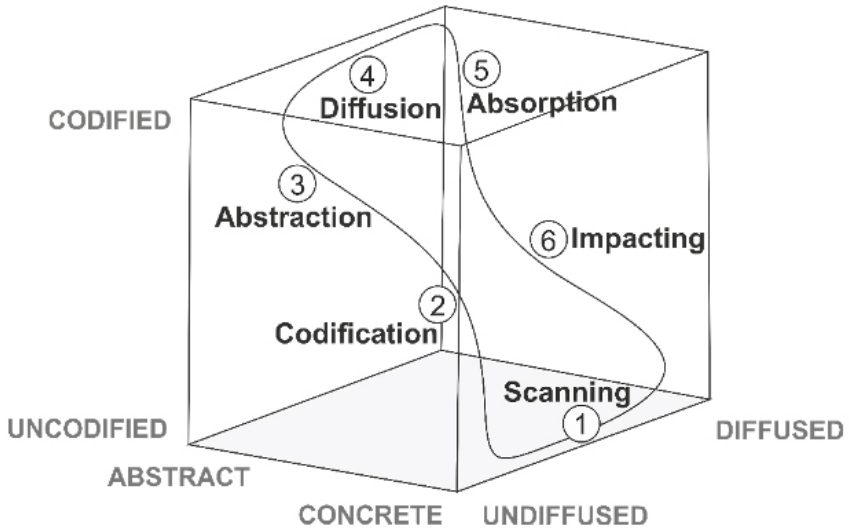

Figure 4 - I-Space Model
Source: Authors' illustration, based on Boisot (1998).

Tannenbaum and Alliger (2000)

Other authors define different stages representing the development of knowledge but do not enhance them iteratively.

Tannenbaum and Alliger (2000) claim that four major aspects of Knowledge Management jointly determine its effectiveness. They examined Knowledge Sharing, Knowledge Accessibility, Knowledge Assimilation, and Knowledge Application. Knowledge Sharing is defined as the scope to which people share their knowledge. The access of people to the information they need to make decisions, solve problems, perform job tasks and service customers is Knowledge Accessibility. The scope to which people learn or assimilate the knowledge they need to perform well is the definition of Knowledge Assimilation. Finally, Knowledge Application is the extent to which people apply or use knowledge to effectively make decisions, solve problems, and service customers. The last aspect (Knowledge Application) is of great significance for efficient knowledge management. However, each of the previously described aspects contributes to the application of knowledge (Ortiz Laverde, Baragaño and Sarriegui Dominguez, 2003).

McElroy (2003)

McElroy created a framework of Knowledge Management called 'The knowledge life cycle' (KLC) (see Figure 5). In comparison to the model of Nonaka and Takeuchi, it supposes that knowledge exits only after it has been produced. After this step, it can be captured, codified, and shared (McElroy, 2003).

McElroy split the Knowledge Creation Process into two processes Knowledge Production and Knowledge Integration (McElroy, 2003).

In the phase of Knowledge Production, knowledge must first be deemed worthy before proceeding further. This validation process results in the formal acceptance and adoption of new organisational knowledge. A claim must be formulated and evaluated by processes of individual and group learning as well as through information acquisition. If the claim is valid, the knowledge is codified and circulated throughout the organisation. Knowledge is discarded if the claim is declared invalid. The third possible result is that the claim

is uncertain. In this case, additional steps must be taken to further assess the usefulness of the content. This process is repeated until a decision can be made (McElroy, 2003).

The second phase of the model is Knowledge Integration and involves the sharing and dissemination of newly validated knowledge. Knowledge is held by individuals as well as by groups. In addition, this phase identifies whether the given knowledge will fulfil the given business' expectations or is incapable of so doing. A match results in reutilisation. If there is a mismatch, the individual and/or organisational behaviour will be adjusted. This, in turn, results in more learning. Nevertheless, it must be taken into account that these adjustments require "acts of willful transformation, both by the sponsor of the new [knowledge], as well as by the workforce that the changes affect" (McElroy, 2003, p.76).

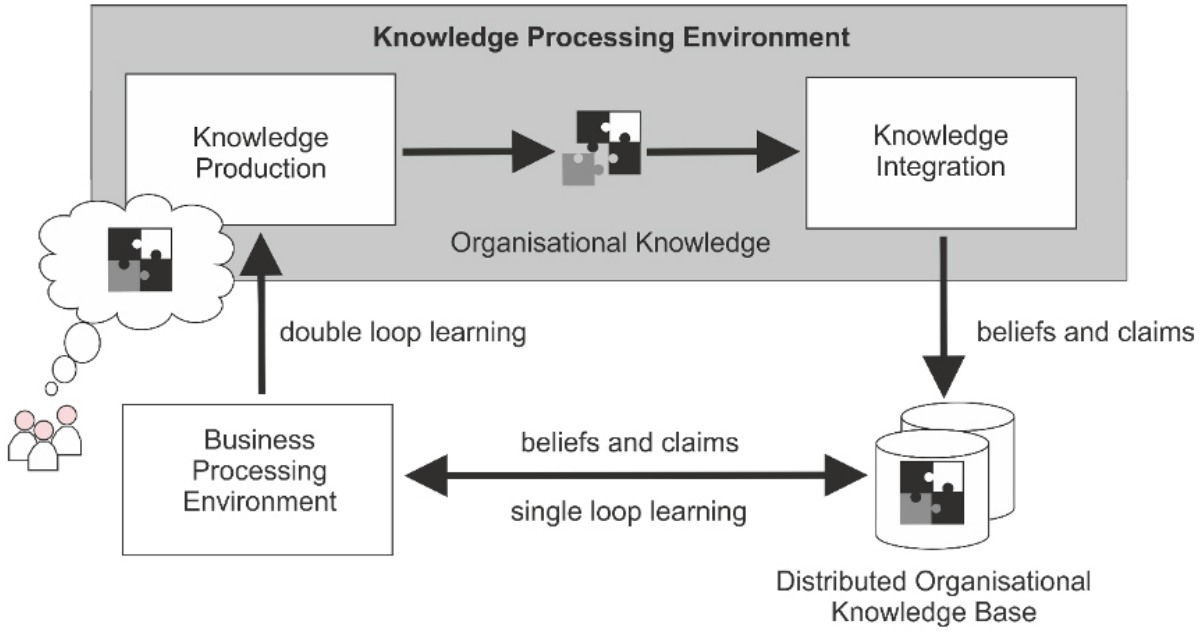

Figure 5 - Knowledge Life Cycle (KLC)
Source: Authors' illustration, based on McElroy (2003).

Skandia Intellectual Capital Value Scheme (1997)

Knowledge Knowledge management is also regarded as intellectual capital. The internationally operating Swedish insurance company Skandia developed an intellectual capital model of knowledge management as an approach for measuring its intellectual capital.

Intellectual capital consists of human capital and structural capital. Dimensions that "are left behind when staff has gone home" is the definition of structural capital. However, structural capital may be owned or shared from a shareholder's point of view. Human capital can only be rented and is not owned (Roos et al., 1997).

An initial model was developed to define different categories of intellectual capital. As shown in Figure 6, market value is divided into financial capital and intellectual capital. Intellectual capital encompasses human capital and structural capital. The latter covers customer capital and organisational capital, which can be subdivided into process capital and innovation capital. Moreover, a more detailed perspective was provided with a further division of organisational capital into two additional building blocks; process capital (intangible assets) and innovation capital (intellectual property) as a balancing item (Roos et al., 1997).

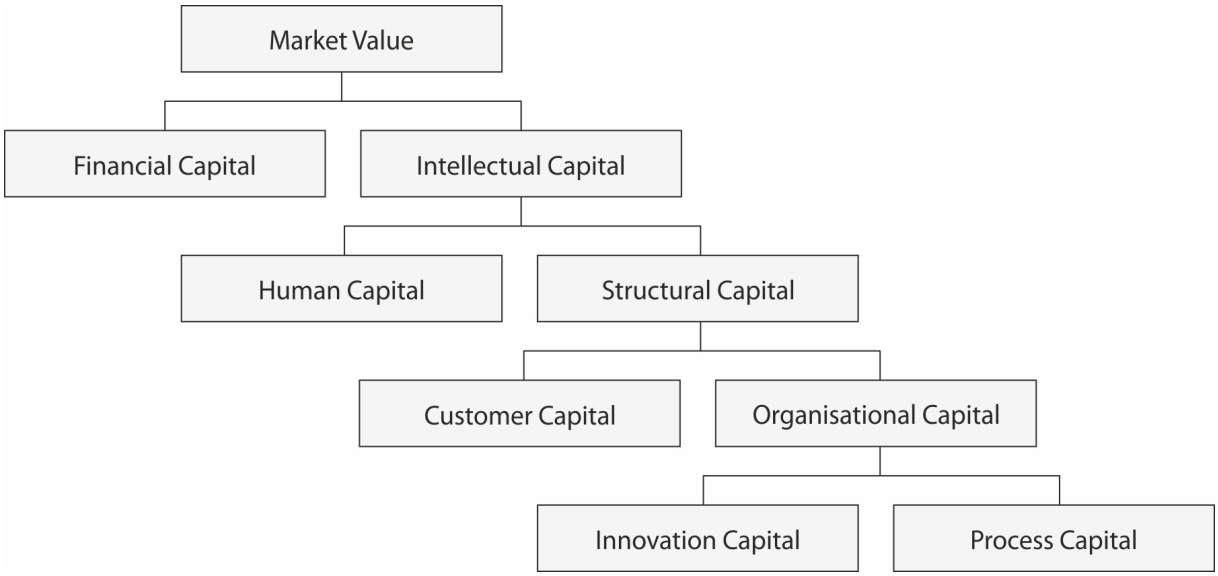

Figure 6: Skandia Model
Source: Authors' illustration, based on Roos et al. (1997).

The Skandia Intellectual capital Value Scheme strongly emphasises the measurement tasks associated with each of the divided elements of knowledge management. It presumes that it can be strictly controlled (Roos et al., 1997).

Probst, Raub and Romhardt (1998)

A more practical approach to managing knowledge is the building block model of Probst, Raub and Romhardt (1998). It was developed in close dialogue with practitioners and always kept the following criterion in mind: "How useful is the model in relation to a chosen question?" (Probst, 1998, p.18).

As in every planning and implementation process, four fundamental aspects have to be observed in knowledge management: purpose definition, situation analysis, deduction of measures based on a nominal-actual-comparison, and success monitoring. Note, that we can find these four aspects reflected in our six stages of a pilot project as well. Probst, Raub and Romhardt (2012) differentiated the four aspects in order to implement phases of knowledge management.

Their method of knowledge management includes eight building blocks, each representing activities directly related to knowledge. Their arrangement in the model follows specific principles. Six building blocks form the key process of knowledge management. Two blocks form an orienting and coordinating frame for this key process. The feedback cycle shows the importance of measuring the measurable variables to focus on goal-oriented interventions (Probst, 1998). Division of the key process of knowledge management is explained below as well as being depicted in Figure 7. In Section 3, we show the integration of a knowledge management model into pilot project's lifecycle.

(knowledge goals) The first step is the definition of knowledge goals. These outline which abilities should be established at which level. Normative (influencing the business culture), strategic (aim for future competence requirements) and operational (target on specific implementation) knowledge goals can be differentiated (Probst, 1998).

(knowledge identification) The identification of knowledge aims to obtain an overview of internal and external data, information and skills, before investing heavily in the development of new capabilities (Probst, 1998).

(knowledge acquisition) Knowledge acquisition refers to the acquisition of external knowledge holders or even the purchase of knowledge products such as software or patents. Important channels to acquire critical capabilities include knowledge held by other firms and people, stakeholder knowledge, experts, and knowledge products. In this way, the body of knowledge can be extended, existing knowledge gaps can be closed and the setup of future or current required competencies accelerated. Furthermore, it is important to realise whether an acquisition is an investment in the future or an investment in the present. Integrated knowledge management is involved in both areas and support their management with the right tools (Probst, 1998).

(knowledge development) Knowledge development is an additional phase to knowledge acquisition. The knowledge that cannot be covered by the acquisition has to be developed internally (Probst, 1998).

(knowledge sharing) Knowledge has to be divided and distributed in case it is supposed to be used consciously or even unconsciously. In order to make knowledge available and usable, the critical questions to be answered are: Who should know what, to what level of detail, and how can the organisation support these processes of knowledge distribution. Regardless of the circumstances, knowledge should never be distributed randomly. Groups or individuals should have access to exactly the knowledge relevant to their specific tasks (Probst, 1998).

(knowledge utilisation) Knowledge utilisation is the productive application of organisational knowledge. It is the purpose of knowledge management. Effective identification and distribution of critical knowledge does not, however, guarantee its regular use. Without consistent use, knowledge systems decay in quality, and initial investment is lost without generating sustained added value. Potential users of existing knowledge have to perceive the immediate advantages which result from changing their behaviour and 'adopting' the knowledge (Probst, 1998).

(knowledge preservation) To obtain valuable experiences, a process of selection has to be created and results have to be appropriately saved and updated thereafter. In order to avoid the loss of valuable expertise, processes of selecting valuable knowledge for preservation must be established to ensure its suitable storage and its regular incorporation into the knowledge base (Probst, 1998).

(knowledge evaluation) The evaluation and measurement of the achievement of knowledge goals is the focus of the last step and is the biggest challenge in the field of knowledge management. Knowledge and capabilities are very elusive and can rarely be tracked to a single influencing variable. In addition, the cost of knowledge measurement is often seen as too high or socially unacceptable. However, the evaluation of knowledge holds considerable potential to generate value (Probst, 1998).

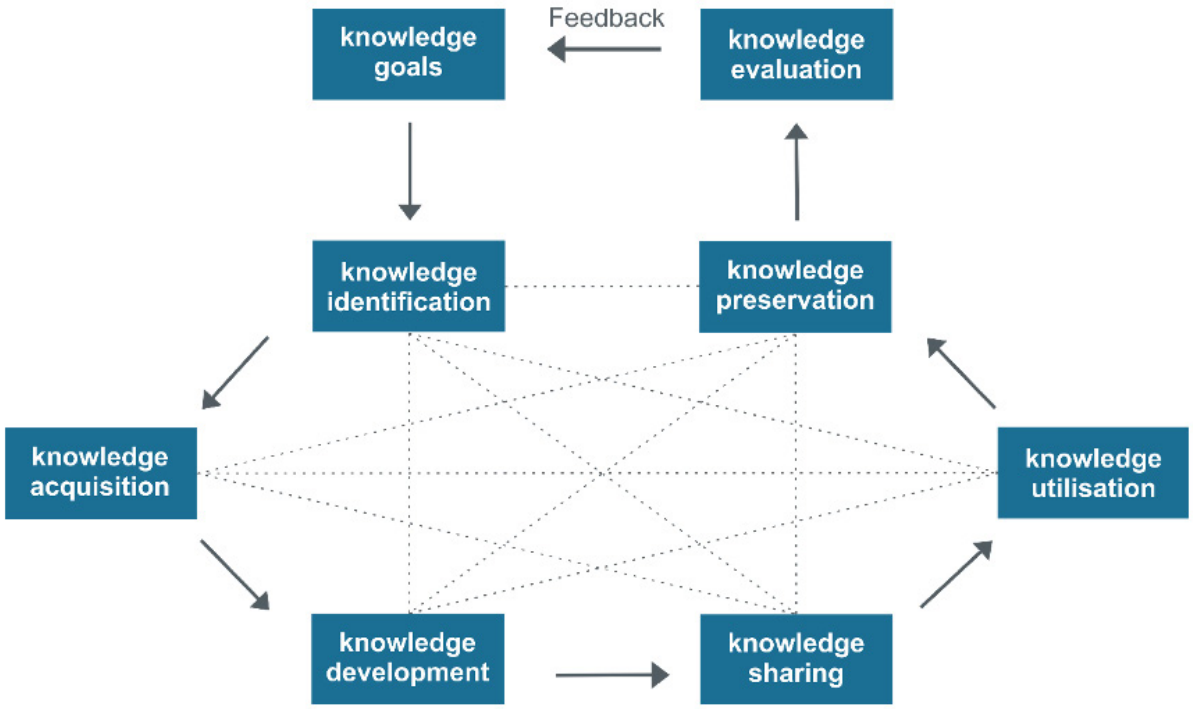

Figure 7 - Building Blocks of Knowledge Management
Source: Authors' illustration, based on Probst, Raub and Romhardt (2003).

The Knowledge Management Model as a Basis for Our Developed Structure

We have described different models of knowledge management. The basis of most models is a learning cycle that is influenced by framework conditions or hindered by learning barriers. There is no 'right' model of knowledge management. The different systems are the result of different cognitive interests and observer perspectives.

The framework of Probst, Romhardt and Raub emphasises the interdependence of the building blocks. The individual blocks correlate and interact. Thus, the activities of knowledge management should never be conducted in isolation from one another (Probst, 1998). This major advantage is very important for the development of our model.

Furthermore, their model is guided by a practice-oriented interest in understanding. It is a practical approach to improve organisational capabilities through the better use of the individual and collective knowledge resources of an organisation. As practical experience is the main core of planning knowledge, this is also an important point for the suitability of this knowledge management model. The definition of the building blocks of knowledge has further advantages: the knowledge management process is structured in logical phases, approaches for interventions are offered, and a proved framework for diagnosing the sources of knowledge problems is provided (Probst, 1998).

Based on these positive characteristics, we decided that this model was best suited for integration into the pilot project lifecycle.

It is suggested by Probst, Raub and Romhardt (2012) that these phases are processed in a circular flow, starting with the definition of the knowledge goals. The results of the knowledge evaluation are then fed back into the knowledge objectives. In a less idealised setting, the individual phases are strongly interconnected (see Figure 7), i.e. a multitude of different orders of these phases is possible. We will use this degree of freedom when we exemplify how to incorporate knowledge management into the phases of pilot projects. In particular, this is

necessary as the waterfall lifecycle modelnn is non-iterative. I.e. we cannot feed back into the objectives of the same project. Thus, we will focus our illustration on the sharing of knowledge between two consecutive pilot projects.

3. Structure to Efficiently Share Knowledge Obtained in Pilot Projects

The goal of our work is to provide a means to centrally store (preserve) and efficiently share knowledge obtained in a pilot project. To achieve this, we aim to create a novel structured approach, derived from the stages of pilot projects' common waterfall lifecycle and the phases of knowledge management. To that end, we also identify the parts of knowledge management that need to be transferred into a central, external and independent infrastructure. This infrastructure should be accessible to any pilot project. We start with an analysis of the management process that is targeted towards the requirements of pilot projects.

The definition of the knowledge management process by Probst, Raub and Romhardt has various strengths. It structures this management process into logical phases that can occur within the stages of a pilot project. Moreover, it offers approaches for interventions and it provides a proven search framework for the causes of so-called knowledge problems – two further features that can be used by pilot projects. At the same time, it is emphasised that the individual phases interact with each other and that phases of the process may not necessarily be considered in isolation. As pilot projects are non-iterative and have a definite end, we will investigate this last aspect in order to preserve knowledge beyond a pilot project's life. In this context, the planning principles and processual method in spatial development processes have to be the focus. Therefore, the stages of a pilot project are the guiding principle for the integration of the lifecycle of knowledge management.

Knowledge management is a cross-sectional task that undergoes all stages of a development process – in our context, this is the development and execution of a pilot project captured in the waterfall model. The organisational structure of the development process has to support activities that identify, share, and use, as well as preserve and evaluate relevant knowledge. In a pilot project, these tasks may be split between the different participants, depending on the current phase. For example, all the tasks need to be executed by the project initiator in stage 4 (Evaluation of the application by the initiator). Yet, in stage 5 (Execution), the scientific monitoring should be responsible for identification and evaluation and the pilot municipality should establish use of existing knowledge. We propose that preservation and sharing should be provided by a central, external and independent infrastructure.

To achieve this in an efficient and effective way, several aspects have to be considered. Identification of knowledge is currently the most time-consuming task. A structured and consequent approach to this challenge, pursued from the start, may extend the initial phase of the project implementation. Holistic approaches are necessary if knowledge is to be handled in a structured way. Punctual activities are not effective. The organisational structures – planning and project implementation processes – must allow a structured handling of knowledge. If knowledge and information are easily accessible for planning and project implementation, this potential drawback can be mitigated.

Until now, the elements of knowledge management were only deployed in the final stage of pilot projects when the given project's lifecycle reached its end, i.e. its unit of operation was the project's final evaluation report. It is the final evaluation report's purpose to identify, distribute and preserve the knowledge gained in the pilot project. This procedure was supposed to ensure that these have after-effects on planning practice and were transferred to municipalities that strongly resemble the pilot municipality. However, our observations of current pilot projects (Steinebach, Gilcher and Felz 2018) reveal that existing knowledge is not necessarily used effectively and efficiently. The comparison of the results in a previous pilot project's extensive evaluation report with the challenges of a given pilot project is equivalent to the identification of internal or external available knowledge, the most time-consuming knowledge management phase. Given that the definite duration of a pilot project causes time restrictions and that there is lack of automation to assist with this task, this phase cannot be executed exhaustively. Knowledge remains unrecognised and is often just taken into account later, e.g. in the final evaluation of the given pilot project.

Therefore, we propose that each stage of a pilot project should undergo its own individual knowledge management process. This is possible as the stages of a pilot project are strictly separated from each other and proceed in a singular direction of succession – i.e. we make use of the properties of the waterfall lifecycle model and the fact that each phase ends with an evaluation.

The advantage of our proposition is that only small parts of a pilot project's lifecycle have to be completed before the obtained knowledge can be stored and shared. When smaller units of a pilot project undergo the process of knowledge management, knowledge gained in a single stage can be collected, stored, and shared. These smaller units of information are also easier to compare and, thus, the knowledge identification, acquisition, and utilisation become less time-consuming tasks. It follows, that their potential to be reused in future pilot projects as well as further planning practices is improved as the cost-benefit ratio improves significantly. This also allows reuse of current insights as the pilot project providing them need not have already terminated.

The development of this structure, integrating the phases of a knowledge management process into the individual stages of a pilot project, is key to achieving this goal. Figure 8 illustrates the structure on the example of two consecutive pilot projects. Pilot Project 1 integrates parts of a knowledge management process (blue) into its project stages. Relevant phases to be executed are knowledge objectives, knowledge identification, knowledge acquisition (for the purpose of presentation this is assumed to be internal only), knowledge development, and knowledge evaluation. These phases have been rearranged to suit the pilot project's stage. Most importantly, the two phases of knowledge preservation and knowledge sharing have been moved into a novel sharing infrastructure that exists outside of, and thus independently from, the pilot project's lifecycle. It is supposed to persistently store the results of knowledge evaluation and potentially knowledge development, too. This central infrastructure should be used by all pilot projects for knowledge preservation and knowledge sharing. This is illustrated by the consecutive pilot project, Pilot Project 2. The latter has its own knowledge management process (green), and uses the central infrastructure. Most importantly, the knowledge utilisation for Pilot Project 2 should use the results from Pilot Project 1. Moreover, knowledge identification and acquisition can make use of the centrally available source for knowledge for this stage of a pilot project. This scheme repeats in every phase of the waterfall lifecycle (not depicted).

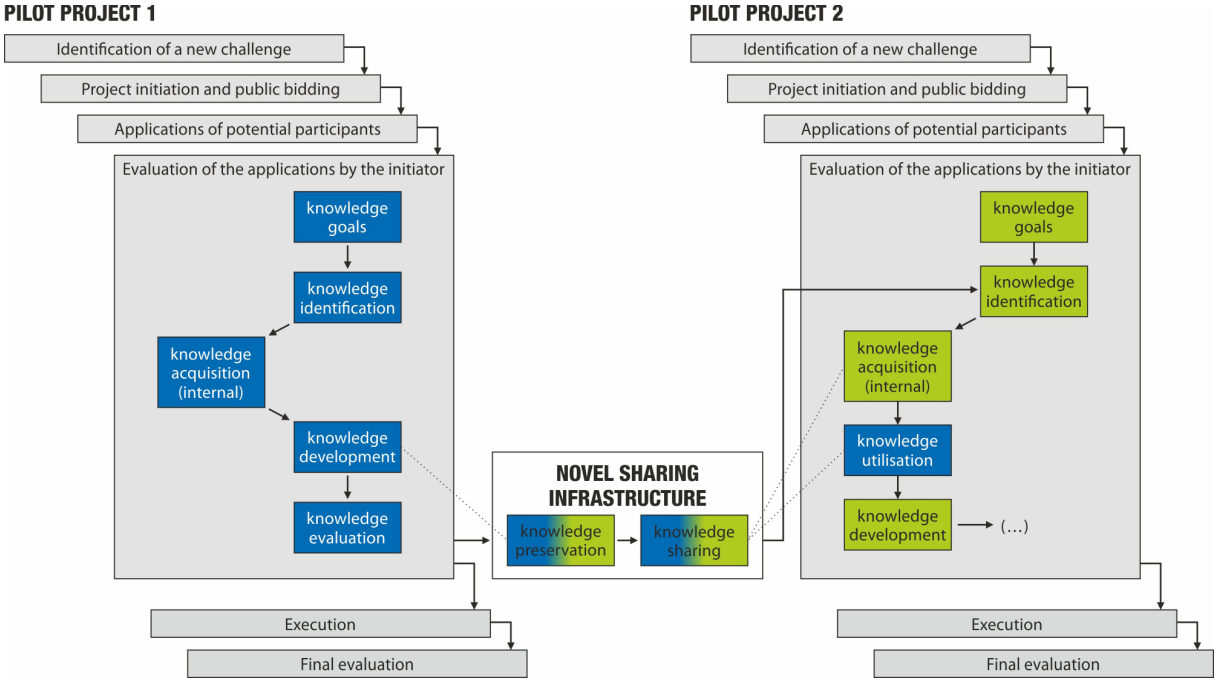

Figure 8 - Integration of knowledge management into the waterfall lifecycle of pilot projects
Source: Authors' illustration.

In knowledge management, learning processes can be identified as new knowledge, whilst skills (learning) is individually constructed. The individual understands new elements and links them with prior knowledge and awareness. Knowledge is created at four levels: individual, group, organisational, and inter-organisational (Barbat, Boigey and Jehan, 2011; Turner, Fünfgeld and Robertson, 2016).

Three models of learning can be differentiated. Single-loop learning is the adaptation to environmental changes through action. Double-loop learning causes a change in values with regard to the theory of use and strategies. Triple-loop learning highlights the possibility of 'learning about learning' or 'learning to learn' and learning lessons from experience. Thus, multi-loop learning means analysing lessons (failures as well as successes) and translating these into updated and more informed decisions in the future (Barbat, Boigey and Jehan, 2011; Turner, Fünfgeld and Robertson, 2016). In the context of these models, knowledge is created, retained and transferred within an organisation. In contrast, the preservation and sharing of knowledge as well as learning lessons from experience takes place between organisations. However, inter-organisational learning brings further complications, such as issues of knowledge consistency. At some stage of their adaptation process, most organisations develop formal training and capacity-building programs and tools to support staff (Turner, Fünfgeld and Robertson, 2016). Therefore, we developed a special framework for pilot projects just as organisations often develop special solutions for multi-loop learning.

4. Conclusion

In this paper, we identified the lifecycle of a pilot project to correspond to the waterfall lifecycle model of development projects. This categorisation of the proceedings of pilot projects allows for reuse of the known properties of a waterfall lifecycle. Most notable is the non-iterative nature of these projects that manifest in non-overlapping subsequent stages that do not incorporate feedback. As we aim for the efficient and effective sharing of knowledge, the latter property is very important. It contrasts to the fundamental feedback step of the knowledge management process we proposed to integrate into pilot project stages. To that end, we presented concepts to overcome this mismatch and to integrate knowledge management into the lifecycle of pilot projects. As mentioned, this integration repeats for every stage in order to reduce the unit of sharing from a comprehensive final project evaluation report to smaller pieces of information. This should reduce the effort of knowledge identification, acquisition and utilisation; i.e. it improves the cost-benefit ratio of these steps of knowledge management and makes them attractive for pilot projects. In this paper, we presented the required background and contributed a theoretical solution for the integration of knowledge management into pilot project stages. Moreover, we exemplified the knowledge preservation and sharing via a novel, external sharing infrastructure through an example of two consecutive pilot projects. In the future, we aim to investigate benefits of digitalisation and automatization as means by which to further simplify knowledge identification and acquisition. We plan to implement our concepts on a small scale and test it on data from pilot projects that we have previously monitored.

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AN INVESTIGATION INTO THE INFLUENCE OF LAND-USE, SOCIAL NETWORKS AND INFORMATION AND COMMUNICATION TECHNOLOGIES ON DESTINATION CHOICE FOR SOCIAL ACTIVITIES

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Abstract

Information and Communication Technologies (ICT) enable individuals to travel more flexibly. The choice of location for social activities has become very flexible. In addition to this, land-use characteristics also play a vital role in the location of social activities. This work aims to analyse the influence of land-use characteristics, ICT use, and social networks in the destination choices for face-to-face social activities of university students during both weekdays and weekends.

Students from the two different campuses of the Instituto Superior Técnico were presented with an online questionnaire, which was intended to collect information about their use of ICT and social networks, in addition to their travel characteristics and socio-demographics. Emphasis was made upon capturing the characteristics of social networks and ICT usage. Information on land-use characteristics was obtained from secondary sources.

Factor analysis was initially carried out to extract factors related to the use of ICT and social networks; these were later used to model the destination choice for social activities. The alternatives considered for destination choice included: home or the vicinity thereof, university or the vicinity thereof, other locations (further away from home and university), and evenly spread locations – having no specific priority for any of the other three locations considered. The analysis was performed separately for travel during weekdays and weekends so that an understanding of the differences and similarities in behaviour during these different time periods could be garnered. A multinomial logit model was estimated to model this choice. The results point to the relevance of land-use characteristics, the location of close friends, and modes of interaction. Individuals residing in more accessible central, and denser areas, were more likely to have activities distributed evenly across the city. These results stress the relevance of accessibility in allowing larger and more diverse spaces to be used for social activities.

Keywords

Destination choice, social travel, multinomial logit model, Information and Communication Technologies, social networks

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1. Introduction

Unlike other forms of travel, travel for social activities (hereafter referred to as social travel), is enriching, in that individuals become socially involved at their destination (Forrest, 1974). The differences that exist between social travel and other types of travel make it essential to understand all the factors that contribute to its existence. Factors influencing socialising and the generation of social travel can be significantly different from those which influence other forms and purposes. In addition to differences in spatial structure and function, social trips are discrete in nature and are conditioned by the availability of residual time as well as by the coupling of restrictions. These aspects make the study of social travel an important subject matter. Social travel improves social interactions that are critical to reducing social exclusion, segregation, and improving liveability, which in turn, is important for the formation of communities (van den Berg, Kemperman, and Timmermans, 2014). The importance of social travel is often underreported in literature.

Destination choice for social activities is often conditioned by the land-use characteristics, as there is a need for areas for social interactions (Handy, 1996). Advancements in Information and Communication Technologies (ICT) have led to the increased penetration of the smartphone into masses and the extensive use of social networking applications such as Facebook, WhatsApp, Instagram. Cumulatively, such processes have increased the potential to make travel, particularly social travel, more flexible. ICT can have substitution, complimentary, neutral or modification effects on travel decisions (Salomon, 2000; Mokhtarian and Salomon, 2002). In addition, technologies can have implications for long-distance social relationships and may increase social interactions (Axhausen, 2007). Their impact is, however, not restricted to frequency, as individuals can also make amendments to travel decisions during their travel. In other words, these advancements have changed travel itself, as predicted by Townsend (2000).

The nature of social interactions and geographical location influence the formation of social networks (Doreian and Conti, 2012). The reduction in travel costs facilitates the maintenance of larger social networks, and this impacts the interactions of their members and the locations known/visited (Axhausen, 2007). Along with the increasing popularity of social networking sites such as Facebook, and Instagram, individuals have created virtual social networks – which liberate individuals from barriers imposed by geography. Individuals are increasingly relying on these platforms to maintain social contacts (Wellman et al., 2001; Cheung, Chiu, and Lee 2011). Increased social contact may or may not eventually lead to participation in social activities and travel (Wellman et al., 2001; Carrasco and Miller, 2006). In this study, we aim to analyse the destination choices for the social activities of university students. Gaining insight into this subject matter may facilitate the better evaluation of transportation control policies, and provide better estimates for travel distances while improving accessibility to various facilities (Pozsgay and Bhat, 2001).

In addition to the factors discussed above, land-use characteristics also play a very important role in destination choices. The attractiveness of the destination area, defined by its land-use characteristics, has an influence on trip attraction (Thil and Horowitz, 1997; Kitamura, Chen, and Narayanan, 1998). Land-use characteristics, such as green spaces and public facilities, are critical to social interactions and the formation of social networks (Holland et al., 2007; Völker, Flap, and Lindenberg, 2007). Urban policymakers are urged to provide facilities that will improve harmony amongst different communities and bring individuals with different socio-economic characteristics together (Krellenberg, Welz, and Reyes-Päcke, 2014). To better plan for the provision of such facilities, it is important to study why people travel to destinations that possess certain land-use types.

The travel characteristics of university students have been only sparsely represented in existent literature, but are now increasingly gaining attention (Khattak et al., 2011; Whalen, Páez, and Carrasco, 2013). University students travel more compared to the general public (Khattak et al., 2011). However, they pursue fewer home-based social trips (Khattak et al., 2011; Volosin 2014). University students may also have a different temporal distribution of activities (Khattak et al., 2011). Differences in personal characteristics, work/university, and household obligations may contribute to this (Volosin, 2014). University students are also more open-minded and receptive to new ideas (Limanond, Butsingkorn, and Chermkhunthod, 2011), and therefore, can be used to evaluate the impact of new technologies on travel (Khattak et al., 2011). Furthermore, university students are often followed by others in society. Hence, understanding their behaviour could pave the way towards more sustainable travel (Zhou, 2012). We believe it is appropriate to analyse social activities within this group before extending the analysis to the larger population.

Bearing in mind the above-mentioned factors, this study has the following objectives:

- To analyse the influence of land-use characteristics, ICT use and social networks in destination choice for face-to-face social activities by students
- To analyse the similarities and dissimilarities in the factors governing destination choice for activities, pursued during weekdays and weekends by students

This research was carried out using data from 425 students belonging to the two geographically separate campuses of the Instituto Superior Técnico (IST) in Lisbon, collected using an online survey. Data pertaining to land-use characteristics were obtained from secondary sources. Considering the nominal nature of the destination choice, the multinomial logit model was used for estimation of the destination choice for face-to-face social activities during weekdays and weekends. This type of model and its extensions have been extensively used to model destination choices (Adler and Ben-Akiva, 1976; Bowman and Ben-Akiva, 2000).

The paper is divided into six sections. A summary of the literature is presented in the next section. The third section describes the data, and the fourth section discusses the methodology. The fifth section presents the analysis and estimation results. The sixth section presents a summarised discussion of the results and the most important findings from this research.

2. Literature Review

This literature review covers three different aspects relevant to the subject matter of this paper. First, it discusses social travel, then it provides a review of social networks and ICT and their influences on social activities. Finally, it focuses on destination choices for social activities and the differences that exist relative to other travel purposes.

2.1. Social Travel

Social networks generate social activities that eventually generate travel (van den Berg, Arentze, and Timmermans, 2013). Social activities often involve individuals from different households, and travel plays an important role in said social interactions. Analysis of social travel has often been neglected and the research emphasis of existent literature has mostly been on dimensions associated with mandatory activities, such as work and schools, and so on. Social travel involves interaction between geographical areas that are spatially separated, and highlights social interactions within a city (Stutz, 1973a). The timing of social travel is often defined by residual time (Arentze and Timmermans, 2008) and it is mostly distributed during evenings or weekends (Wheeler and Stutz, 1971; Arentze and Timmermans, 2008). Furthermore, social travel is influenced by previous and subsequent activities (Stutz, 1973b). These aspects differentiate social travel from travel for other purposes.

The mandatory nature of commuting obliges individuals to undertake activities irrespective of distance or to relocate to new locations if the costs for said activities are too high. For social travel, individuals have the flexibility to choose between pursuing and not pursuing social travel and hence, the propensity to do so declines as the distance increases (Stutz 1973a, 1973b; Greenbaum and Greenbaum, 1985). Furthermore, individuals participate based on the 'tie strength', i.e. the presence or involvement of relatives or members of their social network (not online social networks) or unrelated neighbours (Stutz 1973a, 1973b; Carrasco and Miller, 2006). In contrast to the findings for trip generation and recreational activities, low-income groups make more social trips (Wheeler and Stutz, 1971; Stutz, 1973b). Household composition, urban structure, familiarity with an area, an individual's social status, the travel time involved and the distance to destinations as well as the latter's spatial characteristics all have an influence on social travel (Wheeler and Stutz, 1971; Stutz, 1973a; Hanson, 1982).

2.2. Social Networks and ICT

Social context and opportunities for the development of networks are critical (Huckfeldt, 1983). Interactions within social networks are enriching, as they facilitate the exchange of information and thus influence travel

decisions and vice-versa (Arentze and Timmermans, 2008). The location of social activities depends on the location of the individual and the location of the social contacts, as the location must be convenient for everybody involved in the activity. Living in the same neighbourhood as one's social contacts reduces the need to travel for social interactions. However, more distant work locations result in individuals choosing locations far away from home for social interactions (Tilahun and Levinson, 2009).

Technological developments allow people to circumvent some of the difficulties associated with the distances that affect social travel. ICT aid the formation and maintenance of social networks and eventually influence travel decisions (Aguiléra, Guillot, and Rallet, 2012). A large network often leads to an increase in the use of ICT; however, the increased use of ICT does not necessarily result in a larger social network (van den Berg et al., 2013). Phone calls and messages, which are often preferred for short-distance communications, may substitute face-to-face meetings, facilitate organisation, and help in making amendments to activity locations and timings (Larsen, Axhausen, and Urry, 2006; van den Berg, Arentze, and Timmermans, 2012). These influences remain unchanged across different age groups and social temporal orders (Yuan, Raubal, and Liu, 2012). Emails travel further, and are preferred over other means of communication (Larsen et al., 2006; van den Berg et al., 2012). Emails facilitated changes to activity locations prior to the widespread popularity of smartphones (Lee-Gosselin and Miranda-Moreno, 2009). The internet facilitates the maintenance of large social networks by ensuring frequent communications, though the size of such networks decreases as distance increases (Mok and Wellman, 2007; Dijst, 2009). ICT fragments non-work trips and the nature of fragmentation may be spatial or temporal depending on the specific ICT device used (Ben-Elia et al., 2014). Mobile phones and computers enable individuals to accomplish some tasks without having to travel (Dal Fiore et al., 2014). Research by van den Berg and Timmermans (2014), Sharmeen (2015), van den Berg, Weijs-Perrée and Arentze (2016) has mostly focussed on the frequency of social activities. Destination choice is influenced by the characteristics of the social networks. Specifically, the location of the members of the social networks and the characteristics of the relationships with these members influence the choice (Carrasco, Miller, and Wellman, 2008). Recent advancements in the analysis of social networks have also been well described by Kim, Rasouli and Timmermans (2017).

2.3. Destination Choice

Destination choice has been the subject of considerable research in travel demand modelling. In the destination choice of usual work and school tours, destinations are assigned to already known work/school locations (Bradley, Bowman, and Griesenbeck, 2010). In destination choices for other activities, the socio-demographics of individuals, such as gender, age and race, play an important role (Hammadou et al., 2008; Auld and Mohammadian, 2011; van den Berg and Timmermans, 2014). Some of the household characteristics that influence destination choices, as reported by other researchers, include income, availability of vehicles, household type and household composition (Thil and Horowitz, 1997; Hammadou et al., 2008; van den Berg and Timmermans, 2014).

Travel characteristics, such as duration, travel cost, the mode used, travel distance and destination accessibility, are some of the other determinants of destination choices (Adler and Ben-Akiva, 1976; Koppelman and Hauser, 1978; Hammadou et al., 2008). Population, population density, land-use characteristics, such as the presence of commercial establishments, land-use type, accessibility, number of jobs, retail employment and other employment realities, also influence destination choice (Thil and Horowitz, 1997; Kitamura et al., 1998). The geographic context of the zone, specifically retail areas and non-retail areas, the attractiveness of the destination, the quality of experience offered and the interaction of zonal characteristics (such as frequency of bicycle lanes, restaurants, household population) with socio-demographics, also affect destination choices (Koppelman and Hauser, 1978; Pozsgay and Bhat, 2001; Eluru et al., 2010).

In addition to the aforementioned factors, destination choices for social activities are influenced by individual physical fitness levels, distance to various facilities, satisfaction with places of entertainment, meeting places and cultural facilities, working hours, school hours, the number of face-to-face interactions that have occurred in the past, the number of ICT contacts in the past, and the frequency of contact with neighbours (van den Berg et al., 2014). The propensity for social interactions has been observed to be high in dense urban centres (Farber et al., 2014). Furthermore, the destination choice for social activities may differ during weekdays and weekends.

3. Data Description

The questionnaire is available online (https://tinyurl.com/Social-Networks-Questionnaire) and a detailed description of the survey methodology can be found in de Abreu e Silva, de Oña, and Gasparovic (2017). After removing records with inconsistencies, the resulting data contained observations from 425 students and the analysis and statistics presented below were limited to this sample.

In contrast to the common practice of using a single-day activity diary, information on the destination choices for social activities during the previous week was collected separately during weekdays and at weekends. This helped to eliminate any potential misrepresentation associated with the use of a single-day activity diary, particularly for social travel. As social travel is not undertaken on a daily basis, the use of single-day activity diary could result in the under-representation of social travel. The dependent variable has four alternatives, defined as the most frequent destination for individual respondent's social activities during weekdays and weekends:

- Home or the vicinity thereof, defined as an area equivalent to 10 mins walking or 800 metres radius centred on the respondent's residence
- University or the vicinity thereof, defined as an area equivalent to 10 mins walking or 800 metres radius centred on the university
- Other locations, farther away from both home and university
- Evenly spread, having no specific priority for any of the three locations considered in this research (base alternative for the analysis).

Figure 1 shows that, during weekdays, social activities were mainly concentrated around university campuses. The significantly low percentage of social activities near residences during weekdays could be an indication of the composition of the social networks of the respondents. However, during weekends, social activities tended to take place away from both residences and the university. This could be because Lisbon's nightlife establishments are located at distances far from both IST campuses as well as from the main residential areas of the city and metropolitan area.

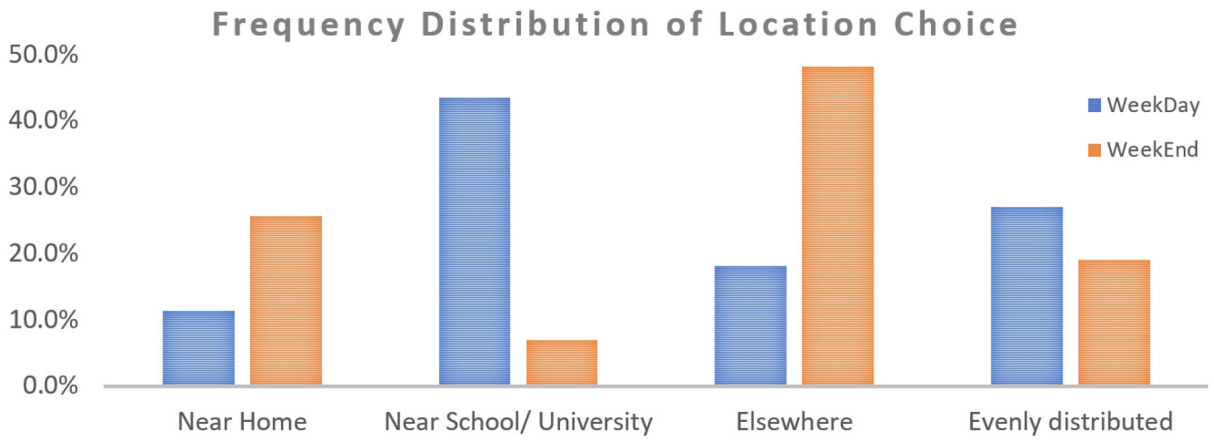

Figure 1 - Frequency Distribution of Location Choice

In addition to the socio-demographic characteristics of students, the dataset contains information on the use of ICT and social media (the number of social media contacts), social networks characteristics (such as size, transitivity and propinquity) and social travel (frequency and approximate destination). The survey collected information on the postal codes of the respondents' places of residence, with the land-use data obtained from secondary sources being assigned to the respondents in the dataset. The study did not register the exact location of the destination choices for all the social activities.

The socio-demographic characteristics of the respondents are presented in Table 1. Each of the statistics generated as part of the study was evaluated separately for each of the two IST campuses. As the statistics were

essentially similar for the two campuses, the values for the overall population are presented. Almost 90 percent of the students responding to the survey belonged to the Alameda campus. The majority of the students were aged between 20 and 25. As expected, very few students were older than 35. The dataset has a slightly higher representation (55%) of male students and master's students than both doctoral and undergraduate students. During the week, public transport was the most preferred transport mode (35% of students), while cars were the most preferred mode during weekends. Most students had less than the minimum wage at their disposal for their monthly expenses.

Table 1: Socio-demographic Characteristics of the Respondents

VARIABLE		OVERALL (%)
Campus	Alameda	89.18
	Tagus Park	10.82
Age is younger than 20		15.06
Age is between 20 and 24		55.53
Age is between 25 and 35		24.47
Age is older than 35		4.94
Percentage of male students		56.47
Role at university	Bachelor's student	33.97
	Master's student	56.22
	Doctoral student	9.81
During weekdays, the most preferred mode for social activities in the previous week	Car	25.53
	Public transport	34.59
	Bike	8.71
	Walk	23.06
During weekends, the most preferred mode for social activities in the previous week	Car	37.88
	Public transport	17.41
	Bike	7.53
	Walk	18.12
Money available for monthly expenses	Less than or equal to minimum wage (€557*)	66.59
	Between minimum wage and twice minimum wage	12.47
	More than twice the minimum wage	6.12
	Don't know or no response	14.82

* Minimum wage in Portugal in 2017

Table 2 presents the use and characteristics of the respondents' ICT devices. Most of the students used social networking sites every day, on weekdays (70%) and at the weekends (60%). Only 20 percent of students contacted acquaintances daily. A significant proportion of students used chatting/video calls as a substitute for face-to-face interactions or for maintaining contact with people living far away. The results also show that a fair number of students used chat or video calls to maintain networks that involve close friends/acquaintances/family members.

Table 2: ICT Use and Characteristics

VARIABLE		OVERALL (%)
Uses social networking sites on a daily basis, on weekdays		71.11
Uses social networking sites on a daily basis, at weekends		60.00
Contacts acquaintances daily		20.00
Engaged in chatting/video calls to keep in contact with friends/ acquaintances	Never	23.29
	Sometimes	43.76
	Around half of the times	11.76
	The majority of times	14.35
	Every time or almost all times	6.82
Engaged in chatting/video calls to keep in contact with family members	Never	36.47
	Sometimes	34.35
	Around half of the times	9.41
	The majority of times	10.59
	Every time or almost all times	9.18
Chat/video call because a face-to-face meeting was not possible	Never	31.76
	Sometimes	30.82
	Around half of the times	10.35
	The majority of times	11.53
	Every time or almost all times	15.53
Chat/video call with people living far away	Never	23.06
	Sometimes	31.29
	Around half of the times	9.41
	The majority of times	16.94
	Every time or almost all times	19.29

Table 3 presents the social network characteristics. The size and location of the networks, as well as the interactions that occur within them, are discussed. The average number of close friends, other than family members, was 8.72. The number of acquaintances, other than family members, was 14.99. Intimate friends of nearly 40 percent of respondents lived in the same municipality, but not in the same neighbourhood. Similarly, acquaintances of nearly 35 percent of respondents lived in the same municipality. This indicates that distance may play an important role in the formation and maintenance of a close network of friends. Roughly 90 percent of individuals had face-to-face meetings for social activities during weekends and on weekdays.

Table 3: Social Network and Characteristics

VARIABLE		OVERALL (%)
Number of close friends, other than family members		8.72
Number of acquaintances, other than family members		14.99
Where do your friends live?	Close friends live nearby	24.90
	Close friends live in my city/municipality but not nearby	40.16
	Acquaintances/not so close friends live in my city/municipality	34.94
Frequency of face-to-face social activities, involving friends or acquaintances (during weekends)	No travel	10.12
	Undertakes 1 or more social activities during weekends	89.88
Frequency of face-to-face social activities, involving friends or acquaintances (on weekdays)	No travel	11.11
	Undertakes 1 or more social activities during weekdays	88.89

A review of the literature indicates that land-use characteristics influence destination choices for social activities. Accordingly, we collected data on the characteristics of the students' two main spatial anchors (residence area and campus area); these were also part of the choice set of locations for social activities. A summary of the statistics related to land-use characteristics near to respondents' homes and the university is presented in Table 4. The average values indicate that most areas are urbanised and have a higher percentage of access to

bus transport. Most areas are, however, not easily accessible by motorways or heavy transit (mainly rail and ferries). The average distance to the Central Business District (CBD) and to the university from the homes of respondents was around 8 km.

Table 4: Land-Use Characteristics Near Home and University

VARIABLE	MINIMUM	MAXIMUM	AVERAGE	STD. DEV.
Percentage of urban area (residence area)	1.962	100.000	81.842	25.981
Compactness index (residence area)	1.143	16.852	1.954	1.558
Density of population (residence area)	11.178	422.121	150.144	106.030
Mixed land-use (residence area)	0.124	9.772	0.820	0.896
Percentage of residents 400 m away from a bus stop (residence area)	0.224	100.000	76.771	26.462
Percentage of residents 400 m away from a heavy transit station (residence area)	0.000	100.000	27.949	27.865
Percentage of residents 1000 m away from a motorway node (residence area)	0.000	100.000	38.565	33.165
Distance to CBD (m) from home	290.187	37089.419	8519.567	7352.909
Percentage of urban area (university area)	54.849	100.000	95.208	13.907
Distance to university from home	495.070	36959.850	8214.831	7535.717

4. Methodology

This study pursues two objectives. The first is to identify the role of land-use patterns, social networks and ICT in the destination choices of students for social activities. With this goal in mind, several variables depicting these characteristics were included in the model specification. Destinations are relative to an individual's main spatial anchors, i.e., residence and university. Considering the nominal nature of the dependent variable, a Multinomial Logit (MNL) model was used for the estimation.

The second objective is the identification of the similarities and dissimilarities in destination choices between weekdays and weekends. The difference in social travel characteristics on weekdays and at the weekends has already been discussed in Section 2. The frequency distribution in Figure 1 indicates significant differences in the destinations chosen for social activities during the week and at weekends. This difference may be due to differences in the characteristics of the individual respondents, land-use, ICT use, and social networks, or it could be dependent on residual time (not addressed in our study). The estimation results are expected to provide insight into this.

5. Model Estimation and Discussion of Results

The definition and distribution of the dependent variable have been discussed above in Section 3. MNL, a trusted estimation technique in travel demand analysis, was used for estimation of the destination choice model. The model is based on the principle of utility maximisation. Its simplicity of use, estimation, and interpretation has significantly contributed to making this one of the most popular discrete choice models. The principle, theory and practice of model estimation have been comprehensively characterised in Ben-Akiva and Lerman (1985) and Koppelman and Bhat (2006).

Table 5: Estimation Results of Factor Analysis

VARIABLE	FACTOR_1	FACTOR_2
KMO Statistic	0.736	
Name of factor	F_Chat_Call_Expe_Far	
Engages in chatting/video calls to keep in contact with friends/acquaintances	0.695	
Engages in chatting/video calls to keep in contact with family members	0.719	
Chat/video call because face to face meeting was not possible	0.841	
Chat/video call with people living far away	0.860	
KMO Statistic	0.837	
Name of factor	F_Cent_Urb_Comp_Bus	F_Den_Mix_HT
Percentage of urban area (residence area)	0.934	
Compactness Index (residence area)	-0.745	
Density (residence area)	0.459	0.812
Mixed land-use (residence area)		0.747
Percentage of access to bus (residence area)	0.859	0.329
Percentage of access to heavy transit (residence area)	0.488	0.730
Percentage of access to motorways (residence area)	0.457	-0.727
Distance to CBD (m) from home	-0.865	-0.346

Various aspects related to the use of ICT and social media were covered in the questionnaire. For better estimation and to ensure parsimony, principal component analysis using varimax was used to construct the factors and thus reduce the number of variables tested in the models. This also minimised potential collinearity problems. Varimax maximises the sum of the variances of the squared loadings (Kaiser, 1958). The resulting factors were tested for their meaningful representation, communalities and their Kaiser-Meyer-Olkin measure (KMO). The factors were later attached to the original dataset, for inclusion in the model. Estimation results, along with the factor loadings, are presented in Table 5. The factor named "using chat and calls when social contacts were at a significant distance, or communication was expensive (F_Chat_Call_Expe_Far)", captures the role of video calls/chats in the maintenance of social networks. Particularly when face-to-face communication is expensive or difficult, this acts as a substitute for face-to-face interactions. The factor, "living in a central, compact area accessible by bus (F_Cent_Urb_Comp_Bus)" represents respondents living in central, highly urbanised and compact areas with high accessibility to bus transport. The factor "living in a dense and mixed area, with good accessibility by heavy transit (F_Den_Mix_HT)" represents individuals living in dense and mixed areas highly accessible by heavy transit.

The models obtained were evaluated based on goodness-of-fit measures, nature, magnitude and the statistical significance of the estimated coefficients. The estimation results are tabulated in Table 6. It should be mentioned that the goodness-of-fit measures for the two models are reasonable. From an initial log-likelihood value of -589.175, the model for weekday travel, improved to a value of -497.627 (ρ^2 value of 0.155) and the model for weekend travel improved to a value of -484.561 (ρ^2 value of 0.178). In the case of the model for weekends, the market shares model itself appeared to be a good predictor and the improvement over this model was nominal.

Table 6: Estimation Results for the Destination Choice Model

	WEEKDAY	WEEKEND
VARIABLE	**COEFF**	**COEFF**
Near Home		
Constant		1.15***
Master's student	-0.56*	
Number of close friends, other than family members	-0.22***	
F_Chat_Call_Expe_Far	-0.39**	
F_Cent_Urb_Comp_Bus		-0.28**
Age is between 20 and 24		-0.82***
Close friends living in my city/ municipality but not nearby		-0.55**
Undertakes 1 or more social activities during weekends		-0.73**
Disposable income for monthly expenses is less than or equal to minimum wage		0.75**
Near School		
Constant	1.10***	
Age is between 20 and 24		-0.85**
Age is between 25 and 35	-1.00***	-0.95*
Age is more than 35	-1.47*	
Uses social networking sites on a daily basis, during weekdays		-0.73*
F_Cent_Urb_Comp_Bus	-0.36***	
F_Den_Mix_HT	-0.74***	
Percentage of urban area near university/distance to university	1475.81***	
Master's student	-0.45**	
On weekdays, the most preferred mode for social travel was the car	-0.65**	
Number of acquaintances, other than family members	-0.12*	
Elsewhere		
Constant		1.04***
Age is between 20 and 24		-0.71**
Age is more than 35	0.90***	
Disposable income for monthly expenses is less than or equal to minimum wage		0.50*
Contacts acquaintances daily	-1.26***	
Goodness-of-fit measures		
Initial loglikelihood	-589.175	-589.175
Loglikelihood (constants only)	-537.345	-502.115
Loglikelihood (final)	-497.627	-484.561
Rho-squared value (w.r.t. constants)	0.074	0.035
Rho-squared value (w.r.t. initial)	0.155	0.178
Note: ***, **, * ==> Significance at 1%, 5%, 10% level.		

5.1. Weekdays

The socio-demographic characteristics of individuals play important roles in their travel decisions. Students above the age of 25 are more likely to perform social activities at destinations away from the university or their place of residence. Individuals pursuing master's degree are less likely to pursue activities near home or the university. Individuals commuting by car are more likely to have their destinations for social activities evenly distributed across the city. Increased mobility through having greater access to a car could be a contributing factor in this. Land-use characteristics near individual residences and the university play a very important role

in the choice of destinations for social activities. Improvements to land-use factors near individual residences are likely to result in social activities being more evenly distributed across the city. Students with residences in central, highly urbanised and compact zones with good accessibility to bus transport are less inclined to undertake social activities near the university. The same is the case for students from dense and mixed areas that are highly accessible by heavy transit. For them, there may not exist a clear preference for locations and there may be an even distribution of activities across the city. Students enrolled in the urban campus and living close to it are more likely to choose areas close to the campus for their social activities.

Social networks' characteristics are a strong driver of destination choices for social activities. The size of a social network, the location of its members, and the modes of communication that the network members use are all likely to influence destination choices. Individuals with a large number of close friends are more likely to have their destinations evenly distributed across the city. This is because individuals may have to undertake activities across the city to maintain social interactions. The same is true for individuals with a large number of acquaintances. Individuals contacting acquaintances daily are likely to maintain a good social network and this may result in an even distribution of activities across the city. Similarly, individuals using video calls or chats for the maintenance of their social networks, specifically with people with whom face-to-face contact is either not possible or difficult, are also likely to distribute activities across the city. They may also be using activities as a substitute for face-to-face interactions or for communication with individuals who are based further away.

5.2. Weekend

As mentioned earlier, there is a difference in destination choices between weekdays and weekends. Individuals aged between 20 and 35 are less likely to choose destinations near their residences or the university. They are more likely to have their social activities evenly distributed across the city. Students with a disposable income of less than or equal to the minimum wage are more likely to choose locations close to their individual residence – this is probably because of the desire to save the expense that would be incurred by travel. They may also choose affordable destinations for their social activities, which may be away from their home or residence. Individuals living in central, highly urbanised and compact areas with high accessibility to bus transport are more likely to have most of their activities distributed evenly across the city, possibly due to the higher accessibility of their residential areas. Since the university is closed during weekends, the land-use characteristics near the university are irrelevant in the destination choice for social activities at weekends.

The characteristics of the social network are also important for destination choices during weekends. Students with close friends living in the same municipality have the flexibility to plan and undertake activities in different parts of the city. This becomes more relevant for social activities. With the widespread popularity of social networking platforms, individuals are increasingly relying on social networks to maintain their social interactions with friends and acquaintances. These interactions may be undertaken in order to plan future activities and may, as a result, involve decisions relating to timing, destination, participating individuals, and so on. The findings show that individuals who use social networking websites daily during the week have an even distribution of destinations, which could be an indication of the existence of just such a phenomenon. Individuals undertaking more social travel during weekends are less likely to choose locations close to the university and are, as a result, more likely to have them evenly distributed across the city instead.

5.3. Comparison between Weekdays and Weekends

One of the most significant differences between weekdays and weekends was the choices themselves. During weekdays social travel was mostly concentrated around the university. However, at weekends individuals preferred destinations that were located away from the university or their residences for social activities. During weekends and on weekdays, the next preferred choice was having them evenly distributed across the city. Very few activities were pursued near the university during weekends.

The factors that influence destination choice differ between weekdays and weekends. Only the age of the students was observed to influence their destination choices on both weekdays and at the weekends. All other variables were different for weekdays and weekends. In the case of weekday travel, the characteristics were

mostly related to the size of the social network and the use of instant chats or video calls on a regular basis. However, in the case of weekend travel, the location of other members of the social network and the spending capacity of individuals emerged as decisive factors.

6. Conclusion

This research analysed the destination choice for social activities of university students from two Instituto Superior Técnico campuses in Lisbon. The factors influencing destination choice on weekdays and during the weekends were identified. Furthermore, the difference in travel patterns and the factors influencing the choice of destinations were analysed. It should be highlighted that individuals were asked to report the preferred destinations for the majority of their social travel on weekdays and at weekends. While the preferred destinations for social travel on weekdays were close to the university, destinations away from both the university and individual residences were preferred during weekends. This finding confirms the need to analyse these choices separately.

The explanatory variables in the specification were also different for the two cases, with the exception of the age of the individuals. The socio-demographic characteristics of individuals, size (number of acquaintances, number of close friends) and characteristics (location of close friends) of their social networks and modes of interaction (frequency of contact, method of contact, etc.) all influenced the choice of destinations for social travel. Furthermore, individuals relying more on chats and video calls for maintaining contact with friends, family and acquaintances were more likely to have an even distribution of activities across the city. The same trend was observed among individuals relying on chats and video calls for maintaining their social networks and is likely to have been the result of spatial separation or other factors hindering face-to-face interactions.

Land-use characteristics of the university and places of residence, along with travel characteristics such as the ability to use a car for social travel, also influenced choices of destination. Individuals residing in central, highly urbanised and compact areas with good accessibility to bus transport were more likely to have activities distributed evenly across the city. The same was true for individuals living in dense and mixed areas that are highly accessible by heavy transit. These results stress the importance of accessibility for allowing the proliferation of greater and more diverse spaces for social activities.

Considering the current penetration of smartphones and the internet amongst the general population, it would be interesting to extend this research using data that is not limited to students. Furthermore, the identification of the influence of ICT and social networking sites on destination choice for social travel would indicate a need to analyse these factors further.

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A RESILIENCE-BASED APPROACH TO ENHANCE THE CAPACITY OF SMALL VILLAGES TO COPE WITH INTERTWINED THREATS:

A CASE-STUDY IN THE BASILICATA REGION

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Abstract

About 70 percent of Italian municipalities that have fewer than 5,000 inhabitants are located in difficult to access mountain areas which are often prone to multiple hazards. As clearly demonstrated by the seismic events that hit Central Italy in 2016, the socio-economic decline of these municipalities is also increasing their vulnerability. Nowadays, small villages represent an important challenge for Italy, because they require significant resources and effective strategies to both break the cycle of decline and promote their economic and social development, while also reducing their vulnerability to natural and climate related hazards. This contribution provides an overview of the initiatives recently launched in Italy in favour of small villages and outlines a methodological path to assess and enhance the overall resilience of these areas, with a focus on a case study area located in the Basilicata Region of Southern Italy.

Keywords

Inner areas, small villages, vulnerability, socio-economic decline, resilience

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1. Italian Small Villages: Roots and Geographies of Decline

Starting from the 1950s, urban populations have significantly increased worldwide, and exceeded total rural population in the first decade of the 21st century: to date, over 70 percent of the population of Europe lives in urban areas (UN, 2018), with it being estimated that this percentage will reach 80 percent in 2050 (UN, 2014). The concentration of population in large urban areas and the corresponding decline in rural areas have led to significant territorial imbalances, characterised by the gathering of economic activities, equipment, and facilities in urban areas, and the progressive marginalisation of small villages in rural areas, often left to the point of total abandonment.

This phenomenon particularly affects Italy, where about 70 percent of existing municipalities have fewer than 5,000 inhabitants and most of them possess populations ranging from between 1,000 and 2,500 inhabitants (37.5 percent). Small villages in Italy cover a total area that exceeds 50 percent of the national land surface, even though they are home to only 16 percent of the Italian population (ANCI – IFEL, 2015).

Over recent decades, small villages have suffered both from population reductions and an increasingly elderly resident population. During the last three decades, while the overall population has continuously increased in medium and large cities, the Italian Statistical Bureau (ISTAT) estimates that there has been a significant population decline in small villages, with a parallel increase in the percentage of the population aged over sixty-five (ANCE, 2017).

Furthermore, small Italian villages are characterised by both a lack of adequate essential facilities, such as schools and hospitals, and an inability to guarantee an acceptable level of citizenship to local residents. The classification of small villages carried out in 2014 by the Italian Department for Development and Economic Cohesion, which was based on their accessibility to essential facilities, showed that only 36 percent of small villages are located in close proximity to medium-large cities (poles), in which essential facilities are available (Carlucci, Guerrizio and Lucatelli, 2014). In contrast, 64 percent of small villages, mainly concentrated in Southern Italy (Basilicata and Calabria) and on the main islands (Sicily and Sardinia), are located in areas that are far or even very far from such poles. As a consequence, they have limited accessibility to essential services.

Finally, it is worth recalling that most Italian small villages are located in mountain (41.3 percent) and hilly areas (40.7 percent), with a very limited number (17.9 percent) in flat areas. The prevailing location of small villages along the Alpine arc or the Apennine Mountains implies that most of them fall into areas which are characterised by high seismic and hydrogeological hazard levels. In detail, 35 percent of small villages are included in areas classified as seismic zone 1 (where major earthquakes may occur) or 2 (areas which may be affected by quite strong earthquakes): these villages are mostly located in Central and Southern Italy (Marche, Molise, Campania, Basilicata, Puglia, Calabria, Sicily and Sardinia). In respect to landslides, over 36 percent of Italian small villages fall into areas threatened by a very high or high level of landslide hazard, with most of them being located in Molise, Marche, Basilicata, Calabria and Sicily.

The complex geographies of abandonment that increasingly characterise inner areas in Italy (Bassanelli, 2009; Pirlone, 2016) seem to be more and more the result of the dramatic interweaving of socio-economic and environmental factors. In these areas, population decline is due not only to their limited accessibility and the significant lack of facilities and job opportunities, but also a consequence of the occurrence of natural hazards. The latter, by affecting an aged population and a building stock already degraded by a lack of maintenance, can lead to the permanent abandonment of hit villages.

However, despite their continuous decline, almost all Italian small villages possess significant historical-architectural heritage and a wealth of high-quality natural resources, with over 30 percent of these villages being included in protected areas (national and regional parks, natural reserves, and so on). Furthermore, most of them are carriers of diversity both in respect to heterogeneous local cultures and traditions, and in terms of climate and environmental conditions that favour a variety of vegetation, fauna, and agricultural crops.

2. Breaking the Declining Cycle: European and Italian Strategies

Awareness of the need to promote effective strategies, capable of breaking the population decline and ensuring the enhancement of the significant cultural, historical, and naturalistic heritage that characterise small villages in rural and mountain areas, spread throughout Europe in the second half of the 1990s.

The Cork Declaration (EU, 1996) – A Living Countryside – emphasised the urgency of placing sustainable rural development at the top of the European Union Agenda and highlighted the role of small villages as key elements for promoting the development of vibrant rural communities. These issues were resumed, ten years later, by The Cork Declaration 2.0 (EU, 2016) – A Better Life in Rural Areas – that clearly remarks how, despite the decline of both population and traditional economic activities, villages and small towns still represent an important part of European culture. The Cork Declaration 2.0 recognised the key role that rural areas and communities could play in both implementing the United Nations Sustainable Development Goals (SDGs) and counterbalancing rural exodus and youth drain. In particular, the Declaration provides key principles to guide European rural policies and stresses "the need to ensure that rural areas and communities (countryside, farms, villages, and small towns) remain attractive places to live and work by improving access to services and opportunities for rural citizens and fostering entrepreneurship in traditional rural domains as well as new sectors of the economy" (EU, 2016).

Following the same line, in 2014 the Italian Government launched the National Strategy for Inner Areas for the period 2014-2020. The Strategy refers to all inner areas that, although being very heterogeneous, share both a significant marginality in respect to the main supply poles of essential services (education, health and mobility) and the presence of important environmental and cultural resources. The primary objective of the Strategy was to foster economic and social development of inner areas, by improving those already existing practices capable of successfully reversing the marginalisation process (Barca and Calafati, 2014).

The Italian inner areas have been identified with reference to their distance from the closest supply poles which offer basic services related to education, health and transport (railway stations), and have thence been classified into four typologies: belt, intermediate, peripheral, and ultra-peripheral areas. In order to better understand their heterogeneous development paths, they have then been examined according to both their geomorphological features and their demographic and socio-economic structures. The set of indicators that has been used to identify and classify inner areas does not include parameters related to the hazards or vulnerability features of these areas. However, as clearly demonstrated by the seismic events that affected numerous small villages in Central Italy in 2016, the vulnerability of these areas to natural hazards is significantly amplified by population decline and the consequent lack of maintenance practices that had been applied to both territory and building stock. Meanwhile, hazardous events are often responsible for the acceleration of on-going declining/abandonment processes: the few inhabitants who still live in small villages, keeping alive already weak local economies, are often forced to permanently abandon these places following a disaster, because the pre-existing lack of accessibility, services and job opportunities, which have already induced population decline, further increases. This is a process that may also, sometimes, further undermine effective post-event reconstruction.

As emphasised by Vale and Campanella (2005), following a hazardous event cities and territories rise again "not due to a mysterious spontaneous force, but because people believe in them". The authors also stressed that "cities are not only places in which we live, work and play, but also a demonstration of our ultimate faith in the human project, and in each other". In small villages, population decline and ageing, combined with geographical and economic marginality, are progressively undermining the capacity of people to keep their faith in the human project alive, making the development of a vision for their future, which is crucial to achieving a new normalcy after a disaster, more and more difficult.

In Italy, attention on revitalisation of small villages was re-launched in 2017. The latter was declared the Year of the Italian Villages and during this year Law 158/2017, also called the *Save Villages Law*, was issued. This law recognises small villages (referring to those which have fewer than 5,000 inhabitants) as key resources in ensuring a wider territorial safeguarding, since they play a crucial role in counterbalancing hydrogeological

hazards by ensuring the widespread maintenance and protection of common goods. This law aims to counteract depopulation, while increasing the attractiveness of small villages. To this end, a program of public funding was set up in order to support measures addressing the protection of environmental and cultural heritage, the reduction of hydrogeological risks, the regeneration of historical centres, the securing of road infrastructures and school facilities, and economic and social development through the establishment of new productive activities (Law 158/2017, Article 3, paragraph 1). Unfortunately, the National Plan for the Requalification of Small Villages, which should have been carried out within 180 days from the approval of the law and was intended as a preliminary document that would guide project submission and fund assignment, has yet to be issued.

3. A Resilience-Based Approach to the Revitalisation of Small Villages

The two initiatives launched by the Italian Government could undoubtedly disclose new opportunities for the revitalisation of small villages, even though they have not engendered any measurable outcomes so far. It is also worth noting that both these initiatives have provided limited references to the resilience concept: this concept could be very useful both to better understand and cope with the intertwined socio-economic and environmental factors that the overall decline of small villages depends on.

Over the last decade, the resilience concept has gained prominence in several scientific fields, especially spatial planning, and has come to play a key role in all of the most recent international documents focused on Sustainable Development (United Nations, 2012, 2015a) and Disaster Risk Reduction (DRR) (United Nations, 2015b).

Resilience is nowadays widely interpreted as a promising concept for better understanding the interwoven systems of humans and nature, and for better dealing with complexities and uncertainties arising from the numerous challenges due to the interactions among social and environmental factors (e.g. urban population growth; urban development patterns; consumption and degradation of natural resources; climate change and related impacts).

This concept has been pushed forward by numerous international campaigns which have sought to enhance the capacity of cities to deal with current and emerging environmental, social, and economic challenges. Examples include the Making Cities Resilient campaign, launched in 2010 by the United Nations International Strategy for Disaster Reduction (UNISDR), and the 100 Resilient Cities Initiative, launched in 2013 by the Rockefeller Foundation.

The potential of a resilience-based approach to support place-based strategies, capable of framing a participatory and inclusive development of rural and mountain marginalised villages, is nowadays largely agreed (Salvia and Quaranta, 2017). However, despite its largely recognised importance, the resilience concept has so far merely been used as a fashionable umbrella concept or, as remarked by Weichselgartner and Kelman (2015), as "an all-encompassing, multi-interpretable idiom", capable of attracting wide scientific interest and a large amount of funds. The translation of resilience into practice is still limited and generally based on a bounce-back perspective – which clearly informs, for example, the UNISDR's Making Cities Resilient campaign – and leads to strategies that predominantly address increasing the capacity of cities to resist, or quickly recover from natural hazards' impacts.

Nevertheless, the theoretical debate on resilience, which can be traced back to ancient times and is well routed in different disciplinary fields (Galderisi, 2018), could bring out new perspectives for the development of resilience-based strategies which need to be able to:

- strengthen the capacity of living systems to continuously adapt or transform themselves, by "inventing new practices in front of novel problems" (Grøtan, 2014), like those posed by coupled socio-economic and environmental challenges;
- shift from a silo-based (sectoral) approach to a cross-sectoral one that takes into account the complex interactions between social, economic and ecological factors (Galderisi and Limongi, 2017).

Based on the idea of 'evolutionary resilience' introduced by Davoudi et al. (2012), the resilience concept is here interpreted as a set of features that are capable of improving territorial systems' capacities to withstand, absorb, accommodate, adapt to, recover from, and even transform in the face of sudden events and chronic stresses, caused by different and often interconnected pressure factors: from the scarcity of resources to economic crises, from natural hazards to climate-related ones (Galderisi, 2018). According to this definition, a resilience-based approach might support proactive and site-tailored strategies, based on local communities' capacities for active learning, and focused on improving the overall capacity of territorial systems to cope, in the short term, with the impacts of heterogeneous threatening factors, to continuously adapt in the face of changing conditions through incremental adjustments, and innovate themselves in the long term by introducing fundamental changes within and across these systems.

Hence, a resilience-based approach might effectively guide the strengthening of small villages' capacities to withstand and absorb shocks as well as to progressively adapt to emerging threats or to transform themselves, by bouncing forward to better system configurations, in the face of constantly changing system dynamics and complexities over a range of spatial and temporal scales (Yamagata and Sharifi, 2018). In detail, the adoption of a resilience-based approach might allow transforming small villages from problem areas, left on the margins of contemporary societies' development, into fundamental cultural and environmental resources for Italian development (Caravaggi and Imbroglini, 2014; Di Figlia, 2016).

Unfortunately, as mentioned above, the initiatives recently launched in Italy for the revitalisation of small villages have provided limited references to the resilience concept. In detail, the Save Villages Law does not provide any references to this concept while the Italian Strategy for Inner Areas, despite mentioning it, provides a very limited interpretation of the term. The latter includes resilience among the key words that are identified as crucial for triggering a development process based on the 'activation' and engagement of local communities. These key concepts include:

- land maintenance, primarily related to the maintenance of natural resources;
- prevention, related to damage caused by hydrogeological hazards, forest fires and loss of biodiversity;
- resilience, interpreted as a function of the wealth of both the available natural and cultural resources and the artefacts that characterise these areas and their potential for use;
- adaptation, related to the constantly changing and difficult to foresee climate scenarios.

Nevertheless, the concept of resilience, in its broadest meaning, encompasses all the key words mentioned above. Resilience is nowadays widely interpreted as a 'continually changing process' (Davoudi et al., 2012) that results from the dynamic interaction among different features of socio-ecological systems:

- robustness, which refers to the system's ability to withstand the impacts of different threatening factors, by preserving its own characteristics and structure, except for a temporary departure from its normal functioning condition;
- adaptability, which refers to the capacity of a system to continuously adjust its responses to changing external drivers and internal processes, while continuing to develop within the same stability domain (Folke et al., 2010);
- transformability, which refers to the ability of a system to radically innovate in the face of changed conditions, by developing new and creative perspectives for local development;
- learning capacity, which refers to the capacity of a system to learn, by combining experience and knowledge; this capacity supports each of the above-mentioned features and emphasises the key role of social capital and institutions in the construction of resilient territories (Galderisi, 2018).

Having defined our understanding of resilience, what kind of tools can be used to analyse or act on these features in order to enhance the overall resilience of a territorial system? Nowadays, the resilience concept, drives numerous international initiatives: all of them aim at strengthening the capacities of urban and territorial systems to cope with current and emerging environmental, social and economic challenges and, primarily, with the increasing impacts of natural and climate-related hazards. These initiatives, despite sharing common goals, largely differ from each other. They are promoted by different international organisations, such as UNISDR, the Rockefeller Foundation, and the International Council for Local Environmental Initiatives; each involves settlements largely differing in size as well in geographical, cultural, economic and social features; they are based on different principles and guidelines, and adopt different tools to achieve an apparently common goal: the building of a resilient city.

Hence, based on the interpretation of the resilience concept and the most widespread operational tools currently available to analyse and assess resilience, in the following we outline a methodological path which allows us to achieve two objectives. First, a better understanding of the main pressure factors (threats) that might hinder future development and, in some cases, the very survival of small villages. Secondly, a better understanding of the characteristics of these villages that should be strengthened to allow them to better cope with such threats (response capacity) (Figure 1). In detail, the outlined methodological path combines and adapts to the definition of resilience that has been here adopted the operational tools developed by two international initiatives: the Making Cities Resilient Campaign, aimed at increasing the resilience of territorial systems in the face of natural or man-made hazards, and the 100 Resilient Cities initiative, aimed at increasing the resilience of territorial systems in the face of a wide range of shocks and chronic stresses. It is worth noting that while the latter has mostly involved large cities, the former has involved heterogeneous human settlements, ranging from small villages (fewer than 1,000 inhabitants) to big cities.

The Disaster Resilience Scorecard (DRS) is one of the key operational tools introduced by the Making Cities Resilient Campaign. It seeks to guide local governments in evaluating current disaster resilience as a base for outlining, implementing and monitoring Disaster Risk Reduction Action Plans. It includes a set of questions, which have been defined according to the Ten Essentials for making a city resilient outlined by the UNISDR. Moreover, these questions have been designed to allow constant review of local progress in the implementation of the Sendai Framework 2015-2030. The DRS is structured as a two-level process (a preliminary and a detailed assessment), capable of involving multiple stakeholders, such as public bodies, private businesses, community groups, and academic institutions. This tool sets out a clear pathway for: defining a current baseline; outlining future goals; monitoring progresses, and raising the awareness of different stakeholders on the key actions that need to be carried out to increase cities' resilience in the face of natural hazards (United Nations Office for Disaster Risk Reduction, 2017).

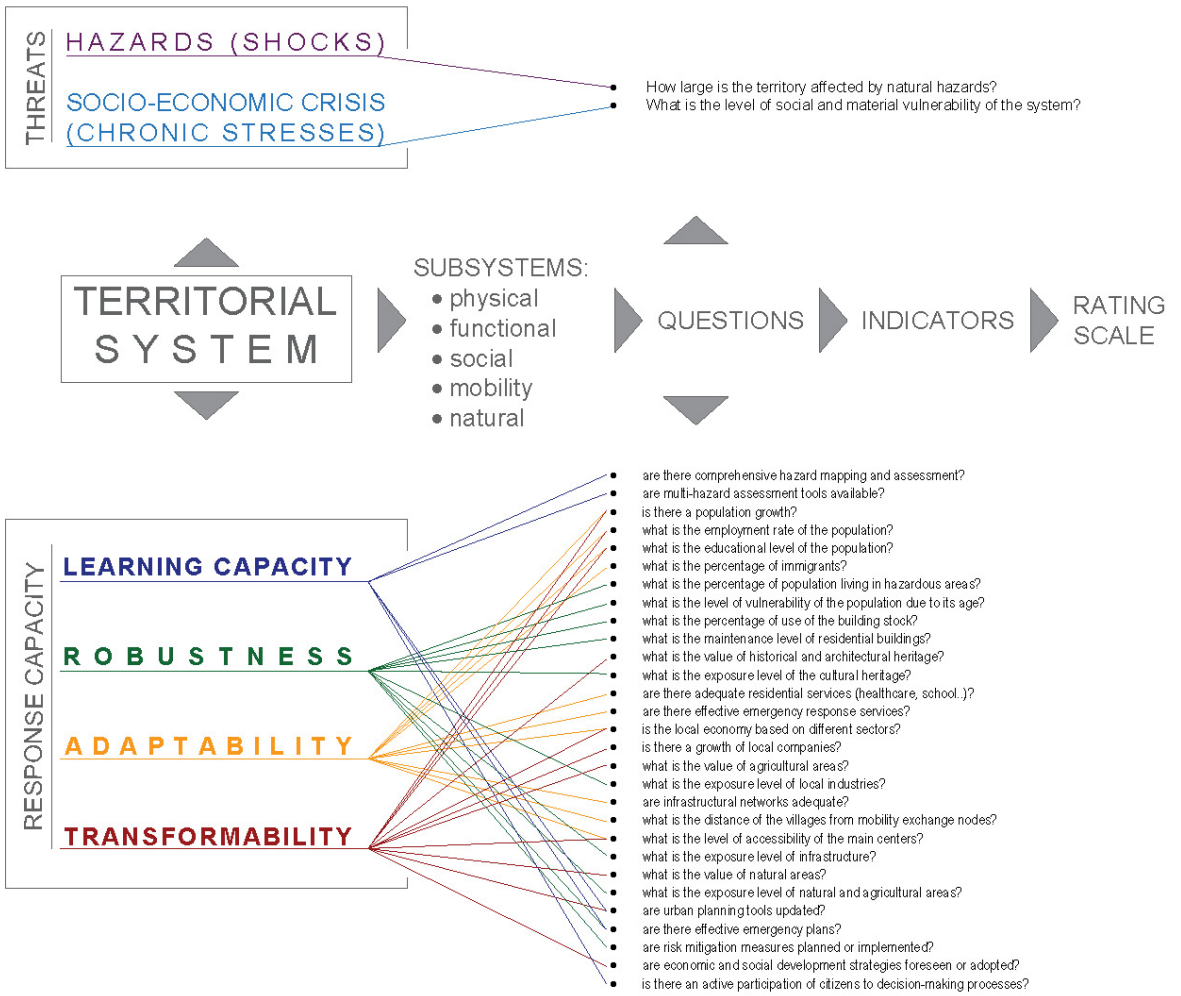

Figure 1 - The methodological path to analyse threats and response capacities of territorial systems

As part of the 100 Resilient Cities initiative, the City Resilience Framework (CRF) was set up with the aim of understanding and measuring cities' resilience in the face of acute shocks and chronic stresses. It is structured as a circular model and characterised by different rings and sectors. It identifies four key sectors (Health and Well-being; Economy and Society; Infrastructure and Environment; and Leadership and Strategy) and 12 key goals (three for each dimension) that cities should achieve in order to improve their resilience. A set of 52 indicators, related to the different sectors and key goals, as well the most adequate qualitative or quantitative metrics for their measurement and assessment, were also provided (The Rockefeller Foundation/ARUP, 2015).

The proposed methodological path combines these tools in order to widen its focus from disaster risk reduction, which is the main aim of the UNISDR initiative, to the broader range of threats considered by the CRF, including socio-economic decline. In detail, the proposed methodology to assess the resilience of small villages is based on a set of questions and related indicators which have been defined with reference to the main subsystems (social, physical, functional, mobility, and natural resources) that constitute a territorial system and to the key features of a resilient system (robustness, adaptability, transformability, and learning capacity). Outlined questions and indicators are taken up and adapted both by the DRS as well as the CRF in order to assess local resilience to both hazard factors and socio-economic decline (Figure 1). The provided set of questions may guide practitioners and decision-makers in evaluating the capacity of each considered subsystem to tackle both acute shocks and chronic stresses. One or more quali-quantitative indicators are associated to every question and their values have been homogenised through a scoring procedure that translates their individual heterogeneous values into a numerical score from 0 (scarce or absent) to 5 (very high). The scoring procedure makes it possible to assign an overall resilience value to each territorial system and evaluate the relevance of each resilience characteristic in relation to each territorial system or subsystem (Tables 1 and 2).

The outlined methodological path is able "to inform decisions about improvement, to evaluate a project or a program development and to learn about incremental changes" (Turner et al., 2014, p.11). Thus, by following this path, local administrations will be guided in: carrying out a preliminary assessment of local resilience in the face of heterogeneous threatening factors; selecting, time to time, strategies and actions that have to be implemented for improving resilience; and, afterwards, evaluating their effectiveness. As a result, this path will ensure a continual learning during the process of resilience building.

4. The Resilience of Italian Small Villages: A Case Study in the Basilicata Region

The Italian Strategy for Inner Areas, in addition to providing suggestions on how to promote local economic and social development, has also identified a pilot area in each Italian Region. For each area, along with specific measures addressed to improve accessibility to basic services, a detailed Program Agreement has been carried out.

With respect to the Basilicata Region, the Strategy identified a pilot area, called Matera Mountain, which includes the municipalities of Accettura, Aliano, Cirigliano, Craco, Gorgoglione, Oliveto Lucano, San Mauro Forte and Stigliano (Figure 2). In this area, the Strategy aims to counterbalance the depopulation process through a set of actions addressing three general goals:

- the strengthening of agricultural activities;
- the promotion of tourism, to be achieved through the enhancement of minor cultural heritage;
- the improvement of basic services (mostly in the fields of health, education and transport infrastructure).

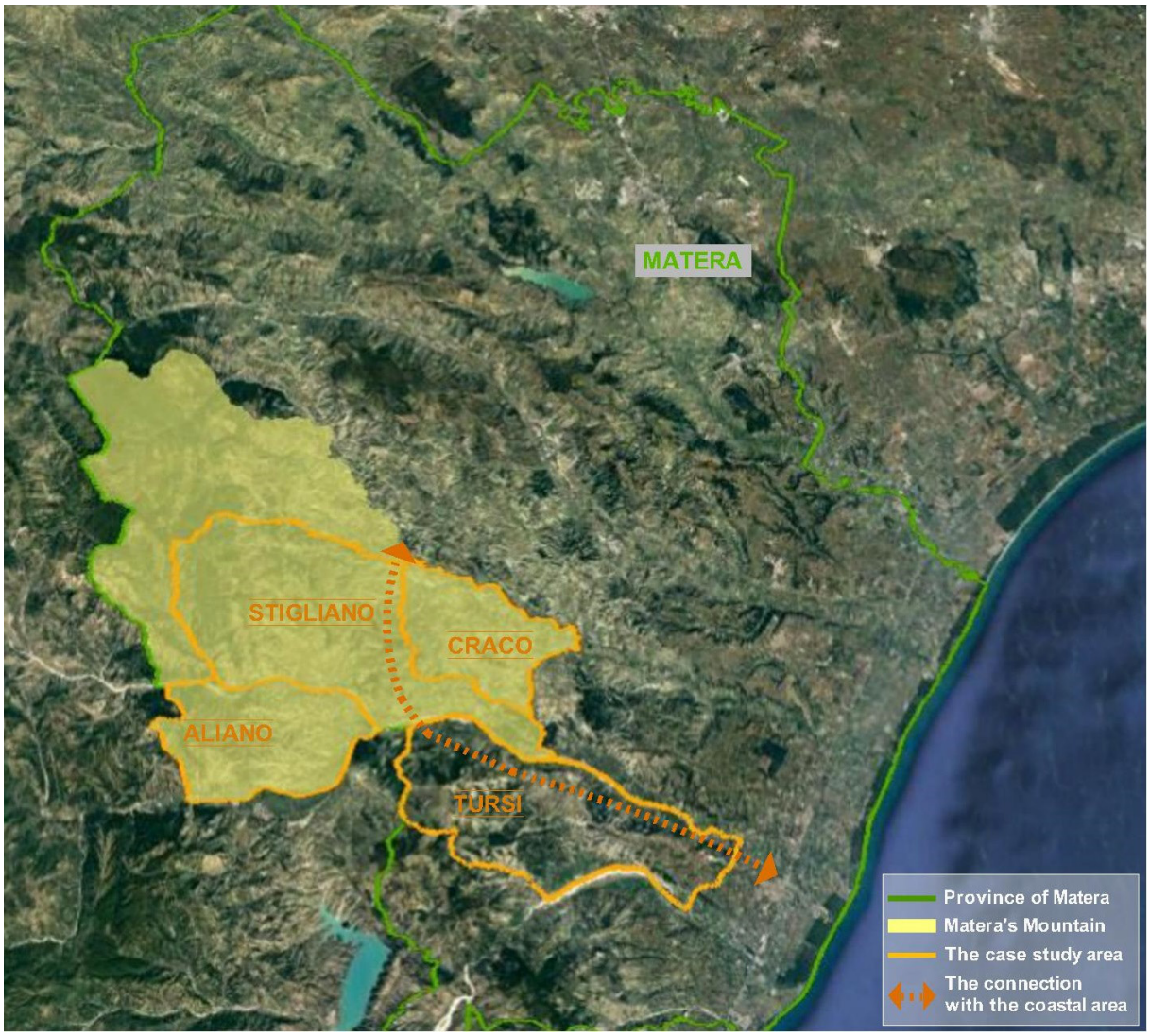

Figure 2 - The pilot area (Matera's Mountain) in the Basilicata Region and the four Municipalities included in the case-study area

It should be noted that, although the occurrence of natural hazards has significantly contributed to the depopulation of the pilot area at stake, the Strategy neither refers to the need for risk prevention and mitigation, nor to the need for master plans based on multidimensional approaches and capable of integrating risk analysis into the wider framework of sustainable local development.

Moreover, the municipalities included in the pilot area from the Basilicata Region, despite all being characterised by significant processes of socio-economic decline, show heterogeneous morphological, landscape and geomorphological features that significantly affect their hazard profiles. According to these characteristics, the pilot area can be distinguished into at least three sub-areas: the predominantly wooded area to the North-West, the plain rural area in the centre, and the area of 'calanchi' to the South-East (Figure 3). In particular, the latter shows a peculiar landscape characterised by steep slopes, along which soft sedimentary rocks, dry terrain and clay-rich soils have been extensively eroded by wind and water.

The area of 'calanchi', including the municipalities of Craco, Aliano and Stigliano, represents an interesting case study for applying our methodological path because it provides an emblematic case of a decline process that has been caused by both environmental and socio-economic factors. This selected case study area has been progressively abandoned from the 1960s onwards due to the lack of residential services and infrastructures, and the numerous hazards threatening it. In the Municipality of Craco, for example, the process of decline started in the 1960s, after a landslide, and accelerated significantly in 1980 when, after an earthquake, all

remaining residents moved to a new village built in the lowland. This is where the few remaining inhabitants (762) still live. The municipality of Tursi has also been included in the case study area. Despite being external to the pilot area identified by the Strategy for the Inner Areas, Tursi shares geomorphological features with the three other municipalities and is also an important hinge among inner and coastal areas; as a result, it might play a key role in any future development of this area (see Figure 2).

According to the outlined methodological path, the threats that the identified case study area is exposed to have to be examined, first. In detail, numerous hazards threatening this area were analysed whilst, with regard to chronic stresses, the main socio-economic factors responsible for the area's decline process were taken into account.

Figure 3 - The area of "calanchi" in the Basilicata Region. Panoramic view from Craco.

Regarding hazards, the case study area is, according to available information, classified as a seismic zone 2 (high to medium) (Dipartimento di Protezione Civile, 2015), possesses a high risk of forest fires (Regione Basilicata, 2015) and significant hydrogeological instability (Autorità di Bacino della Basilicata, 2016, 2017). As for socio-economic decline, this threat has been analysed through the 'social and physical vulnerability index', defined by the Italian Statistical Bureau (ISTAT) at a municipal scale. This index describes, through a single value, the different aspects of a multidimensional phenomenon, by combining seven basic variables: the age of the population, the number of family members, the level of educational attainment, and housing and employment status (ISTAT, 2011). The values of this index are higher than the regional average (99.94) for the municipalities of Aliano and Craco (respectively 100.93 and 104.20), and slightly lower for the municipalities of Stigliano and Tursi, whose values are respectively 98.63 and 99.91.

Secondly, the proposed methodological path was tailored to the peculiarities of the case study area, in order to allow a preliminary resilience assessment. In detail, a matrix for analysing the resilience features of each subsystem to the different threatening factors that this area is exposed to has been outlined. Each matrix provides a set of questions, the related indicators and the rating scale. The matrixes (one for each subsystem

as shown in Tables 1 and 2) allowed us to provide a final value for each resilience feature in every municipality included in the case study area (Figure 4).

It is worth outlining that the test of the methodological path on the pilot area revealed some minor difficulties, which could represent a disincentive to its widespread use by local decision-makers. The first one is the high fragmentation of data and information required for measuring the selected indicators (36) and to the fact that not all the required information was already available. Hence, in order to measure all the selected indicators, heterogeneous data and information had to be collected from both direct (e.g. the ISTAT database, the Basin Plan, the seismic classification, the regional Fire Prevention Plan) and indirect sources (e.g. interviews with citizens and local government officials). Moreover, the measurement of some indicators, such as the percentage of urban areas and the number of historical buildings exposed to the different hazard factors, required the combination and processing of basic variables into the GIS environment, through the overlapping of different thematic layers.

A second difficulty can be traced back to the procedure for standardising the values of the 36 selected indicators, according to a scale of values ranging from 0 to 5. The standardisation process required a comparison of the value assumed by each indicator with an average value. In some cases (such as population trends, unemployment rate, and so on) local indicators had to be compared to the regional average value provided by the ISTAT database. In other cases (such as accessibility levels, calculated through indicators measuring the distance between each municipality and the closest highway exit and railway station as well as the distance between each municipality and the closest supply poles), it was necessary to extend the analysis from the four considered municipalities to a wider territorial area in order to obtain an average reference value for the geographical area against which the obtained indicators for each of the municipalities could be weighed.

With respect to the outcomes of the preliminary resilience assessment, which are shown in different colours in Figure 4, it is worth noting that all the case study municipalities exhibit low values with respect to learning capacity (in blue). This feature was assessed through five indicators (approval and periodic updating of urban master plans; availability of environmental assessments; availability of adequate monitoring system of environmental resources; integration of risk mitigation measures in urban development strategies; and citizens' engagement in the setting up of urban development strategies).

Robustness (in green) was assessed through a set of ten indicators, which referred both to the exposure and vulnerability of the components of each subsystem to the considered threatening factors and to the type and number of risk mitigation measures planned or implemented. The values of robustness, which are below 3 in all considered municipalities, are slightly higher than those assumed by the other resilience characteristics. These positive values, however, largely depend on the really low amount of exposed population and assets, whilst the vulnerability of exposed assets is very high, and few or no risk mitigation measures have been planned or implemented.

Adaptability was assessed through a set of ten indicators taking primarily into account the consistency and diversity of both the resident population and basic services and productive sectors, the accessibility of the case study area, and the redundancy of the mobility network. Due to demographic decline and the limited availability of infrastructures and basic services, adaptability (in yellow) shows very low values in all the considered municipalities and in respect to all the subsystems, with the exception of the Municipality of Tursi, which shows a slightly higher value, as it is the closest one to the more equipped and best connected coastal area.

Transformability (in red) was assessed through a set of eleven indicators which mainly referred to the value of natural and cultural resources. Those resources are crucial, in fact, for triggering a revitalisation process in the case study area. Moreover, some indicators referred to the availability of approved or on-going strategies/ initiatives aimed at promoting local development. Finally, it is worth noting that some indicators (e.g. diversity of productive sectors, redundancy of mobility infrastructures, etc.) refer both to adaptability and to transformability. They are relevant, indeed, to an incremental adjustment of territorial systems to changing contexts, but represent also key factors for the emergence of new perspectives for local development. Again, with the exception of Tursi, transformability shows very low values, even though the existing cultural and natural heritage represents a significant strength for the triggering of a local development process.

Table 1: Example of Matrix to carry out a Preliminary Resilience Assessment: Mobility Subsystem

RESPONSE CAPACITY – SOCIAL SUB-SYSTEM				
Resilience characteristics	**Questions**	**Indicators**	**Rating scale**	
ADAPTABILITY	Are mobility networks adequate?	Length of road and railway network in respect to territorial surface (kms/km^2)	5	Kms/km^2 ratio is less than 1 for the road network and less than 0.6 for the railway network
			4	Kms/km^2 ratio is less than 0.8 for the road network and less than 0.4 for the railway network
			3	Kms/km^2 ratio is less than 0.6 for the road network and less than 0.4 for the railway network
			2	Kms/km^2 ratio is less than 0.4 for the road network and less than 0.2 for the railway network
			1	Kms/km^2 ratio is less than 0.2 for the road network and less than 0.1 for the railway network
			0	Kms/km^2 ratio is less than 0.1 for the road network and less than 0.1 for the railway network
	What is the distance of the villages from mobility exchange nodes?	Distance of the villages from the closest highway exit and railway station (km)	5	Distance from the first highway exit less than 20 km, distance from the first railway station less than 20 km
			4	Distance from the first highway exit is more than 20 km and less than 30 km, distance from the first railway station is more than 20 km and less than 50 km
			3	Distance from the first highway exit is more than 30 km and less than 70 km, distance from the first railway station is more than 20 km and less than 50 km
			2	Distance from the first highway exit is more than 70 km, distance from the first railway station is more than 20 km and less than 50 km
			1	Distance from the first highway exit is more than 70 km, distance from the first railway station is more than 50 km and less than 70 km
			0	Distance from the first highway exit is more than 70 km, distance from the first railway station is more than 70 km
TRANSFORMABILITY ADAPTABILITY	What is the level of accessibility from the main cities?	Distance of the inner areas from the main city (ratio between the radius r of the circle with the centre in the central pole and the road distance d to be covered) and redundancy of the mobility network	5	The main city can be reached by two or more transport options and the r/d ratio is higher than (or equal to) 0.9
			4	The main city can be reached by two or more transport options and the r/d ratio is higher than (or equal to) 0.8
			3	The main city can be reached by two or more transport options and the r/d ratio is higher than (or equal to) 0.5
			2	The main city can be reached by two or more transport options and the r/d ratio is higher than (or equal to) 0.8
			1	The main city can be reached by two or more transport options and the r/d ratio is higher than (or equal to) 0.5
			0	The main city can be reached by two or more transport options and the r/d ratio is higher than (or equal to) 0.3
ROBUSTNESS	What is the exposure level of road and rail networks?	Percentage of road and rail networks located in hazardous areas	5	Less than 10% of the surface devoted to infrastructures located in hazardous areas
			4	Less than 30% and more than 10% of the surface devoted to infrastructures located in hazardous areas
			3	Less than 50% and more than 30% of the surface devoted to infrastructures located in hazardous areas
			2	Less than 70% and more than 50% of the surface devoted to infrastructures located in hazardous areas
			1	Less than 90% and more than 70% of the surface devoted to infrastructures located in hazardous areas
			0	More than 90% of the surface devoted to infrastructures located in hazardous areas

Table 2: Example of Matrix to carry out a Preliminary Resilience Assessment: Social Subsystem

RESPONSE CAPACITY – MOBILITY SUB-SYSTEM				
Resilience characteristics	**Questions**	**Indicators**	**Rating scale**	
TRANSFORMABILITY	Is there a population growth?	Population growth trend over the last 40 years (1971-2011)	5	The population growth trend is higher than 35%
			4	The population growth trend is higher than 20%
			3	The population growth trend is higher than 9%
			2	The decline trend of the population is about 4% (regional average trend)
			1	The decline trend of the population is about 15% (lower than the regional trend)
			0	The decline trend of the population is about 40% (significantly lower than the regional average)
ROBUSTNESS	What is the percentage of population living in hazardous areas?	Percentage of population living in hazardous areas	5	Less than 5% of the population living in hazardous areas
			4	Less than 10% of the population living in hazardous areas
			3	Less than 15% of the population living in hazardous areas
			2	Less than 20% of the population living in hazardous areas (regional average)
			1	Less than 25% of the population living in hazardous areas
			0	More than 25% of the population living in hazardous areas
ADAPTABILITY	What is the percentage of immigrants?	% of immigrants and their age composition (ratio between immigrants aged 0-29 years and total number of immigrants)	5	Number of immigrants between 10% and 20%; more than 50% of them are under 30 years old
			4	Number of immigrants are between 5% and 10%; more than 50% of them are under 30 years old
			3	Number of immigrants are between 10% and 20%; more than 30% of them are under 30 years old
			2	Number of immigrants are between 5% and 10%; more than 30% of them are under 30 years old
			1	Number of immigrants are between 5% and 10% but less than 30% of them are under 30 years old
			0	Number of immigrants are less than 5% and less than 30% of them are under 30 years old
LEARNING CAPACITY	Is there an active participation of citizens?	Citizens' associations, events organized by citizens and partnerships with the local government	5	There are numerous citizens' associations and events organised by citizenship or by local government with a significant engagement of local population
			4	There are some citizens' associations and events organised by citizenship or by local government with a good engagement of local population
			3	There are some citizens' associations recently established and some events organised by citizens and institutions are planned for the future
			2	There are few citizens' associations born recently and some events organised by citizens and institutions are planned for the future
			1	There are few citizens' associations recently established and some events organised by the local government are planned, without a significant engagement of local population
			0	There are no citizens' associations and events organised by local government or citizens

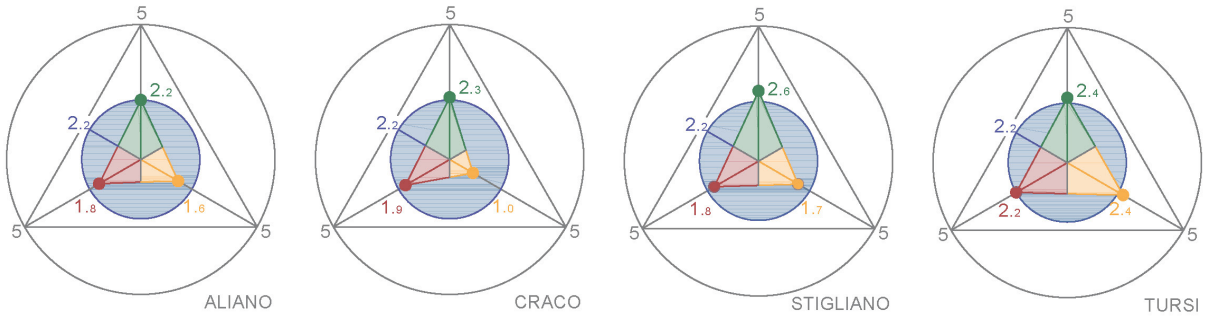

Figure 4 - The outcomes of the Preliminary Resilience Assessment for the selected Municipalities. In detail, the blue circle shows the value of the learning capacity, whilst green, yellow and red respectively refer to robustness, adaptability, and transformability.

5. Conclusion

Based on a brief overview of the initiatives recently launched in Italy in favour of small villages, which represent about 70 percent of Italian municipalities, this paper has outlined the potential of a resilience-based approach to their revitalisation. Furthermore, by combining some of the available operational tools for resilience assessment, a methodological path to evaluate the resilience features of Italian small villages has been outlined. This path, which has been tested on a case study area in the Southern Italy (Basilicata Region), might represent a useful tool capable of supporting decision makers in the development of effective strategies for revitalising small villages. It allows us to measure current resilience features and to build up a baseline against which progresses towards local resilience increase can be monitored. Moreover, monitoring activities also ensures continuous learning alongside the process of resilience building.

Although the research work has been specifically focused on Italian small villages, the outlined methodological path could be adapted to different contexts, providing an effective tool to better steer on-going strategies to counterbalance the depopulation of European rural and mountainous villages and assess their effectiveness. As clearly noted by the Cork Declaration (EU, 2016), this issue represents a priority in Europe as small villages are a key part of European culture; and the need for place-based policies, capable of increasing their resilience to hazard factors while enabling participatory and inclusive development strategies, is nowadays largely agreed (Salvia and Quaranta, 2017).

The outcomes of the preliminary resilience assessment of the pilot case allowed us to identify the main weaknesses that should be addressed in order to enhance the resilience of the pilot area and facilitate the revitalisation process. It also allowed us to highlight some of the main weaknesses of the Preliminary Strategy for the Matera Mountain. In particular, this Strategy lacks any specific references to risk prevention and mitigation, even though the outcomes of the preliminary resilience assessment clearly highlight that, in case foreseen measures would be implemented, they could negatively affect the already limited robustness of the case study area by increasing current exposure levels to the numerous hazards that exist therein.

The features which, though peculiar to the case study area, are nevertheless common to many Italian small villages threatened by multiple hazards and characterised by increasing vulnerabilities, require an integrated vision capable of combining strategies and measures aimed at counterbalancing socio-economic decline with measures and funds specifically addressed to disaster risk reduction.

Finally, the limited impact of the Preliminary Strategy for the Matera Mountain with regard to enhancing learning capacity has to be emphasised. The Strategy clearly remarks the need to engage all local stakeholders, including citizens, in the implementation of the envisaged measures, but it does not refer to the need to 'root' these measures into ordinary planning tools. However, the integration of 'extraordinary initiatives' into ordinary planning tools would allow for better framing of the measures foreseen by each initiative into a comprehensive and shared vision, outlined through a participatory decision-making process, and capable of both ensuring the continuity of the development process far beyond the lifetime of the extraordinary initiatives, and a strengthening of potential synergies among different measures.

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FROM MACRO-LEVEL POLICIES TO MICRO-LEVEL PRACTICES:

CHANGING GLOBAL ECONOMIC LANDSCAPES AND THE PROLIFERATION OF MIDDLE-CLASS GATED COMMUNITIES IN MEXICO

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Abstract

In recent decades, gated communities for affluent groups have gained academic attention worldwide. However, in nations with large inequalities such as Mexico, which are also affected by issues of insecurity, corruption, and violence, these enclaves have become more common for middle-income groups. Their existence is usually associated with the search for prestige and exclusivity, along with fear of crime and violence. However, this article focuses on other structural conditions that contribute to the proliferation of these fortified spaces, such as the connections between global economic forces and the changes in national planning, financial, and housing policies since the 1990s. Since then, Mexican peripheries have become more fragmented and disconnected and gated communities have proliferated. This discussion takes place in a context of global polarisation, both in the Global North and South, in which planners have been urged to respond to issues of growing fear, inequality, and violence. This article addresses the contradictions of polarisation, because some Mexicans are defending the right to build walls to protect from insecurity, while there is also social condemnation of the proposed wall by President Trump. The discussion about macro-economic policies in the development of middle-class gated communities in Mexico is helpful in identifying the future risks and challenges that may come from the normalisation of exclusionary places.

Keywords

Gated communities, Mexico, inequality, urban fragmentation, contradictions

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1. Introduction

In the late 1980s and early 1990s, after years of economic crises, uncertainty, and political turmoil, Mexico embraced an economic and political model which was largely defined by the neoliberal policies promoted by global economic institutions commonly identified as the Washington Consensus (Williamson, 1990; Zanetta, 2004; Walker, 2013). During the late 1980s and early 1990s, there were important changes to planning, housing, land tenure, and financial policies in Mexico (Puebla, 2002; Vidal, Marshall and Correa, 2011; Monkkonen, 2012). The new policies were aligned with the World Bank's vision in which governments were *"advised to abandon their role as producers of housing to adopt an enabling role of managing the housing sector as a whole"* (The World Bank, 1993, p.1). The 'market enabling strategy' considered not only the participation of the private sector in the provision of housing (Keivani and Werna, 2001; Puebla, 2002) but also the financialisation of the housing market, and made this sector one of the main drivers of Mexican macro-economic growth in the 1990s and 2000s. As a result of these policies, private interests from foreign and national actors eroded the existent planning system and the capacity of the state to deal with everyday issues. In only a couple of decades, Mexican metropolitan areas have grown significantly in the territory of small municipalities with limited planning knowledge or regulation, leaving large housing developments without adequate infrastructure, public services and transport.

The national housing strategy during the 2000s was based on the number of houses built and the number of mortgages originated. The result of this quantitative rather than qualitative approach contributed to the configuration of fragmented urban structures in an already divided and polarised society dealing with inequality (González-Arellano and Larralde-Corona, 2019). The private-led and financially-focused housing production shaped not only fragmented cities but also contributed to a stronger fracture between different social groups, and between those groups and the state. As Mexico's macro-economic position improved, the wealthiest population became more powerful and more segregated while the conditions of the most vulnerable did not improve. These growing inequalities have been fundamental in the increase in crime, corruption, delinquency, and distrust.

In this paper, I discuss the role of global economic policies in the shaping of modern Mexican peripheries and the contradictions, risks, and challenges that have arisen as a consequence of growing polarisation. This is achieved through an analysis of middle-class gated communities (GCs) which provide tangible examples of the role of fear and distrust in the shaping of modern socio-spatial relations. Reflection upon the proliferation and normalisation of middle-class GCs in Mexico can provide researchers and policymakers in other countries with hints on the possible challenges to face under the current global atmosphere of fear and distrust. The widely spread far-right movements and anti-immigrant groups, which are present in Europe and North America, are threatening principles of freedom, diversity, inclusion, multiculturalism, and sustainability. The article is organised into four sections. The first provides background to the research. Thereafter, a brief literature about gated communities and their development in Mexico is given. This is followed by a broad analysis of the role of macro-level policies and their impact on everyday lives using a middle-class gated community in Mexico as case study. In addition, a discussion about the contradictions, risks and challenges of the normalisation of these exclusionary places and practices is presented. Finally, the conclusion addresses possible opportunities to build bridges in a time of walls, considering the findings in the case study *Lomas de Angelópolis*.

2. Research Background

This article is partially based on the findings of a four-year doctoral project conducted between 2013 and 2016 that focused on the proliferation of middle-class gated communities (GCs) in Mexico from a practice perspective (Morales, 2016). However, the discussion in this paper goes beyond the aims of the thesis, in that it focuses on the risks and challenges of these exclusionary places and practices in a global context of polarisation, particularly since 2016. The case study of *Lomas de Angelópolis*, which was used for the cited thesis, is a large-scale suburban GC in the Metropolitan Area of Puebla, the fourth largest in Mexico. The case is not only a tangible example of an extreme case of a spatially and socially fragmented urban structure, but also illustrates the role of financial interests and global forces' impact on national policies, as well as how these shape social practices.

The research conducted between 2013 and 2016 took an interpretive approach and used qualitative methods because I had particular interest in a practice analysis approach of gated communities using an in-depth single case study. The case *Lomas de Angelópolis* in Puebla, Mexico, with over 21,000 housing units, allowed the identification and analysis of the policies, practices, and meanings in the process of 'gating up'. The fieldwork was done mostly through observation and semi-structured in-depth interviews of all those involved, such as developers, public officials, policymakers, architects, home cleaners, amongst many others (Morales, 2016, pp.89-96).

The observation exercises were conducted in four stages throughout the three-year period (2013-2016) and the 39 interviews that were undertaken were organised into five categories: residents and potential residents; government officials and policymakers; developers, constructors and financial enablers; NGOs, experts and academics; and outsiders and neighbours. The observational exercises and interviews not only provided a wide range of ideas about security, housing needs, and the justification for fences and gates, but also showed two underlying drivers: aspirations and anxieties were fundamental in the growing success of GCs for middle-income groups. The interviews also provided many examples of the connections between these enclaves and macro-economic and political policies, and how these have impacted everyday lives, attitudes, and meanings. Some of the findings from the thesis indicated that whilst residents did not aim to segregate themselves, GCs offered certain advantages such as the accountability and protection of patrimony that open-street neighbourhoods run by public authorities lacked.

During the research, most interviewees that I spoke with considered that they had encountered 'legitimate' experiences with crime and violence that justified their decisions to move into or develop fortified enclaves. After the 2016 United States presidential election and the anti-Mexican rhetoric of President Trump and his pledge to build the southern wall, I went back to the gated community *Lomas de Angelópolis* because I wanted to talk to the interviewees and see if the views of residents to fences and walls had changed. Between January and March 2017, I was able to conduct short semi-structured interviews with seven of the 16 residents whom I had previously interviewed. In addition, I asked the same questions to other nine residents who had not taken part in the original research. I found that, although the arguments for gating up were different, ranging from family convenience, investment opportunities, and security concerns, all the interviewees justified their need for walls and fences, while emphatically condemning Trump's plans to build a wall between the U.S. and Mexico and the imposition of policies that would damage Mexicans on both sides of the border. I found the responses revealing because they showed that residents did not perceive the contradictions between their discourses and actions living inside a GC. In 2018, I conducted some further research about 'life on the other side of the wall' with a particular focus on the precarious conditions of cleaning and construction staff trying to get to work inside the GC every day from surrounding informal settlements and old towns. I found that residents did not know much about the living conditions of their workers and their everyday struggles.

3. Gated Communities… A tangible Expression of a Fragmented Society

Gated communities (GCs) have been discussed in academic literature from different perspectives since the late 1990s particularly in the United States of America and a few Latin American cases (Blakely and Snyder, 1997; Marcuse, 1997; Davis, 1998; Caldeira, 2000; Low, 2001). The earliest literature focused on prestige, lifestyles, and socio-spatial segregation in exclusive fortified enclaves or 'citadels' for affluent groups (Blakely and Snyder, 1997; Marcuse, 1997). However, since the early 2000s, the discussion has extended to different socioeconomic groups all over the world. According to Fainstein (2010, p.81), housing provision policies should consider the "values of diversity, democracy, and equity"; however, residents in gated communities defined by privilege and exclusion might not desire such values. Marcuse and Van Kempen (2002) consider that homogeneity at the micro-level in certain enclaves contributes to diversity at a metropolitan level, but the case analysed in Puebla Mexico shows that gated communities aimed at different socioeconomic groups did not contribute to making cities more diverse, but that they resulted in more fragmented cities.

The debate about fortification and exclusion has transcended the residential realm of physical barriers, and in so doing has incorporated discussion of more complex territorial challenges including governance, management, equity, and social cohesion amongst others (Blandy and Lister, 2005; Atkinson, 2006; Fainstein,

2010; McKenzie, 2011). The building of walls, according to Marcuse and Van Kempen (2002, p.15) "to create or enforce divisions may be as much of a reflection of the instability of underlying relationships of the hardness of the divisions within them". Gated communities, therefore, are not only spatially segregated urban spaces, but also a tangible expression of privilege, power divisions, and political and economic interests. The state can play a regulatory role or it can respond to the desires of the most powerful groups; unfortunately in Mexico, since the 2000s, real estate interests have been more powerful than official planning objectives.

In Mexico, GCs and privately-developed planned communities are not new; there are examples of their existence for high-income groups since the beginning of the twentieth century (García-Peralta and Hofer, 2006; Giglia, 2008; Scheinbaum, 2010). However, in recent decades, these residential fortified enclaves have become more common in Mexican metropolitan areas (Cabrales-Barajas and Canosa-Zamora, 2001). In my research, I focused on middle-class gated communities for two reasons. First, because most Latin American literature about socio-spatial segregation focuses on the poorest and most vulnerable social groups. Secondly, it was because of the role that this socio-economic group played during the recent debt-fuelled housing production boom and the privatisation of urban development (Vidal, Marshall and Correa, 2011) as well as the vulnerability that comes with extreme debt and the weakening of the state's role in housing production in a context of political and economic uncertainty (López-Calva and Ortiz-Juárez, 2013).

A large majority of the literature about GCs in the late 1990s focused on physical borders and socio-spatial segregation in the global north. In recent years, there has been an increase in literature about these enclaves in Latin America, introducing new elements of analysis from a global south perspective. Since Caldeira's (2000) 'City of Walls' that introduced intangible components to the development of these exclusionary enclaves such as 'talk of crime', numerous authors have provided different approaches to the analysis of GCs. For instance, Borsdorf and Hidalgo (2010) proposed typologies of Latin American GCs depending on size and structure that went from 'urban gated communities', to 'suburban gated communities', and 'megaprojects'. Roitman, Webster and Landman (2010) proposed a methodological framework that considered three specific themes: 'social fragmentation, spatial fragmentation, and institutional fragmentation'. For this research, literature was organised into five categories:

- *Peace of Mind and Security*. One of the main ideas around gated communities is a search for security or at least the perception of security. In recent years, some authors have questioned whether these spaces are actually more secure than traditional open street neighbourhoods (Atkinson and Smith, 2012; Csèfalvay and Webster, 2012); others consider that these spaces respond more to fear of crime than to actual crime (Caldeira, 2000; Coy and Pöhler, 2002; Addington and Renisson; 2013). In Mexico, some authors have even argued that GCs are not significantly safer than traditional neighbourhoods (Vilalta, 2011).
- *Status and Prestige*. Some authors consider the main drivers of GCs to be status and prestige; people trying to improve their position upon the social mobility ladder may consider that living in a gated community provides a sense of distinction or exclusivity (Blakely and Snyder, 1997; Giglia, 2008). Csèfalvay (2011) argues that security measures implemented "express prestige rather than prevent crime" (2011, p.751). These exclusive 'communities' are meant to group people with similar 'tastes' and interests (Manzi and Smith-Bowers, 2005).
- *Lifestyle and Quality of Life*. Unlike the previous category where the search for a community is based on exclusivity, in this case it is based on common interests. It follows that they may be linked to the presence of certain special facilities for sports, leisure, or social life (Horta-Duarte, 2012). Quality of life, in that sense, comes with the possibility that GCs provide a way by which to avoid the inconveniences of outside life (Álvarez-Rivadulla, 2007).
- *Withdrawal from the State*. Some authors focus on the presence of homeowners' associations which function as a sort of 'private government' in master-planned communities and assume some of the roles of the state. The concerns are not only in the privatisation of public functions (Janoshka, 2002) but on the continuing financial and organisational viability of these enclaves (McKenzie, 2011). These private administrations can result in serious governance problems in the long term because they depend on the market rather than a vision of the city (Marcuse and Van Kempen, 2000).
- *Privatisation of Public Space*. In Latin American academic literature, there is growing concern about the proliferation of GCs because they are seen as an example of the privatisation of public space; some authors argue that streets are fundamental spaces for public life (Borja and Muxi, 2003). GCs, in that sense, fracture urban structures leaving the most vulnerable outside (Giglia, 2008). The growing tendency to exchange traditional public spaces for modern exclusionary places limits the possibility of 'social space' and contributes to the differentiation of social classes (Segovia, 2007).

Discussion about gated communities has evolved since the 1990s, and every year there is more empirical evidence from different contexts. The use of case studies is helpful to identify the similarities and differences between fortified places in a global context with regard to both local implications and repercussions.

4. From Macro-Level Economic Policies to Micro-Level Housing Practices: Middle Class Gated Communities in Mexico

Gated communities are a global phenomenon. Though their emergence and proliferation respond to different local conditions, they are also part of a growing transnational movement of capital, free-market ideas, and practices. Some global ideas that are usually seen as 'neoliberal', have become particularly influential in urban development, such as "general disinvestment in cities by federal governments", which has forced "city governments and public authorities to borrow more in order to provide the same basic services" (Mitchell and Beckett, 2008, p.78). These limitations have driven local authorities to rely on loans and increase their debt or transfer the burden of investment in infrastructure and service provision to others. Mitchell and Beckett (2008, p.76) argue that neoliberalism is not only about market liberalisation but that states also play a very important role: states are active "in the processes, both through withdrawing the social provisions of an earlier, Keynesian or 'welfarist' moment, as well as through the vigorous creation of new conditions of privatisation and deregulation through which markets expand".

Considering such complex connections between global economic forces and local everyday practices, I used Shove, Patzar and Watson's (2012) three basic elements of practice, 'competences, meanings, and materials', for this research to analyse the 'relations and connections' between policies and practices that have contributed to the proliferation of GCs (such as the deregulation of planning, and the financialisation of housing). This practice-based approach allowed analysis of structural conditions that facilitate certain policies and practices without considering the 'meanings' and cognitive-affective dispositions that make residents, public officials, and developers justify these fortified enclaves. The work of Shove, Patzar and Watson (2012) was useful to connect tangible and intangible elements to the analysis of GCs.

Walls and barriers are not only 'materials' but also a representation of the aspirations and anxieties of populations living under social, economic, and political uncertainties. Through this practice-based analysis considering competences, meanings and materials, I argue that the proliferation of middle-class gated communities is not a mere matter of choice of individual families self-segregating, but the result of complex combination of policies and practices, where municipalities, developers, and residents find more incentives to build, manage, and live in this sort of development than in traditional open street neighbourhoods. In that sense, the decision to move to a GC is not a simple aspirational trend through which to find status, prestige and security, or a real estate marketing tool. The creation and proliferation of GCs is also linked to existing facilitating forces and institutional conditions, characterised by social inequality, the withdrawal from the state, a growing power of financial institutions, and a genuine response to self-protect from growing crime and violence.

After the institutionalisation of urban planning and housing in the 1970s, Mexico's political and economic policies drifted in the late 1980s and early 1990s towards the privatisation of housing and urban development (Zanetta, 2004; Monkonnen, 2012). This coincided with more tangible spatial segregation in cities and clearer socio-economic distinctions characterised by new consumption patterns and access to new commodities (Walker, 2013). The most important cities in Mexico, such as Mexico City, Guadalajara and Puebla, have distinctive examples of what Blakely and Snyder (1997) call 'lifestyle communities' or GCs for the affluent population which have been studied by several authors (Cabrales-Barajas and Canosa-Zamora, 2001; Rodríguez-Chumillas and Mollá Ruiz-Gómez, 2003; Scheinbaum, 2010). This article, on the other hand, focuses on the less-studied middle-class GCs, which can be better understood through the analysis of macro-level policies, such as 'financialisation' and 'transnational urbanism'. These two elements of analysis show how Mexican real estate market has boomed in the recent decades because it is seen as a rapid way for accumulation of capital, with the participation of financial institutions, national and foreign private capital, and standardised ideas of housing and urbanism supported by transnational actors (Parnreiter, 2016).

In the early 1990s, as part of the North American Free Trade Agreement (NAFTA), there were important changes in Mexican economic, political, housing, and planning policies (Zanetta, 2004; Moreno-Brid, Pérez-Caldente and Ruíz-Nápoles, 2005; Vidal, Marshall and Correa, 2011). Since the early 2000s, financial institutions and government agencies have promoted strategies for Mexicans to reach middle-class status through home and car ownership. The middle classes, which had suffered considerably in the 1980's economic crises, acquired larger debts in recent years to maintain their middle-class status (De la Calle and Rubio, 2012; Walker, 2013). The market-driven economy has incentivised privately run services to cover all the basic needs. According to the National Survey of Household Income and Expenditure 2016, the average Mexican family spends around 44 percent of their income on health, transport, housing, and education (INEGI, 2016). Developers of GCs have targeted middle-class families, because of their supposedly stable incomes, and their ability to acquire mortgages. They have also been targeted because of the growing aspirations and anxieties that have arisen under the current social, economic, and political context.

As a consequence of the recent policy changes, middle-class GCs proliferated in Mexican metropolitan areas because private developers were able to acquire cheaper land, local governments allowed new urbanisation projects with few planning restrictions, and the national housing policy privileged private investment and the participation of financial institutions. These facilitating strategies were aimed not only at developers but also individual families, because financial institutions developed a series of new and diversified mortgage options that strengthened an already debt-driven economy. Due to these structural conditions, in my doctoral thesis (Morales, 2016), I proposed that discussion about gated communities should not only focus on the gates and fences but go beyond the physical fortified space and focus on gatedness - a concept that helps with understanding the connections that exist between these material spaces, and policies, practices, and meanings.

Socio-spatial segregation is not new in Mexico; it can be traced back to pre-Hispanic times and the Spanish viceroyalty (Scheinbaum, 2010). During the period of Spanish rule, the territory had a clear socially segregated structure. Nonetheless, for centuries, there were some shared spaces; places where different social groups could meet such as churches, parks, promenades, green areas, and streets. The privatisation of public space is one of the most important current discussions in Latin America because socio-spatial segregation is becoming more tangible and making social inequalities more visible. GCs have provided an opportunity for real estate investment, securitised environments, isolation from the outside inconveniences, and in some cases, municipal disengagement from the provision of some public services.

As previously stated, financialisation plays an important role in urban development in modern global cities. In Mexico, state-run institutions such as the Institute of the National Fund for Workers' Housing (INFONAVIT) have become 'enablers', instead of producing social housing, they are now financial institutions that support housing production by private developers. This urban development and housing production model has brought serious problems because it does not consider transport, infrastructure, security, and the provision of public services and public facilities (Eibenschutz-Hartman and Goya-Escobedo, 2006). The combination of financial incentives to developers and buyers, and chaotic suburban sprawl created by the national social housing policy offered fertile ground for the creation of middle- and high-income GCs. Isolation from the city and the inconveniences of surrounding new social housing developments enabled new residential enclaves that privileged the use of the private automobile and the securitisation of space (González-Arellano and Larralde-Corona, 2019). Municipalities also incentivised this sort of development through ad-hoc planning regulation or de-regulation, so that private developers covered infrastructure and urbanisation costs.

The increase in house production after 2010 indicates how profitable it became, with the main housing development companies becoming listed within the Mexican stock market. The economically-focused housing provision strategy was far from the original constitutional aim of providing 'adequate and dignified housing for all' (Constitucion, 1917, Art.4). The economic forces and stakes are so high that they can be seen as a form of 'transnational spatial governance' in a borderless world (Healey, 2013), where geographic boundaries are less important than economic flows. The physical fortification of houses, neighbourhoods, cities and even countries are as much as a result of increased fear and security concerns, as they are global financial market outcomes.

Transnational planning ideas can also have positive impacts; there have been important efforts in recent years to improve public transport, the quality of public spaces, and provide better housing solutions. However, these initiatives have only continued where they have been seen as economically viable, regardless of whether they were socially pertinent. Mexico has a relatively young planning system; it was in the mid-1970s that planning became institutionalised. However, in a very short time, planning institutions lost their capacity to respond to common good interests, and although on paper it continues to privilege the improvement of the quality of life and adequate land management, the physical outcomes do not match the aims of planning regulations but rather the written and unwritten rules of supranational markets. The new urban model raises governance concerns, not only because of the disassociation of local governments with the population of certain sections of municipal territories such as GCs (Eibeschutz-Hartman and Goya-Escobedo, 2006) but also because of the disappearance of shared spaces.

The transnational planning influence we are observing in Mexico is not about spatial configurations, but the construction of policies built on global economic interests and meanings. Healey (2013, p.1511) provides conceptual and methodological tools "for the critical analysis of transnational flows of planning ideas and practices"; the author points out that the analysis should focus on the flows, rather than the origin of the ideas. In that sense, Mexican housing policies since the 1990s have been closely linked to the recommendations of the World Bank with regard to how to enable housing markets to work. However, as Zanetta (2004) points out, the Mexican government chose to ignore those parts of the policy recommendations that were inconvenient for economic growth purposes, such as looking after the most vulnerable segments of the population. As a result, the impacts of global economic interests in urban development were even higher, because corruption and political aims, disregarded public interest. Since the implementation of policies of deregulation, privatisation, and commercial liberalisation amongst others which are widely accepted by Washington based global financial institutions (Williamson, 1990), Mexico has become a debt-driven economy with sprawling cities and possesses a middle-class which is burdened by private automobile dependence, mortgages and consumer debt, and high-cost private services. Macro-policies are affecting everyday lives in individual households and making families more vulnerable in the process.

The issue with the proliferation of gated communities is that once the city only works in fractions it is very hard to make it work as one piece; urban design is used for marketing purposes instead of making more liveable inclusive cities.

For instance, developers of GCs are using New Urbanism principles and Creative Class ideas to boost small businesses to make their planned communities more attractive and therefore more profitable. That is why it was important in this research to look not only at the policies and the practices, but also the ideas, the meanings and the perceptions in the process of gating up (Wagenaar, 2011; Shove, Patzar and Watson, 2012) and how mentalities become institutionalised into practices (Healey, 2013). Transnational ideas have not only influenced policies to boost economic growth and benefit financial interests, GCs are also spaces of metaphors, perceptions, and avoidance. In the following paragraphs, I will use the case study of *Lomas de Angelópolis* in Puebla to illustrate some of the connections mentioned.

5. Lomas de Angelópolis in Puebla, Mexico: A Global Middle-Class Gated Community with Local Implications

Lomas de Angelópolis is a large-scale gated community in the metropolitan area of Puebla, the fourth most important city in Mexico. It is one of the largest gated communities in the country, with over 21,000 housing units organised in small clusters (inner GCs). The original design of the gated community targeted high middle-income families, but the development was so successful that, in only a decade, it increased its size from around 100 ha to 700 ha. As the project became more profitable, it evolved from a simple residential area to a fortified city with its own city centre, schools, universities, hotels, and offices.

My first observation exercises in this GC were conducted in 2009, before starting my doctoral studies, when most of the clusters were not fully inhabited and there were only single-family housing units. Back then,

residents complained about the lack of shops and restaurants, as well as the distance to the city. By the time I finished my doctoral research in 2016, the GC had become a new centrality and most of the leisure, recreation and commercial activities in the metropolitan area are now in Sonata, the commercial district inside the compound.

5.1. Background Information About GCs and the Metropolitan Area of Puebla

The financial crises of the 1980s affected the ability of the middle-classes to obtain housing financing. However, after the changes in land tenure that liberated massive extensions of communal agriculture land *(ejidos)* to urbanisation, and the market-enabling strategies of the early 1990s, Puebla's metropolitan area experienced a boom in real estate that became even stronger after the 2000s due to financialisation.

The first GCs in Puebla were aimed at elite groups with privileged use of urban space. The GCs built between the late 1980s and the early 1990s ranged from 50 to 400 plots to develop (Rodríguez-Chumilla and Mollá Ruiz-Gómez, 2003, p.4). However, the scale and market have diversified since the 2000s, particularly in the municipalities of San Pedro Cholula and San Andrés Cholula. The case study *Lomas de Angelópolis* is located in the vicinity of a land reserve considered in the Regional Development Programme Angelópolis in 1993, developed by the global consultancy firm McKinsey just before NAFTA came into effect, with clear aims of global competitiveness and attracting national and foreign investment (Jones and Moreno-Carranco, 2007; Cabrera-Becerra and Guerrero-Bazán, 2008). The 1993 programme included guidelines for the land reserve Atlixcáyotl, but the rest of the land had very few planning restrictions, which enabled the developers to define their own planning regulations.

According to Milián-Ávila and Guenet (2015, p.184), the chaotic expansion and "socially segregative urbanisation" that led to the proliferation of GCs in Puebla was enabled by the "absence of legislation and clear institutional regulations". In a census conducted between 2000 and 2001 they found 912 gated communities in Puebla and its fringes (Milián-Ávila and Guenet, 2006). These authors consider that some of their main concerns about these enclaves and the private nature of their investment is that neighbouring settlements are having difficulties to access basic services and there is constant congestion due to the reliance on primary roadways (Milián-Ávila and Guenet, 2015). The original regional urban programme in 1993 considered a large section of social housing, but as land value increased, the programme was modified to fit the market's need for luxury commercial areas and elite housing developments (Cabrera-Becerra and Guerrero-Bazán, 2008). The metropolitan area of Puebla includes several municipalities, which make it difficult to take shared planning decisions. Depending on the location, GCs are aimed at diverse socio-economic groups. *Lomas de Angelópolis* is the largest of all, and it incorporates all segments of the middle-classes.

5.2. Normalisation of Middle-Class Gated Communities in a Polarised Environment

One of the main findings of the interviews undertaken for the research conducted between 2013 and 2016 (Morales, 2016) was that residents, developers and even public officials justified the proliferation and normalisation of middle-class GCs in Mexico due to issues of crime and violence. However, in the same interviews, when interviewees were asked about the process of 'gating up' it became clear that there was a strong connection between this supposedly spontaneous flourishing or fortified spaces and transnational planning ideas and economic interests.

Lomas de Angelópolis is such a large residential development that it extends through different localities and municipalities. Residents who were interviewed have become so used to life inside the gated community and the presence of private administrators that take care of their everyday problems, that some of them were not even aware of the name of the municipality in which their house is located before they moved in. This is an example of the disengagement of residents and local governments, and how private actors are assuming functions that were previously covered by the state.

The case study was useful in identifying connections between policies and practices and how these intertwine with people's aspirations and anxieties. Since the first interviews with residents, I realised that the decision to

move into a GC was not only an aspirational choice, but a decision based on real security concerns, a response to financial incentives, or a direct response to limited capacity from municipal governments. Two interviewees decided to move into the GC after their houses or cars were burgled in their previous neighbourhood. One of the interviewees decided to move into the GC after finding that it was much easier and faster to obtain a mortgage for a new house there than it was to obtain a credit to self-construct a dream family house somewhere else. Three interviewees implied that they were somehow 'forced' out of their previous neighbourhoods due to municipal abandonment; these residents considered their neighbourhoods to have been more dangerous because so many people were moving out, and that fixing a pothole or a broken lightbulb in a streetlamp could take years. These interviewees were more satisfied with private administrators looking after their basic needs even if it meant permanent maintenance costs.

The interviews also showed how aspirations and anxieties play an important role in the decision-making process of moving into a gated community, and how these feelings continued even after they moved into the GC. Around the time that the GC was built, conflicts between drug cartels and organised crime became more visible, and stories about kidnappings, burglaries and extortions became more common. The 'talk of crime', as Caldeira (2000) calls it, has become common in coffee shop small talk, but its impact has become exponential because of social media, particularly Whatsapp groups where dramatic warnings are shared. Fearmongering is affecting daily patterns of everyday lives and choices. Residents interviewed shared significant concerns about life in the city and the potential threats that made them feel safer inside the GC.

The normalisation of these enclaves in places such as Puebla, Mexico can be understood through the examples mentioned previously. They emerged as part of a macro-economic strategy that allowed the privatisation of housing production and urban development. Financial institutions made it easier for families to obtain mortgages for newly built houses in this debt-driven economy. Federal governments left municipal governments with limited resources to provide basic public services, which led to the abandonment of consolidated neighbourhoods and incentives for privately-led planned neighbourhoods willing to assume some of the costs and responsibilities. Because of the growing inequalities derived from the economic model and the war on drugs, there has been an increase in crime and violence. The national financial housing strategy promoted disconnected sprawling territories leaving undefended empty available land for development, a perfect excuse for gating up. And finally, GCs and their private administrators represent accountability and reliability for a group of people who have lost their trust in local authorities (Janoshka, 2002; Zanetta, 2004; Moreno-Brid et al., 2005; Eibenschutz-Hartman and Goya-Escobedo, 2006; De la Calle et al., 2012; Monkkonen, 2012).

One interesting issue found during my doctoral research, that I decided to analyse from a different perspective in this article, is what happens with those who work inside the gated communities and live on 'the other side of the wall'. I found that most of these workers had to use informal access and cross pedestrian bridges over polluted waters. I also walked for kilometres and identified different options of illegal collective transport. However, when I asked my interviewees if they knew how their house cleaners, gardeners, and construction workers arrived, most of them had no idea of what they go through. The policies and the practices helped create a physical fortress that isolates residents from the outside world but also the possibility to empathise more with that external reality.

6. Contradictions, Risks, and Challenges of the Normalisation of Exclusionary Practices

Walls and fences are tools to isolate from surrounding hostile conditions. However, under the current global context of polarisation, it is essential to talk about the contradictions, risks, and challenges of these exclusionary practices. There are conflicting and contradictory positions around physical barriers, and President Trump's proposed wall upon the Mexican northern border at a time when gated communities have become normalised in certain sectors in Mexican society raises several questions. For this article, I did seven follow-up interviews with residents whom I had met during my doctoral research, and I interviewed nine new interviewees because I wanted to learn about their perceptions about walls and exclusionary practices. The responses were similar in all 16 interviews: although some of the interviewees would like to live in a more open type of city, they

considered it acceptable and justifiable to protect their property and families using fences, gates, CCTV systems and private security. However, the same people condemned Trump's proposed border wall when asked about it. Four of the interviewees provided a comprehensive response as to why the wall would stop illegal immigration and would have very high costs and environmental impacts in the long-term. The rest of the interviewees focused on the discriminatory nature of the wall against Mexicans, but never mentioned about discriminatory practices in Mexico.

The contradictions within these residents' responses to walls and barriers, can be linked to the normalisation of their own exclusionary practices since they moved inside the GC. One of the risks of normalisation of GCs is that people may become numb and get used to socially and spatially segregating others who are different. The marketing discourse of the case study analysis is that this gated community allows you to live 'life like it should be', in a planned community with all the amenities, services, and activities you need. However, even if it is a community, the discourses and practices are based on individual benefit rather than the common good.

The normalisation of armed privatised security personnel is an example of the same contradictions. Mexican gated communities are filled with armed private security guards; inside these premises it is seen as acceptable. However, every other person with guns outside the gates is seen as a threat. In Mexico, gated communities have become so normalised for middle-income groups, particularly in suburban areas, that it would seem that this is the only valid way to accomplish the goals of habitability, security, quality urban spaces, and community life. For the residents and potential buyers in the case study analysed, security or at least the 'feeling of security' seemed to be one of the main drivers. A fear-driven urban development is hard to modify because it would require changing people's perceptions, attitudes, and behaviours. One of the interviewees mentioned the advantages of open, diverse and inclusive communities, but his wife had lived through a traumatic experience when their house was burgled, and that had changed their position on GCs completely.

During my fieldwork in 2013, I discovered that most of my interviewees had shared a traumatic experience that justified their voluntary displacement into a GC. Most of the stories happened to the residents I interviewed, but some others were just stories that they had heard from someone else. All of my interviewees considered that their quality of life was better than before, so they did not even consider the possibility of going back to a traditional open-street neighbourhood. This is problematic because the normalisation of gated communities is accompanied by a belief that municipal authorities would never be able to provide the same certainties and services in traditional neighbourhoods. Distrust in local authorities is connected to corruption. According to the Latinobarómetro Report in 2017, 61 percent of Mexicans consider that government officials are corrupt and only 16 percent of Mexicans trust the government in general (Latinobarómetro and CAF, 2017). Distrust in local authorities is also a response to their limited capacity to provide basic public services, security and infrastructure.

The same Latinobarómetro Report shows that interpersonal trust has gone down in recent years in all of Latin America; only 18 percent of Mexicans trust other people (Latinobarómetro and CAF, 2017). Fear-driven urban developments produce highly segregated spaces, but anxieties do not disappear. In a recent Smart City exhibition in Puebla, a large majority of the companies exhibiting their products were surveillance and security systems. According to one of the interviewees, in Lomas de Angelópolis some private administrators in a few clusters have located CCTV systems in every street and implemented rules that force every visitor to open their car's boot and every house cleaner or gardener to show their bags on their way out. The fences and the gates are not enough to keep people safe or make them feel completely safe.

The risks and challenges of modern Mexican gated communities are not just in the shape of walls and fences but the inequality and physicality of segregation. It is not only the increasing gap between the rich and the rest of the population, but also the super-stratification of middle to lower-income groups. GCs, in that sense, should be seen as a dangerous urbanisation model in terms of governance. In the case of Mexico, we can see how crises and political uncertainty are shaping and reshaping the urban structure. The case study I analysed in Puebla can be seen as an extreme case because of its large scale and multi-clustered structure (more than 21,000 houses located in stratified mini-gated communities). The research showed that residents felt judged by outsiders and considered that they had valid reasons to live in a GC and these had nothing to do with the exclusiveness, status, and prestige drivers usually mentioned in literature. There were three main issues why these residents considered that gated communities are not only desirable but necessary:

- Municipal authorities are unable to respond to their needs and they feel that private administrations are more reliable and provide better services.
- Their family's safety is more important than anything else, and if it takes a wall, a fence, a security guard, a camera and an alarm, these residents will not hesitate to pay for all them because it provides them peace of mind.
- The ideal of a shared space for all sounds good, but they would rather live amongst 'people like them'. The residents I interviewed do not consider themselves racist or discriminatory but defend their right to associate and spend time with people with the same interests and tastes.

From a policy perspective, it becomes very hard to promote inclusive urban environments, because the meanings attached to this model of safe urbanism is so strong. The 'new normal' makes the traditional city undesirable because it does not offer the same elements of beauty, security, reliability, and infrastructure. The risks and challenges of these urban segregated structures are that once they become normal, people become numb and stop realising the conditions of disconnection and isolation. Gatedness, or the need to live protected by gates, is becoming so desirable that it is leaving the residential areas and reaching public spaces, universities, and public facilities. In Puebla, even bike lanes and public parks are being gated, because people feel safer. Public and private universities are incorporating more access control strategies and increasing their security budgets to fulfil their students' expectations. The problem with this normalisation is that it makes it more difficult to promote more inclusive policies and practices.

In recent years, scholars and planners in Puebla have proposed the prohibition of GCs and other exclusionary urban practices. However, these ideas face strong opposition because most people in Puebla value the presence of 24-hour security personnel or safe and closed environments. During 2017, I compared advertisements for new houses with similar sizes and designs; the prices varied not as a consequence of their location or the presence of schools and public spaces nearby, but according to the type of neighbourhood (gated or non-gated) that they were located within. With this in mind, I consider that in order to change policies and practices we should understand meanings before designing new regulations and planning instruments. The research in Puebla shows that as long as people attach positive meanings to these exclusionary urban spaces, they will not support any project that opposes them; even when projects do not comply to federal planning or environmental laws. The clearest example of this was the construction of the International Baroque Museum designed by the famous architect Toyo Ito. It was more important to have an outstanding architectural project from a famous architect than to protect one of the few open large-scale green areas left in the metropolitan area.

With this research, I found that the proliferation of gated communities has become so normalised in Puebla that there is not even official data about them. The existing numbers have been provided by academic research, but official sources such as Cadastre, the Urban Development and Sustainability Secretary, or the National Institute of Statistics and Geography (INEGI) have no official registry of sizes, locations, the presence of private administrations, the presence of private security personnel, or homeowners' associations. In Puebla, there are no laws or regulations that consider the interrelation of gated communities and their surroundings.

7. Conclusion: Building Bridges in a Time of Walls

The current global context of polarisation, and the contradictions, tensions, risks, and challenges of exclusionary places, make it difficult to think about alternatives to isolation and securitisation. The analysis of an extreme case of gatedness such as *Lomas de Angelópolis* in Puebla, Mexico provide some clues to planners and policymakers to deal with this complex urban phenomenon that has been shaped by global economic forces and micro-level practices. The extreme case of social inequality and distrust in institutions in Mexico should act as a warning for other regions of the world such as the European Union where principles of diversity, inclusiveness, and multiculturalism are under threat because of the fears and security concerns of the few.

Considering the particular case study of Lomas de *Angelópolis in Puebla*, some of the main risks and challenges of exclusionary places, as well as possible opportunities to address these issues can be summarised thus:

- In Mexico, there is a concurrency principle in urban development control laws. There is a federal framework and every state and municipality has its own specific legislation. After the 2018 presidential transition, Mexican institutions and policies are facing the possibility of dramatic changes. It is too early to know what the outcome of this transition will be, but in terms of policymaking, the new national housing policy is based on human rights, and there is a clear intention to not only contain sprawling metropolitan areas but also to regulate large-scale housing developments to mitigate, amongst other things, the negative impacts of gated communities.
- The isolation on residents inside gated communities such as *Lomas de Angelópolis*, according to the interviews conducted, creates a sort of numbing effect that makes residents unable to pay attention or empathise with others outside. The risks and challenges of this numbing effect are that residents inside the GC depend on economic, political, and social stability to maintain themselves in a manner that is disconnected and disengaged with the outside world. However, in the last couple of years, main roads have become saturated during the rush hour, there have been growing concerns about water supply, and burglars have found ways to enter the premises without being caught. These issues have made residents remember that there are municipal authorities, at least to complain about the lack of security. The opportunity in these cases is the recognition that to be able to fix those problems, there must be a will to compromise with surrounding neighbourhoods and find shared solutions.
- The case study shows how macro-economic interests have shaped thousands of lives. It is not only the important changes in land, planning, housing and financial policies that enabled the proliferation of GCs, but also the debilitation of the state that made these neighbourhoods more reliable than the traditional city. There can be no alternative to GCs until local authorities recover the confidence and trust of citizens. The opportunity to build bridges lies in fighting corruption and promoting permanent neighbourhood improvement programs.
- The case study also shows how the enabling strategies of the state have weakened planning laws and regulations, and citizens have lost their confidence in the planning system. To regain trust in the planning system, the benefits should be tangible, measurable, and easy to spot. Therefore, municipal governments should be able to improve public service provision, security, and infrastructure. There are creative planning instruments that are used in other Latin-American countries that might help municipalities to finance these basic needs.
- Fear-driven urbanisation strategies create unfinished safe spaces. Observation exercises in Puebla showed that even in the safest GC in the metropolitan area, residents, owners, authorities and developers will continue to invest in new security features. No matter how safe it actually is, fear and anxieties do not disappear. Local governments must provide not only adequate infrastructure and security personnel, but also identify the main issues that people fear the most. The current conditions of crime and violence make this issue one of the hardest to solve, but a better understanding of the underlying problem, might contribute to fighting them.

The case against these exclusionary places is embodied in what I call the 'traps of gatedness'. The first trap is the 'credit and debt trap' that is the result of a state-led policy promoting homeownership binding thousands of middle-income families to long-term debt. The second trap is 'the private government trap' because of the governance problems that come with a system that functions above the public interest. Finally, I consider the 'security and control trap' that is making people more vulnerable because of the extreme scrutiny and surveillance they are subject to.

The risks of the normalisation of these spaces, particularly under uncertain political and economic conditions is that it makes it seem as though there is no alternative. Prohibition, from a planning perspective would be counterproductive because residents would demand their right to live in a safe environment. The case study illustrates the need to promote planning strategies from the local level that understand people's aspirations and anxieties, without affecting other people's access to opportunities. The case shows that people are willing to follow rules and pay fees as long as they see that they are being looked after. Gated communities are often seen as the result of a failing planning system. But it is not necessarily failed planning. It is the combination of economic, social, and political interests that are connected to planning. Therefore, alternatives to building bridges in a time of walls and extreme polarisation cannot come only from regulation. Housing policies should consider not only their relationships with global markets and financial institutions, but also municipal capacity, governance strategies, and sustainability. The case study illustrates that the structural conditions of market-led housing policies made it easier to build and move into a gated community, but it also illustrates that practices are defined by meanings and perceptions. In that sense, local governments must pay more attention

to aspirations and anxieties of their population to anticipate and provide better and more inclusive urban solutions.

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CULTURAL ENTHUSIASTS, CIVIL SOCIETY AND THE STRATEGIES OF HERITAGE-MAKING IN THE LATE RUSSIAN EMPIRE

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Abstract

Cultural heritage preservation became one of the key topics of public discussion in the Late Russian Empire. These discussions led to the establishment of several initiatives for protecting Russian cultural heritage. This article demonstrates that such initiatives developed a variety of different strategies for heritage-making. Examples from the Society of the Protection and Preservation of the Monuments of Art and Antiquity in Russia and the Society of the Revival of Artistic Rus' show that several strategies of heritage-making focusing on cultural heritage preservation were developed simultaneously by different civil groups and helped cultivate the interest of the state authority in the subject, an interest which later became institutionalised under the Soviet regime.

Keywords

Cultural enthusiasts, heritage-making, the Late Russian Empire, cultural heritage

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1. Introduction

In his book *Iz proshlogo russkogo obschestva*, the historian of the revolutionary movement in Russia, Vasilii Bogucharskii (1904) described the feeling of being limited in action, which was experienced by the members of the Russian intelligentsia in the 19th century. A mood of hopelessness and the impossibility of finding their place and justification in society were also well described in Anton Chekhov's plays – a mood of ambitions, which could not find realisation in real life. The October Manifesto of 1905, officially "The Manifesto on the Improvement of the State Order", following the first Russian Revolution in 1905, offered the possibility of more effective social actions than those which had previously been permitted. The new freedoms that came with it - freedom of conscience, freedom of speech, freedom of assembly and association – gave a stimulus to the development of civil society. The number of different voluntary associations grew (Bradley, 2009, 2017) and coincided with rapid industrial development, which provided civil initiatives with the necessary funding. According to Joseph Bradley, civil society in Russia provided opportunities to those outside authoritarian power institutions to enter the public arena, influence public opinion and seek cooperation with the authorities in issues that supported nationalism and patriotism (Bradley, 2017; Shevelenko, 2017).

The development of civil society in Russia prior to the revolution has become an established academic subject, although some researchers still question whether the concept of "civil society" can be easily applied to the pre-revolutionary Russian Empire. The problem of adapting this concept to Russian studies was discussed, for example, by Christopher Ely, who concluded that at least some of the ideas and institutions that constituted civil society in the West also came to form a fundamental part of Russia's political culture (Ely, 2009).

Despite the previously common view that most of the Russian population before the revolution were poor, illiterate and oppressed by the government, recent archival research has provided a picture of Russian society in which active participation in social life was widespread (Conroy, 1998; Bradley, 2009). Not only industry, but also ways of life and new ways of establishing communities were being modernised. In my article I use the following definition of civil society: "organizations and networks of cooperation that are created primarily by the initiative of citizens and draw at least in part on resources that are not granted by the state" (Conroy, 2006, p.11). According to Conroy, civil society in Russia proliferated in the second part of the 19th century and the beginning of the 20th century. It was represented by a group of people who "worked within the existing political and economic system to modify it rather than seeing to topple it by violent means" (Conroy, 2006, p.12). The October Manifesto provided a legal basis for this growing civil society. Although, according to Ely (2009, p.235), the Tsarist regime counteracted the given freedoms and slowed "the pace of change under the new prime minister Petr Stolypin" (1906–1911), the Manifesto stimulated a polyphony of social ideas.

The preservation of Russian cultural heritage became one of the spheres in which civil society played an active role and where cooperation with the authorities was possible since it was in line with official nationalism (Kelly and Smith, 1998). Cultural practitioners testified that the Russian government at the time was not able to effectively resolve problems regarding the preservation of old monuments. The legal mechanism did not exist, the funds were very limited and there was no state institution responsible for cultural heritage (Aliab'eva, 2013, p.5). Industrialisation and urban development led to the re-building and demolishing of old buildings, while provincial locations suffered from a lack of resources for preservation work. Certain members of society, sharing their understanding that material history was disappearing, came together and called for the preservation, reconstruction and documentation of cultural heritage. One of the main promoters of heritage preservation was the journal *Starye Gody*, which constantly published articles on the vandalisation of Russian cultural and historical monuments.

While the history of Russian culture has attracted many scholars, the strategies of heritage-making in the Late Russian Empire have not benefitted from considerable research. Nevertheless, some attention to cultural heritage-making was given in the framework of such historical studies as the history of restoration (Shchenkov, 2002), literature (Schönle, 2011), architecture (Lisovskii, 2000), law (Dediukhina, 1997) and national identity construction (Kelly and Shepherd, 1998; Franklin and Widdis, 2004).

My aim is to analyse the role of cultural enthusiasts and civil initiatives in the formation of Russian cultural heritage preservation discourse, institutions and practices. In doing so, I provide an account of the work of

non-governmental organisations: The Society of the Protection and Preservation of the Monuments of Art and Antiquity in Russia (henceforth referred to as the SPPMAA) and The Society of the Revival of Artistic Rus' (henceforth referred to as the SRAR) – two of the most active and established groups in this field that were both operating before 1917. Though their activities encompassed different ideologies, their shared interests in preserving Russian cultural heritage united them. They had a significant influence on the development of cultural heritage preservation discourse and the promotion of the concept of cultural heritage, as well as the development of a wide range of heritage-making practices.

This growing interest to the Russian cultural heritage coincided with the modernisation of society in different spheres of life – social, economic, ideological, artistic, and so on. In keeping with other European countries before World War I, this modernisation went hand in hand with the development of national and imperial discourses as a consequence of, and reaction to, globalism in the form of international industrialization. Russia closely monitored cultural heritage preservation ideas in Europe as developed, for example, by Eugène Emmanuel Viollet-le-Duc and the *Arts and Crafts* movement. Proof that the Russian intelligentsia followed European trends in heritage study can be provided by reference to, for example, their shared interest in Italy, with a similar tradition of cultural journeys, so-called Grand Tours, being undertaken both by Europeans and Russians (Pemble, 1995; Turoma, 2004; Sokolova, 2018).

The Russian antique market researcher Maria Katagoshchina writes that as early as the 18th century the European antiquities market was well developed in Russia, and was influenced by European practices, although Russian antiquities continued to be a limited niche market and were predominantly objects of interest of old believers (Pivovarova, 2009; Katagoshchina, 2014). The broader concern about Russian cultural heritage was stimulated at the turn of the 18th and 19th centuries as a result of growing scientific interest in Russian history, and was further supported by the patriotism which followed the war with Napoleon, as well as access to the old objects sold by families impoverished during the French invasion of Russia. Archaeological findings in the territory of the Russian Empire also inspired public interest in local cultural history (Katagoshchina, 2014; pp.51-59, 108-109).

In order to analyse the process of the formation of the discourse as well as the practices and institutions of heritage preservation, I use the term 'heritage-making', an established concept in heritage studies (Leturcq, 2009; Franquesa, 2013). In the example of contemporary Spain, Jaume Franquesa (2013, p.346) underlines that the concept of heritage "has become a hegemonic idiom helping to legitimize, but also resist, the gentrification and private appropriation of urban space in a global conjuncture dominated by neoliberal policies and voracious real estate pressures". Thus, heritage is understood not as an object but as a practice of 'heritage-making' – where different actors strive for legitimization through heritage-making practices.

I found the concept of 'heritage-making' to be useful for describing practices of heritage preservation in the Late Russian Empire because it helps describe the *process of heritisation*, or as Leturcq (2009) claimed, heritage-making is the process of invention or creation of cultural heritage. It is a complex set of activities involving different actors, objects and institutions, which leads to producing established heritage practices. The aim of this article is to demonstrate that different civil actors were energetic contributors to the heritage-making process in pre-revolutionary Russia, even if they had no decision-making roles in the official cultural institutions.

My research is situated within critical cultural policy studies. It is an academic discipline that analyses the power, information and financial distribution in the sphere of institutionalised culture. It usually questions top-down political decision-making, focusing on governance and administrative systems; national, local, global, gender, and other constructions of identities within cultural organizations; direct or indirect financial support of culture; whether legal systems favour culture production and dissemination, and so on. The study of cultural heritage as part of critical cultural policy studies was formed by such significant authors as Tony Bennett (1995, 2007), Rodney Harrison (2013), Karsten Schubert (2009), Andrea Fraser (2005), Daniel Sherman and Irit Rogoff (1994), Douglas Crimp (1993).

While the focus of critical cultural studies is on the role of the state or the market in the formation of cultural policy, it also highlights the roles of independent non-profit art and culture practitioners. For example, the importance of the participation of artists in cultural policy decision-making has been addressed by scholars

such as Paul Glinkowski (2012) and Jane Woddis (2005, 2014). The discussion of cultural actors and agencies in contemporary Russia has also been the subject of scholarly research (Turoma et al., 2018; Kuleva, 2018; Safonova et al., 2018).

Nevertheless, artists, art critics and other cultural producers are more often seen as passive beneficiaries of policies and funds, while the state is cast as a benefactor and an active decision-maker which distributes financial support in an organised manner in addition to formulating the rules of its distribution (Toepler and Zimmer, 1997; Zimmer, 1999; Bertelli et al., 2014; Schatteman and Bingle, 2017). Meanwhile, as I will demonstrate in the example of the Late Russian Empire, the authorities, in forming official cultural policy, are dependent on discourses, cultivated and driven by non-governmental cultural organizations and independent practitioners. Representatives of both the state and cultural communities formulate their ideas in shared discursive field and rely on each other in the formulation of key concepts and ideas. Thus, cultural policy is not just comprised of a number of top-down decisions, regulations and instructions, which authorities impose on citizens and cultural spheres. As the analysed material demonstrates, the development of cultural policy takes place as an interchange of ideas between different actors where civil society can play a discourse-defining role.

My case study, two non-governmental organizations – the SPPMAA and the SRAR – took an active part in the formation of cultural heritage preservation ideas and practices during the last decade of the Russian Empire. Despite both societies developing a discourse on heritage-making, they interpreted cultural heritage differently and proposed different ways of preserving it. These two societies developed a set of ideas that helped two different strategies of heritage-making to emerge and influenced two different attitudes to heritage preservation. Subsequently, both sets of ideas influenced the actual cultural policies that were adopted in Russia and the USSR. While the Soviet government adapted the more cosmopolitan ideas of the SPPMAA, the pre-revolutionary government expressed an interest in the implementation of the intemperate patriotic ideas of the SRAR.

I consider heritage-making to be both an intellectual project and a practical action, the important part of which is the defining of what is heritage, and what kind of attention and care it should be given. Both societies developed conceptual as well as practical aspects of heritage-making practice. The proposed regulations and practices of heritage preservation acted as mechanisms that transformed something old into a cultural heritage object, or, as one would have said at the time, a *cultural and historical monument*. Thus, through their heritage-making activities, both the SPPMAA and the SRAR defined and established the social value and meaning of heritage objects, which they wanted to protect as historical and cultural monuments.

This article initially provides a general overview of the strategies of the heritage-making of the SPPMAA and the SRAR and discusses their similarities and differences. The last part of the article problematises the meaning of the viewpoints of these societies as *potential* cultural policies. Finally, I summarise how civil society initiatives influenced the formation of official cultural policies.

2. Civil Society Initiatives in Heritage-Making

2.1. The Society of the Protection and Preservation of the Monuments of Art and Antiquity in Russia (1909–1917)

The group of enthusiasts that grew from the circles of the journals *Mir Iskusstva* and *Starye Gody* founded the Society of the Protection and Preservation of the Monuments of Art and Antiquity in Russia. The society, which existed from 1909 to 1917, was formed with the idea of not only educating society about the necessity of such preservation but also the responsibility of taking more direct action to preserve disappearing cultural monuments.

The society was founded at the same time as the draft of the act on monument protection was submitted by the interdepartmental commission of the Ministry of Interior Affairs to the Russian Parliament (Aliab'eva, 2013, p.34). This project was harshly criticised by the SPPMAA, as well as by other cultural organizations, such as the

Moscow Archaeological Society and the All-Russian Artists' Union. The main critique was directed towards the low budget that was envisaged for research and preservation work, and the idea of establishing a strictly centralised institution responsible for cultural heritage preservation – which would make it difficult to reach provincial Russia, and present a minimal possibility of participating in the preservation work in the framework of a newly established institution for artists and scholars. The draft was also criticised for the narrow definition of old monuments (only those objects which were created before 1725 were considered to be monuments); a focus on the cultural heritage of the Russian Orthodox church while Russia was a multi-confessional, multinational country; the absence of administrative procedures for registering historical objects; the absence of opportunities for urgent restoration; and very limited legal punishment for the destruction of valuable cultural and historical objects (*Ob'iasnitel'naia zapiska*, 1912).

The SPPMAA envisioned a much broader action plan for heritage protection and preservation than that outlined in this official proposal. In addition, it also contributed to discussions on the definition of a cultural heritage object from a time perspective. Before the SPPMAA, objects older than 150 or 100 years were considered to be antiquities (Dediukhina, pp.194, 205). The SPPMAA proposed to define monuments that were only older than 50 years as cultural heritage. Thus, the society made an important contribution to defining the concept of 'monuments' *(pamiatniki)*. Prior to this, the widespread opinion was that only monuments produced before Peter I (dates of reign 1682 - 1725) were valuable and worthy of preservation. The SPPMAA insisted that even monuments that belonged to more recent times could be treated as cultural heritage.

Society members claimed that the first step of preservation was registration because it is first necessary to know what to preserve, what to prioritise and how much time and funding are needed for preservation work. The registration of cultural and historical monuments previously made by the state was inconsistent and lacked important information such as building plans and dimensions (Aliab'eva, 2013, p.88). The SPPMAA established the Commission of Registration of Monuments of Art and Antiquity. Thus, monuments previously unknown to scholars and the public were now registered and described.

The society significantly widened the list of objects for preservation by including household items, furniture, music manuscripts, environments such as parks, gardens, squares, courtyards, place names (*Ustav obschestva zaschity i sokhraneniia v Rossii pamiatnikov iskusstva i stariny*, 1910). The society's special interest was manor houses and their culture which, as the society pointed out, should be preserved in their unity as both architectural and art-historical monuments.

The SPPMAA introduced the restrictive concept of what the restoration of monuments should be: "Recognizing the need for the most careful repair, the society considers restoration, as restoration of the original image of the monument, undesirable and permissible only in very exceptional cases" (*Ustav obschestva zaschity*, 1910, §1). The society opposed any distortion of a monument. *Distortion* was defined in §1 of The Charter as "any change to the external or internal image of monuments…, not caused by extreme necessity".

§2 of the Charter defined the wide scope of the society's activities. To fulfil its aims, the society assumed responsibility for contacting local and national government to inform them about existing problems with cultural heritage preservation, collecting information on valuable cultural objects, donating objects to museums, realising preservation projects, opening branches of the society in different regions of Russia, producing publications and exhibitions, and cooperating with other societies in the matter of cultural heritage preservation. These activities were a significant complement to state measures in cultural heritage preservation and required a significant level of knowledge and dedication, which SPPMAA members could provide.

The society included leading Russian cultural specialists as well as high-ranking members of Russian society and the intelligentsia. The chair of the SPPMAA was Grand Duke Nicholas Mikhailovich of Russia. One of his vice-chairs was Alexandre Benois, the founder of the *Mir Iskusstva* group and journal. The secretary was the prominent art historian, Nikolai Wrangel. SPPMAA members invested their time and resources on multiple projects, such as the restoration projects of Rozumovsky Palace in Baturyn and the Ferapontov Monastery (Aliab'eva, 2013, pp.78-79, 82-83). The members built a network of decision-makers in various state institutions and this assisted the society in securing success for some of its initiatives; for example, preventing a planned extensive property development in the historical centre of St. Petersburg, which would have inevitably destroyed much of the historic city's landscape.

The ideas of the SPPMAA were not totally new as similar types of regional organizations already existed. However, what was new about the SPPMAA was its understanding that preservation activities should be systematic and that this required the coordinated work of enthusiasts from all over Russia. Thus, as part of its activities, the SPPMAA contacted local organizations and helped them to become part of the society's network. It also proposed standardised methods of establishing best practice for heritage preservation. 21 branches of the society were opened across Russia. The society grew quickly and was self-financed. In 1909 it had 32 members, in 1914 it already had 694 members, with a slight reduction in 1916 – 581 members – due to the war (Aliab'eva, 2013, p.24). The society's members possessed significant administrative resources, even in smaller towns. Thus, the society had a stable base from which to create a functional structure for heritage preservation, even in provincial Russia. For example, according to Dina Tikhonova, the SPPMAA's Tula branch established almost all Tula museums, which still exist today (Tikhonova, 2014, pp.46-47).

The years before World War I were the most active period for the SPPMAA. The society had an intensive education programme and regularly attracted public attention to the monuments that needed preserving. It was also known that the Russian Orthodox Church was not very sensitive to the preservation of its own cultural heritage objects (Bilibin, 1904). Thus, the society took charge of educational work among the clergy. It was well connected to the Russian Museum and initiated several exhibitions there. During the war the focus of the society shifted to the preservation of cultural heritage in the context of war. This debate continued to influence public discussion, even after the end of the war, when the SPPMAA no longer existed. Nicholas Roerich, one the SPPMAA's members, helped to popularise these ideas and became known globally for his Roerich Pact, The Treaty on the Protection of Artistic and Scientific Institutions and Historic Monuments, which became the basis for forming international standards of law for cultural heritage protection in the event of armed conflicts in the 20th century.

It is difficult to fully observe the results of the society's work because of the lack of existing archival material (Aliab'eva, 2013, p.13). What we know mainly originates from the society's annual reports and publications. Nevertheless, even these sources provide a picture of an active organization that was not only engaged with a wide range of activities but also sought to bring change to existent practices of heritage preservation.

In summary, it could be said that the SPPMAA defined a strategy of heritage-making in which the concept of heritage protection and preservation played a key role. The SPPMAA's interest was not limited to antiquities. The society accentuated the continuity of cultural history and heritage preservation, and the need to preserve monuments from more recent times. It promoted research and preservation of the information on historic monuments and was interested in cultural heritage preservation practices in Europe, taking western ideas as inspiration. The society also broadened the concept of an historical monument, including non-material heritage as well as landscapes and environments.

2.2. The Society of the Revival of Artistic Rus' (1915–1917)

Another civil society that aimed to preserve and promote Russian cultural heritage, and which was active during the last days of the Russian Empire, was the Society of the Revival of Artistic Rus' (1915–1917). Although several of the ideas of the SRAR were similar to the principles of the SPPMAA, there were also significant differences between the two societies' attitudes to heritage-making. The SRAR was created during the First World War and reflected an anti-western mood. While the SPPMAA supported the ideas that the best kind of preservation of historical monuments was conservation, and that every style belonged to its own time and that it should not, therefore, be recreated in contemporary conditions, the SRAR fostered the idea of *pastiche* – the creation of modern objects and buildings in the Old Russian style. SRAR's members believed that the old style could be revived and adapted to contemporary needs. Thus, the aim of SRAR, defined by its Charter was: "disseminating among the Russian people a wide acquaintance with ancient Russian creativity in all its manifestations and its further successive development in application to modern conditions" (*Ustav obschestva vozrozhdeniia khudozhestvennoi Rusi*, 1915, p.23).

As a positive example of adaptation of the old tradition in the framework of contemporary life, SRAR referred to the famous Ball in the Winter Palace in 1903, one of the last high society celebrations of the Russian Empire.

The ball was organised by the Imperial Family. Everyone was asked to wear a costume inspired by 17th century Russian style. Praised by the SRAR, this event was criticised by SPPMAA members, who would have preferred to have seen the funding, which had been spent on imitating Old Russia, used on the preservation of those historical monuments that still existed and which were collapsing into oblivion. Thus, one of the main differences between these two societies was their attitudes to authenticity – for the SPPMAA, authenticity was an unquestionable value, while for the SRAR, the authenticity of historical objects was less important than ensuring the existence of the old style in contemporary life.

SRAR members had a very close connection with the Royal Court. The society was personally supported by Nicholas II, whilst the head of the society was Prince Alexey Shirinsky-Shikhmatov. The member's list included the elite of Russian high society – bishops, aristocrats and famous artists such as Ivan Bilibin, Konstantin Makovsky, Viktor Vasnetsov, Mikhail Nesterov and Nicholas Roerich.

The anti-western mood of the SRAR was developed against the background of intensive anti-German propaganda, which was widespread in Russia during the First World War. Those nations that Russia had previously admired as examples of high culture and civilization demonstrated the impossibility of finding a peaceful solution to the European crisis. This was used in Russian propaganda as a sign of the decline of moral authority in these countries. Disappointment in the rationality and moral strength of Europe contributed to the development of the Russian nationalistic discourses and interest in Russia's own cultural traditions. The SRAR's Charter described this disappointment as follows:

> Russian society, struck by the sudden moral savagery of those nations that are at war with us… began to involuntarily seek the sources of its spiritual strength in those, developed during centuries, historical everyday principles of ancient Russia, which could not be erased by two centuries of foreign imitations. Everyone turned their gaze to the interior of their country and, along with the instructions to use the natural resources of their native land, voices are heard, which remind us of our spiritual treasures, our forgotten ancient architectural and artistic art, historical shrines that are scattered over a wide landscape (*Ustav obschestva vozrozhdeniia khudozhestvennoi Rusi*, 1915, p.11).

Thus, in the SRAR's work, interest in Russian cultural heritage was closely associated with nationalistic military discourses. An anti-western patriotic agenda was integrated into the society's heritage-making practices. Drawing attention to Russian cultural heritage, the SRAR promulgated Russia's right to follow its own political and cultural path. The society's members saw the beginning of World War I as a trigger, which should result in the finding of Russia's own identity.

One of the society's most important interests was education and the promotion of information about Russian cultural heritage. The society described the unbalanced situation in relation to Russian history when educated Russians were more familiar with monuments in Europe than those of their own country. Trips within Russia with the aim of studying historical monuments were rare (*Ustav obschestva vozrozhdeniia khudozhestvennoi Rusi*, 1915, p.7). As a result, members of the SRAR concluded that the extent of the destruction of Russian monuments by Russians was no surprise. It was a result of a lack of knowledge and interest in Russian tradition, supported by Russians' westernised education (*Ustav obschestva vozrozhdeniia khudozhestvennoi Rusi*, 1915, p.6).

The SRAR accentuated media promotion of their ideas and wanted to reach a wide audience (*Ustav obschestva vozrozhdeniia khudozhestvennoi Rusi*, 1915, p.18). It aimed to disseminate information about Russian art, religion, and everyday life through its own publications and lectures, as well as financial support, which the members planned to award to like-minded projects and initiatives.

In general, the SRAR intended to use a variety of means available to disseminate information. The main target group was defined as being, at least to some extent, educated persons and studying youth. According to Adrian Prakhov, a member of the society as well as an art critic, archaeologist and art historian, priority should be given to personal acquaintance with original monuments. To reach a wider audience, the SRAR planned to organise study trips to cultural heritage sites (Shabarova, 2013, pp.327-328).

When acquaintance with original works was not possible, Prakhov recommended the use of light projections of photographs made in the manner that had been employed by Sergey Prokudin-Gorsky who was well known for his colourful pictures of his travels across Russia. Prakhov expressed concern about the limited number of teachers of the history of national art in Russia. According to him, the SRAR should aim to educate future teachers specialised in Russian culture (Shabarova, 2013, pp.165-166).

The special attention paid by members of the SRAR to younger people was influenced by their understanding that it was easier to shape the ideas of younger people than adults. The society wanted to make a list of all schools in which students studied artistic subjects – architecture, craft, and drawing – to organise competitions amongst students in which the latter would create contemporary objects on the basis of examples of Old Russian styles. The SRAR's interest in Russian history was not purely aesthetic; cultural education was seen as forming part of patriotic education (Shabarova, 2013, p.143).

The society paid special attention to the Russian language and considered it to be an important part of national cultural heritage. Their aim was to rid the Russian language of foreign words. The SRAR planned to introduce an award for teachers and pupils who demonstrated the successful practice of language purification. Like-minded citizens also could submit suggestions, i.e. which words of foreign origins could be changed into Russian analogues (*Obschestvo vozrozhdeniia*, 1915, pp.7-8).

Another method of popularising Russian culture, discussed by the SRAR, was cooperation with The Ministry of Railways. This was undertaken so as to ensure that the Russian style was used in construction projects belonging to the country's railway system. It was argued that a special architectural department should be created with architects or civil engineers who already worked in the neo-Russian style (Shabarova, 2013, p.181).

The most successful project driven by SRAR members was the creation of the Theodore Sovereign's Cathedral and Theodore Town, an office and living residence, built for the military and clergy in Tsarskoe Selo, next to the residence of the family of the Russian Emperor.

Yurii Loman, the son of Dmitrii Loman, an SRAR member, who had spent his childhood in Tsarskoe Selo and witnessed the construction of the cathedral and the town, wrote in his memoirs:

> Using the religious-mystical mood of Nicholas II, and especially his wife Alexandra Feodorovna, my father and Prince A.A. Shirinsky-Shikhmatov, active members of one of the scientific societies for studying the history, archaeology, philology and ethnography of the countries of the Middle East, that is, Orthodox Palestinian society – put forward the idea of creating in the immediate vicinity of the palace a temple in the XVII century style. This was because of the absence of a regimental church for the consolidated military troops in Tsarskoye Selo (Shabarova, 2013, p.406).

The architect Vladimir Pokrovsky designed the cathedral in the neo-Russian style, inspired by the Cathedral of the Annunciation in Moscow. The interior paintings in the cathedral were made according to drafts by Viktor and Apollinary Vasnetsovs. Theodore Town was designed by the architect Stepan Krichinsky. In addition, the Warriors Hall *(Ratnaia palata)*, designed by Semion Sidorchuk, was intended to function as a museum of the history of Russian troops. Construction of the pavilion began in 1913. When Russia entered the war, it became a museum dedicated to the ongoing military campaign.

From the beginning of the First World War, the town was adapted to the needs of a military hospital. To entertain wounded military personnel, concerts were organised in the Russian national spirit, featuring national singer Nadezhda Plevitskaia, ballet dancer Agrippina Vaganova, an ensemble of folk instruments led by Vasilii Andreev, as well as the Russian romance performer Yuri Morfessi. Sergei Yesenin and Nikolai Klyuev, representatives of the New Peasant Poets group, also read their poems (Shabarova, 2013, p.463).

The architecture of the cathedral and the town was intended to inspire patriotism and should have led to the consolidation of Russian society. The aim of the project was understood in the context of the war as a basis for future patriotic education of Russian citizens.

The plan of the cathedral and town was an eclectic interpretation of Russian architectural traditions. It included elements of Rostov's XVII century style; the style of earlier historic structures in Novgorod and Kostroma; some of the ideas were also taken from the Moscow Palace of Facets (Shabarova, 2013, p.27). The same mixed style was used for the abundant interior decoration, inspired by churches in Yaroslavl, Rostov, Uglich, Romanov-Borisoglebsk, Ferapontov Monastery, Chambers in Zaryadye, as well as fragments of Russian icons, applied art objects, book illustrations, embroideries, and textiles, amongst others. The theme used for frescos praised the royal authority in the tradition of the Minister of National Education Sergey Uvarov's doctrine of Orthodoxy, Autocracy and Nationality (Perrie, 1998). The Tsar was depicted in a glorified manner as the head of an Orthodox army (Shabarova, 2013, p.34).

Nicholas II visited the construction site on 12 February 1917, when the buildings were almost completed, and was satisfied with the outcome of the project. From the start, this building complex was planned as an inspiring example of the development of Russian art. The role of royal support for the preservation of Russian cultural heritage was emphasised by SRAR members and demonstrated, therefore, that this matter had started to become part of the official ideology. In summary, it could be said that the heritage-making strategy of the SRAR focused on patriotic education and the strengthening of authoritarian power.

3. Heritage-Making as a *Potential* Cultural Policy

The heritage-making strategies of both societies included ideas that could have become part of the official cultural policy of the Russian Empire if the destiny of Russia had not changed so dramatically in 1917. Thus, I would describe their strategies as 'potential cultural policies'.

Russia began a political transformation as a reaction to the Revolution in 1905 but there was still uncertainty about its direction, in the same way that there was uncertainty about the very basis upon which reformed society should be built. As Tatiana Khripachenko (2014) noted, several different concepts of Russian state sovereignty existed: based on the law, the people, and the monarchy, and all three concepts found support among different groups of citizens.

The SRAR's ideas were very compatible with the anti-western propaganda of 1914–1917. Thus, the ideas proposed by the SRAR could have influenced the development of a more nationalistic form of education and cultural policy in the years after the war if the Russian Empire had continued to exist.

As Nicholas II closely followed the activities of the SRAR and legitimised its projects, the SRAR's monarchist ideas could have been used by the government to restore and reinforce its authority after the war. The promotion of national cultural ideas could have become a helpful tool for the post-war nationalistic consolidation of Russian society.

George Gilbert (2016, p.1) described two possible ways of the development of Russian society:

> Whether tsarist Russia was to become a state based on the rule of law and civil rights, or else a police state based on repression, was one question that especially vexed educated society. However, the autocracy did not altogether lack support; many groups rose up to defend it in the face of the revolutionary challenge.

If more liberal groups had been given greater influence in the government after the war, the SPPMAA's strategies could have been integrated into official cultural policies in the field of heritage preservation. The more open pro-western attitude of the SPPMAA would have been in tune with liberal discourses, as well as society's interest in local administrative initiatives, as they had claimed that cultural heritage preservation could not be properly organised from the centre alone. This cultural policy in the style of the SPPMAA would, however, have required a further decentralization of power.

Gilbert claimed that the right spectrum of Russian society before 1917 was broader and more nuanced than has previously been understood, although the variety of political forces, including the radical right as well as more traditional conservative groups, did not create a unified coalition. The SRAR was one example of representatives of traditional conservatism. The Revolution in 1917 put an end to the SRAR's work, the principles of which were in many ways opposite to the new ideology of the Soviet government.

The SPPMAA represented a group of cultured liberals. Their ideas flourished after 1905, when societal groups were given the opportunity to start forming civil platforms to promote their ideas. In respect of SPPMAA's activities, which targeted the preservation of Russian cultural heritage, the free market and civil society were pivotal. Nevertheless, the society was not in direct ideological opposition to Bolshevik ideas. Thus, it was easier for the Soviet government to adapt ideas on cultural heritage preservation, developed by the SPPMAA. They were well suited to the Soviet idea of cultural heritage as a national treasure *(narodnoe dostoianie)*, as well as the principles of proletarian internationalism. The idea of cultural heritage preservation played a part in the attempt by the Soviet government to take control of the circulation of antiquities. The Soviet government widely capitalised on SPPMAA discourses and practices, not only by using the society's ideas but also its members' expertise. At the same time, the sphere of civil initiatives, which had stimulated the development of liberal cultural ideas before the revolution, had been either destroyed or monopolised by Soviet authorities (Il'in and Semenova, 2000; Vzdornov, 2006; Osokina, 2009, 2018, 2019).

It could be expected that SPPMAA members would be included in the cultural work of the new state, while SRAR members would be repressed. This is only partially true. History produced more complex stories. Here are some telling examples.

Petr Neradovsky, SPPMAA member and a custodian of the Russian museum since 1909, who was responsible for the exhibition of Russian icons and one of the first museum restoration studios in Russia, was allowed to stay in the museum after the Revolution and continued his work exhibiting and cataloguing. He became a member of many of the cultural committees that were established in the USSR and through so doing helped to develop Soviet institutions for cultural heritage preservation. However, this did not prevent him from being arrested on several occasions. He spent two periods in prison from 1933-1936 and 1938-1943, (Kyzlasova, 2012, pp.5-6). Nevertheless, after the Second World War he was able to continue his professional career working on the restoration of the Trinity Lavra of St. Sergius.

Another example of an even more dramatic nature was the destiny of Petr Veiner, editor of *Starye Gody*, the journal that worked closely with the SPPMAA. Before 1917 he was one of the founders of the private Museum of Old Petersburg, which, after the Revolution, merged with the Petrograd City Museum. Veiner continued working with the City Museum collection, but from 1925-1929 he was exiled and, after his second arrest, he was executed in 1931.

Some members of the SPPMAA chose to emigrate directly following the Revolution, for example, Princess Maria Tenisheva, one of the most active collectors of Russian antiquities and a supporter of various pre-revolutionary cultural initiatives, such as the journal *Mir Iskusstva*. Other members, for example, Alexandre Benois, were involved in the work of preserving cultural and historical monuments and museum work. From 1918, he was the curator of the gallery of Old Masters in the Hermitage. He also worked for Petrograd city planning, focusing on the protection of heritage monuments. Nevertheless, he subsequently chose to immigrate to Europe. The example of other artists who were close to the *Mir Iskusstva* circle and who were also involved in museum work under the Soviet regime: Osip Braz, Georgy Vereisky, and Stepan Yaremich.

The new Soviet regime gave this pre-revolutionary generation of artists and art critics – those who had managed to develop and learn how to promote their ideas on the preservation of cultural heritage, as well as demonstrated their practical knowledge in organizing well-functioning institutions and projects – an opportunity to make their activities part of new official cultural policies. Many of them were inspired by this and stayed to support the new government.

Naturally, members of the SRAR experienced significant difficulty adapting to the new regime. Dmitrii Loman, who was also a Russian officer and nobleman and had a close relationship with Nicholas II, was executed

in 1918. Prince Shirinsky-Shikhmatov emigrated and continued his activities in Europe. Nevertheless, some members of the SRAR were drawn into the Soviet cultural system. For example, the artist, Mikhail Nesterov, who remained in the Soviet Union, continued working and even received state awards (Stalin Prize in 1941), although he still did not escape arrest in 1938. As a compromise, Nesterov was forced to abandon his religious paintings, for which he was famous, and concentrated on producing portraits of the new Soviet elite.

In general, during the first decade after 1917, the new Soviet authority searched for legitimization from the Russian intelligentsia through its symbolic capital that had been built before the Revolution. It was also in need of ideas and mechanisms to control the access to, and circulation of, valuable cultural heritage objects, which, at the time of the post-revolutionary societal crisis, became objects of exchange and speculation. The new government was able to adapt the ideas of the SPPMAA and develop the practice of heritage preservation that had emanated from pre-revolutionary civil societies. Later, once the new system had been established, the Soviet authorities could decide whether they wanted to get rid of the old specialists whom they had previously relied on. As a result, the people who had empowered this system became its victims (Kyzlasova, 1999, 2012; Roslavsky, 2004, 2015; Sandomirskaja, 2017). Nevertheless, to a large extent their ideas formed the basis of the subsequent cultural policies of the USSR. Thus, the non-profit liberal civil initiatives, which had emerged before the Revolution, significantly influenced the formation of Soviet cultural institutions.

4. Conclusion

The aim of this article was to demonstrate that the formation of heritage preservation practices in Russia was significantly associated with the work of private intellectual/artistic circles as part of the development of Russian civil society. These cultural enthusiasts became important actors in the formation of cultural policy discourses in the Late Russian Empire. The independent players in pre-revolutionary Russia became essential contributors to cultural heritage preservation. They succeeded in establishing practices that became a standard in the field of heritage-making. The examples of the SPPMAA and the SRAR demonstrated that they functioned as initiative groups for establishing the set of ideas which subsequently formed the basis of 20th century official cultural policies in which interest in the preservation of Russian cultural heritage was a core objective.

This article demonstrated that multiple non-governmental groups that treated the issue of cultural heritage preservation differently could exist simultaneously. The SRAR's ideas about Russian cultural heritage preservation were rooted in nationalist discourses. Due to its direct influence on the Tsar's family, the society was influential in the establishment and promotion of an official style inspired by Old Russian art, craft and architecture. In contrast, in its heritage-making activities, the SPPMAA demonstrated an interest in the liberal European practices of cultural heritage preservation and also sought an exchange between Russian and Western cultural lives.

After the 1917 Revolution, the SRAR's monarchist ideas could not survive (although some SRAR members found a place in the establishment of Soviet culture), while the ideas hitherto developed by the SPPMAA were widely instrumentalised by Soviet authorities in building new cultural institutions and practices. The intellectual circles around Mir Iskusstva and *Starye Gody* developed a profound knowledge of the marketing and display of Russian antiquities. This knowledge then became a valuable basis for the formation of Soviet cultural institutions. At the same time, the cultural actors who had helped form Soviet cultural policies in the sphere of cultural preservation could not continue to follow their liberal practices, which had helped to develop the pre-revolutionary heritage-making practices and ideas.

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[The translation from Russian is mine – A.K.]

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