

ENABLING THE CITY

INTERDISCIPLINARY AND TRANSDISCIPLINARY ENCOUNTERS IN
RESEARCH AND PRACTICE



EDITED BY JOSEFINE FOKDAL, OLIVIA BINA, PRUE CHILES,
LIIS OJAMÄE AND KATRIN PAADAM



Enabling the City is a collaborative book that focuses on how interdisciplinary and transdisciplinary processes of knowledge production may contribute to urban transformation at a local level in the 21st century, striking a balance between enthusiastic support for such transformational potential and a cautious note regarding the persistent challenges to the ethos as well as the practice of inter and transdisciplinarity.

The rich stories reflect different research and local practice cultures, exploring issues such as ageing, community, health and dementia, public space, energy, mobility cultures, heritage, housing, re-use, and renewal, as well as more universal questions about urban sustainability and climate change, and perhaps most importantly, education. Against this backdrop, aspirations for the 21st century are related to the international, national, and local agendas expressed in the Sustainable Development Goals (SDGs) and in the New Urban Agenda (NUA), raising fundamental questions of how to enable development. We highlight aspects of transformative learning and ways of knowing, critical to any collaborative and participatory process.

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Interdisciplinary and Transdisciplinary
Encounters in Research and Practice

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ROUTLEDGE



Routledge

Taylor & Francis Group

NEW YORK AND LONDON

First published 2021
by Routledge
52 Vanderbilt Avenue, New York, NY 10017

and by Routledge
2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

Routledge is an imprint of the Taylor & Francis Group, an informa business

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Library of Congress Cataloging-in-Publication Data
A catalog record for this title has been requested

ISBN: 9780367277406 (hbk)
ISBN: 9780367277390 (pbk)
ISBN: 9780429297649 (ebk)

Typeset in Bembo
by Isabell Enssle and Alice Grant

Publisher's Note
This book has been prepared from camera-ready copy provided by the editors.

Cover image by Reshma Upadhyaya, MArch student at Newcastle University,
a studio project illustrating an informal allotment city, Vienna.

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ACKNOWLEDGEMENTS

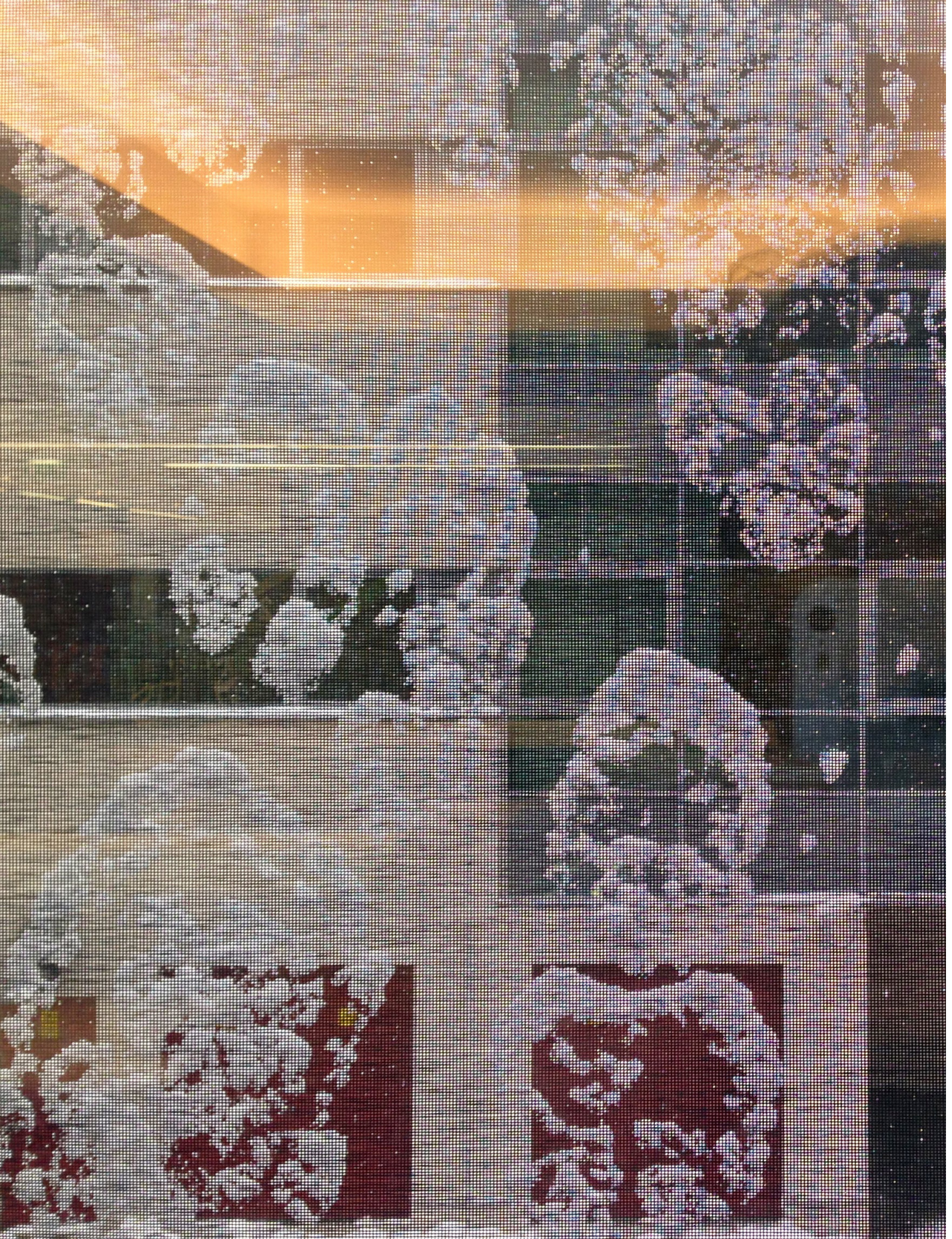
This book is the result of an interdisciplinary and transdisciplinary collaboration between 39 scholars and/or practitioners, all of whom are, in some way, part of the European Collaboration in Science and Technology (COST) Action INTREPID which ran from 2014 to 2019 (<http://intrepid-cost.ics.ulisboa.pt>). It was made possible thanks to our shared experience building on a number of workshops and conferences organized in our host institutions, as part of the Action. We would like to thank everyone who has inspired or worked with us in the workshops and activities that brought us together enabling our mutual learning. We acknowledge the role of the great cities and towns we visited too, allowing us a greater understanding of each other's cultures and ways of doing things.

The editors and authors would like to thank the COST Office, the EU Horizon 2020 for their financial support to the COST Network. Through its activities, COST promotes multidisciplinary networking and inclusiveness across Europe. COST is able to connect high-level scientists, representatives of the private sector and high-level policy makers via open, science and technology networks called "Actions." We also thank our respective Universities and Institutions around Europe for their support and are grateful for the comments and suggestions by colleagues, friends and anonymous reviewers. We thank our patient proof-reader Stephen Murray and our editors at Routledge for being so enthusiastic about this book.

We would finally like to thank Bella Enssle in Berlin and Alice Grant in Sheffield for designing and laying out this book for us and making it all we imagined.



Funded by the Horizon 2020 Framework Programme of the European Union



PREFACE

The final months in the life of a manuscript combining 45 contributors from 14 European countries are busy, if not hectic. But this spring was different. Due to the Covid-19 pandemic sweeping across our planet, we have all been grounded and “locked down” into our homes for almost three months as we write this final note. This has had direct and indirect impact on our book project of course, but most crucially, on everyone’s lives, our cities and wider world we all inhabit.

Cities are witnessing “mobile” crises characteristic of our time of global connectedness: they have become accustomed to financial and economic recessions along with the economic cycles that leave their mark on the urban dynamic and the well-being of citizens. Cities are increasingly familiar with environmental “natural” disasters including floods and heatwaves. But the current crisis caught most of us, particularly in Europe, unprepared; despite recent virus-related events such as SARS and a long history of pandemics across the world. This, in itself, has shaped many of our cities over time.

What will the future “urban experience” look like, and what – and whose – knowledge will shape it? We have noted, with concern, the limited and often narrow perspectives with which the “Covid-19 problem” has been framed as such perspectives inevitably also shape the solutions. A crisis of this scale and reach demands a profoundly interdisciplinary and transdisciplinary approach. We saw precious little of either. Instead, we witnessed largely narrow disciplinary perspectives and involvement of “experts” despite the significant and potentially long-term societal impacts of the “cure”: affecting all fields of human conduct and interconnectedness, the chain effect on life chances, and the unfolding of everyday routines – spatial practices – that define an entire city culture in its colourful palette of diversity.

As for this book, under current circumstances it simply could not have existed, as it is the product of much that is now excluded from our human experience: repeated in-situ encounters, over time and place, helping inform our understanding, imaginary and reasoning about what and whose knowledge matters. The outcome can best be described as a search for epistemological humility.

Thus, as we go to press, the experience of this latest crisis puts this volume in an unexpectedly new perspective, adding to the already strong sense of urgency for its commitment towards inter- and transdisciplinary approaches combining the knowledge of academia and practice and the future of education to enable sustainable life in our cities.

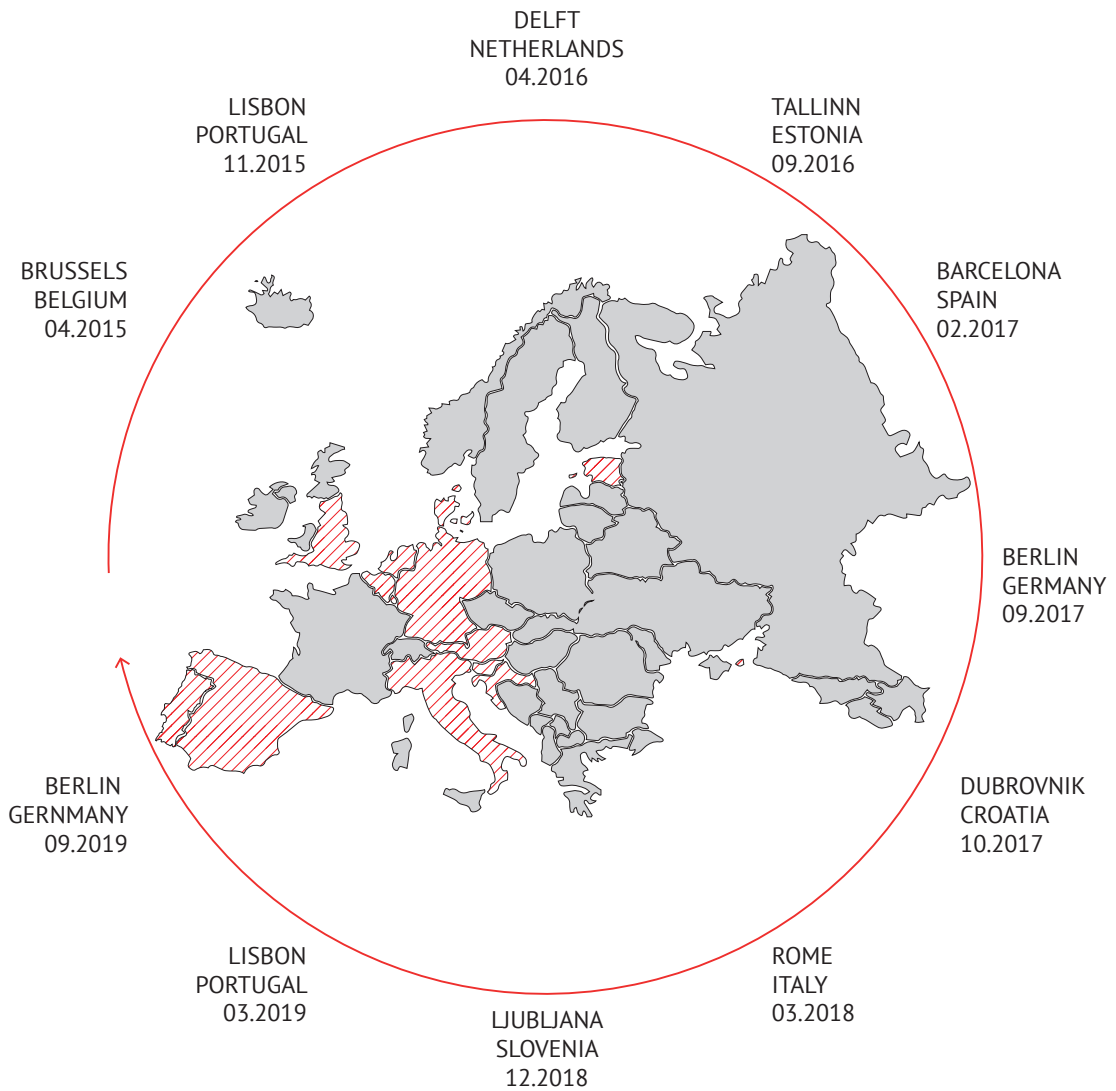


FIGURE I.O.1 INTRERPID network workshop throughout the funding period. Source: Alice Grant.

PART I

Setting the Scene



01

SETTING THE STAGE

Josefine Fokdal, Olivia Bina, Prue Chiles, Liis Ojamäe and Katrin Paadam

Introduction

The motivation for writing this book stems from our engagement with three undeniable trends in the twenty-first century: a geographical trend of escalating urbanisation in a world shaken by multiple interdependent crises, a political trend of recognising the challenges following from this and placing them centrally into global plans for sustainable development, and thirdly, a trend in science policy of proclaiming the importance of interdisciplinary and transdisciplinary (ITD) research, not least to inform policymaking. While torn between challenges and opportunities, one aspect that seems to unite all urban sustainability agendas is an appeal for transformative change and for knowledge that can make it happen. Our collaborative book, *Enabling the City*, occupies this inconvenient, uncomfortable, inarticulate space – but a space almost universally acclaimed as necessary to solve the difficult processes and urban challenges of today. This book focuses on how inter- and transdisciplinary processes of knowledge production may contribute to transformation at a local level, inescapably influenced by global trends.

Urbanisation

Today's processes of urbanisation and the significant projected growth and shift of dynamic urbanisation to the South and East all imply complex challenges related to urban development (UN-Habitat, 2006, 2011; Herrle et al., 2015). Urban areas represent approximately 2% of land cover in the world but produce 70% of emissions (world cities account for between 60% and 80% of energy consumption), and are notorious for their unsustainable ecological footprints. In 2014, 72.5% of the population of Europe lived in urban areas, and this figure is still rising.

4 Setting the Stage

Case studies and stories in this volume from around Europe, set in cities and towns of different sizes and profiles, illustrate the familiar trend towards a diminishing urban–rural divide and the growth of suburban and peri-urban areas on the outskirts of metropolitan regions. Social, economic and environmental problems overlap, often dramatically, within urban areas worldwide (Satterthwaite & Bartlett, 2016).

A global transformation in the way we live and work is urgently needed, and the projected world population of nine billion in 2050 means that “business as usual” is no longer an option (Cornell et al., 2013). We need to end the insanity of continuous economic growth leading to the inevitable – the overconsumption of finite resources (New Economics Foundation, 2009, p. 3). This requires a fundamental change of cultural dispositions linked to consumption patterns and lifestyles, especially in developed countries. Invariably, the processes of urbanisation entail a complex set of trade-offs and synergies between environmental, social and economic aspects of development that cannot be constrained within thematic, sectoral or disciplinary silos (Sachs et al., 2019). The past decades have, among others, shown that both in practice and academic research closer cooperation between various actors is necessary to understand and impact the ongoing urbanisation processes.

Setting a Global Agenda for Sustainable Development

As a result of the global significance of urban trends, the sustainable development agenda is also changing to reflect this priority – through goal-driven changes. The UN 2030 Agenda called “Transforming our World” asks for a “transformative development pathway” (ICSU & ISSC, 2015, p. 9), and the many debates about science and knowledge needed to address twenty-first-century challenges also appeal to the need for significant transformations in education and research (Wernli & Darbellay, 2016). In particular, the German Advisory Council on Global Change¹ distinguishes between transformation research, exploring “the factors, mechanisms and causal relationships of transformation,” and transformative research, referring to “the kind of research that supports the transformation by means of specific innovations – be they social, economic, technical or of some other kind” (WBGU, 2016, p. 34). New approaches in urban research and practice and new forms of governance and decision-making, however, need new modes of knowledge production as a means for coping with the challenges of a more sustainable urban future.

The 17 Sustainable Development Goals (SDGs), along with other global frameworks such as the Paris Agreement, are rather ambitious in their striving for more sustainable development.² Goal 11, for example, *to make cities and human settlements inclusive, safe, resilient and sustainable*, identifies ten targets.³ No. 3 is especially relevant to the work discussed here: *“By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries”* (UNGA, 2015). Throughout this book, we argue that capacity for such “participatory, integrated and sustainable” planning, can best be enabled through knowledge that is both inter and transdisciplinary. Translating these agendas, given the trends and challenges we have “on the ground,” we need to create new systems, models and paradigms that will work in favour of the well-being of people living in cities. We need new knowledge that will reach various actor groups and ways of producing knowledge based on engagement in order to learn how to “enable the city” to thrive and cater for a more sustainable urban future. In other words, urban sustainability entails fundamental change, embracing the fact that knowledge production should be seen as an inclusive process that is not limited to academia and its ways of knowing.

Defining Inter- and Transdisciplinary Processes

Our exploration of inter- and transdisciplinary (ITD) approaches to the design and application of knowledge⁴ focuses on urban research and practice that contribute to the United Nations sustainability agenda. Inter- and transdisciplinary approaches are an expression of depth and degrees of collaboration and diversity, and debates around their need are premised on fundamental questions about the nature and legitimacy of knowledge: what it is, who holds it and who is entitled to contribute to its production.

The definition and common understanding of interdisciplinarity, and related ideas of “multi-” and “trans” disciplinarity, all remain contested and tend to be superficial rhetoric rather than conceptual clarity (see also Chapter IV.1).⁵ These three concepts all pertain to the idea of linking disciplines for the purpose of researching complex problems; however, their purpose and reach is fundamentally different (Lang et al., 2012).

Building on the work done by Wernli and Darbellay (2016) and Petts et al. (2008), we understand *interdisciplinarity* as an approach that can help to structure multiple sources of knowledge around a common topic, promoting the exchange of disciplinary expertise through cooperation, respect and the willingness to learn from, and to understand, each other. We also give our own definition in Chapter I.3. This requires an openness on the part of collaborating disciplines (Mendes & Sá, 2017), and a recognition of shared values and trust between individuals of different disciplinary backgrounds (see also Chapter II.6). It also entails mutual curiosity towards other knowledge cultures (see also Chapter II.3), and even the willingness to give up some disciplinary territory.⁶

The recent debates assert to be about the promotion of interdisciplinarity in view of a response to a better understanding of problems or as a means of generating questions around which new forms of thought and experimental practice can coalesce (Barry & Born, 2013, p. 10; see also Chapters II.5 and II.8). However, although interdisciplinarity is increasingly central to research agendas, and recognised as a precondition for sustainability (Porter & Rafols, 2009; Sterling, 2004; van Rijnsoever & Hessels, 2011), its effective implementation in research projects remains the exception (Owens et al., 2006; Wernli & Darbellay, 2016) to the rule. Genuine progress towards greater unity of knowledge is often marginalised in practice: actual projects and agendas rarely live up to the lofty promises. Cooperation in producing knowledge is uneven and weak in its ability to shift research agendas towards a new comprehensive approach to research (Petts et al., 2008). Deep-rooted divisions between disciplines lead to an incomplete understanding of global changes affecting human societies (UNESCO & ISSC, 2010). Active collaboration, including knowledge exchange, remains rare to date (Stokols, 2014), largely due to the transaction costs involved and the lack of incentives in both practice and academic arenas.

We use Hoffmann-Riem et al. (2008, p. 4) for an approach to Transdisciplinarity that calls for different types of knowledge production for social change. Firstly, through grasping the complexity of a problem and questioning the normative nature of knowledge production; secondly, by recognising the gap between the perceived problem in science and practice; and thirdly, by producing knowledge for the “common good.” Even clearer is the desire, indeed the necessity, for transdisciplinary work, and thus to open the process of urban knowledge production to a wide range of actors that have an interest in city-making beyond academics and so-called specialists.⁷

Transdisciplinarity,⁸ as we understand it, includes the integration of knowledge from various disciplines (i.e. interdisciplinarity) as well as the involvement of civil society and other non-academic actors into the realm of research and practice. The aim is to produce more suitable and applicable results for policymaking and societal change (e.g. Polk, 2014, 2015; Klein et al., 2001). At a local

scale, it can contribute to transforming urban neighbourhoods into accessible, creative, engaging and living spaces by interactive strategies enhancing participation of inhabitants and various stakeholder groups (see also Chapters II.1, II.2, II.4 and II.9). However, the challenge of overcoming researcher-driven projects and an uneven balance of ownership (Pohl et al., 2010; Lang et al., 2012), along with issues of communication, time-consuming processes and the fact that reliability of knowledge is sometimes compromised for the sake of accountability (Polk, 2014, p. 441), are some of the core obstacles to transdisciplinarity identified in the discourse (see also Chapter II.7). Thus, despite the trend in science governance in particular of proclaiming the importance of interdisciplinary and transdisciplinary research, there are still many obstacles to overcome.

The Transformative Power of Inter- and Transdisciplinary Research and Practice in the Urban Realm

The urban environment provides an excellent arena for exploring the multiple challenges and obstacles of integrating diverse sources of knowledge, from multiple disciplines and actors, in an attempt to make sense of deeply interconnected and interdependent problems and solutions, both theoretical and practical, that will enable transformation (see chapter IV.3 in this volume).⁹

Inter- and transdisciplinary urban research and practice, and particularly urban planning, has a long tradition of knowledge integration, although under different labels such as real-world laboratories (e.g. Schöpke et al., 2017), using experiments as the main mode of knowledge production (e.g. WBGU, 2014; Schneidewind & Singer-Brodowski, 2014), participatory action research (e.g. Bradbury & Reason 2003) and transition research (e.g. Van de Bosch & Rotmans, 2008), just to mention a few. Within the field of urban planning practice, there is a tradition of participatory approaches that is worthwhile to build upon when conducting inter- and transdisciplinary research: for example, collaborative planning (Healey, 1997), the communicative turn (Healey, 1993), participatory planning (Chambers, 1998; Goethert, 2004) and community action planning (Hamdi & Goethert, 1997). Within planning practice, inclusive governance and participation¹⁰ has become a cornerstone in the global South and North (UN-Habitat & UN-ESCAP, 2008; UN-Habitat & GLTN, 2009).

Participation is understood as plurality of decision-making, involving multiple actors, including an organized civil society, and a readiness to negotiate and compromise are seen as necessary means for successful interaction (Benz and Papadopoulous 2006). In most cases, however, participatory processes are “owned” and driven by (local) government institutions as the legitimate representatives of the state and participation is expected to provide a “bottom-up” input to formal systems (Chakraborty 2012). Mosse (2001) further identified the danger of external stakeholders setting the local agenda in a more implicit manner under the label of including local knowledge through participation (Cooke and Kothari 2001). Participatory formats that have been developed vary widely, depending, on the one hand, on the political opportunity structure in a particular context, such as the strength and willingness of the local political system to cooperate; and, on the other hand, on the resources and capacities of civic groups to engage in “negotiating development” (Roy 2009, p. 166). Also, the tradition in planning is specific in terms of culture relating to particular societal histories.

The experience and knowledge within the urban realm could be better integrated into the more recent discussion on transdisciplinarity and transformative science for a more sustainable future. There is much to be learned from failures and limitations encountered in practice and research within the urban realm and the development context. Often processes are messy, complex, difficult and time-consuming, and there is a large risk of failure. The kind of knowledge produced through

these processes, however, is what we need in order to be able to localise the Sustainable Development Goals and the New Urban Agenda (NUA), as this book shows.

An Overview

Building on the experience of the authors,¹¹ this book describes intellectual and practical projects carried out in a different way, where transdisciplinary urban issues have enabled new knowledge and ways of knowing, as well as accounting for persistent challenges and, at times, failures. It aims at enabling new knowledge for sustainable futures in order to enhance the quality of life in cities by demonstrating the use and value of crossing borders between disciplines and beyond academia.

Part I: “Setting the Scene”

Part I, “Setting the Scene,” introduces the work, as above, and discusses the journey the editors and authors have taken. **Bina et al.** present a *comprehensive* framework that arises from an analysis of case studies in Part II, providing a unique overview of possible ways of knowing and of enabling new knowledge. It proposes four phases of inter- and transdisciplinarity, and four enabling conditions and qualities that are crucial for inter- and transdisciplinary processes, highlighting aspects of learning, competences and dispositions. **Mennes** then presents a *baseline vocabulary* that guides the reader with a useful series of definitions that cross disciplines and makes the publication applicable to a broad readership.

In this way, *Enabling the City* makes a contribution towards the kind of transformative research and practice required to address twenty-first-century urbanisation challenges, with their complex multi-sectoral interdependencies, captured by the Sustainable Development Goals, and their overarching need for greater collaborative ethos, integrative knowledge production and practices. Parts II and III also reflect on different research and practice cultures – a mirroring of what is going on in inter- and transdisciplinary urban processes.

Part II: “Urban Stories Beyond Disciplines”

In **Part II, “Urban Stories Beyond Disciplines,”** the individual chapters explore aspects of inter- and transdisciplinarity through critical themes (e.g. ageing, health and dementia, energy production, mobility cultures, heritage, housing, re-use and renewal of buildings and public spaces) that need to be addressed in innovative ways in order to contribute to a more sustainable urban future.

Most started their life as case studies presented and analysed during the course of our meetings and events over four years in different countries with the INTREPID network. They show different aspects of the framework that we introduce in Part I, experienced in a variety of contexts and scales.

The first chapter by **Chiles et al.** builds around a collaborative and transdisciplinary project in Stockbridge, South Yorkshire, with the aim of looking into a new energy future for the town and how this could be at the heart of all sustainable renewal in the town. The process involved local residents and an interdisciplinary academic team including an embedded ethnographer who “facilitated” the *self-reflexivity* and, more critically, better communication among the public and academic team members during the project. In this process, the value of establishing a *common language*, the continuous engagement over a longer *time* period (a strong element of “*social*” *time*) and the recognition of the local context, i.e. the history of the place, were strong enabling factors.

The second chapter, “A Creative ‘NanoTown’: Framing Sustainable Development Scenarios with Local People in Calabria, Italy,” by **Verdini et al.**, aims to enable a transition towards sustainability for a town affected by economic and demographic decline in a rural area in southern Italy. An international workshop, initiated by the elected politicians, acted as a catalyst for a positive atmosphere for change. Also, interdisciplinary students acted as individual “change agents” at the same time, building capacities and empowering through shared *learning* experiences. This case study illustrates the three phases, co-design, co-production and continuation, as well as the issue of *competences*: “*The Gagliato experience has helped to refine a working process and a set of competences, which are replicable and may be incorporated into university urban curricula.*” Also, it becomes evident here that context matters in the sense that the political will was there and the citizens were engaged in the new vision for the town.

The third chapter, by **Gromark et al.**, is a reflection on an inter- and transdisciplinary process from its very beginning to implementation (which is often not present in other case studies). The aim of the process was to create a research-informed sustainable residential project. The project itself experiments with cooperative rental housing (in physical, architectural and technological forms), which moves beyond the rather technocratic understanding of sustainability at the housing scale. It shows the value of *disseminating* the lessons learned through a platform for mutual learning and exchange of good practice. The authors point towards three enabling conditions for the inter- and transdisciplinary process: firstly, the continuity of the individuals involved in the process; secondly, the mandates of the people involved were never questioned; and thirdly, the value of different knowledge and competences by people involved was recognised by everyone. In addition, mutual trust and a “distinct common culture of commitment to the cause” was built up during meetings every second month over eight years – so again, *time* matters!

Also on the building scale, but around a public institution, the chapter by **Wolf et al.** is an illustration of accompanying research on how the city initiated and supported a new creative hub in the former public pool in the city of Lucerne. Trust and spatial proximity and a history of working together previously are identified as key enabling conditions: “*They were aware of the challenges of inter- and transdisciplinary research projects regarding joint knowledge production, and they regularly reflected on this.*” Again, the reintegration of knowledge through dissemination demonstrated difficulties, and it was only through the involvement in the INTREPID network that publication of the research was made possible.

The aim of the inter- and transdisciplinary process presented by **Dietz et al.** in Chapter 5 of Part II was to push for changes towards a sustainable mobility culture in Stuttgart, Germany. The specific project presented is on “parklets” – the occupation of a parking spot for three months to create awareness and start a dialogue around the quality of urban space once the parking spot was converted. Data collection and mutual *learning* processes were recognised as part of capacity building for all actors involved in the inter- and transdisciplinary process, which led to a rethinking of the future planning of the public space. This would have been impossible without the available resources in terms of human capacities, a change agent, *time* and flexible funding.

In a similar manner, the chapter “A Step Towards an Enjoyable City: Joining Expertise in Re-designing Public Space Along the ‘Main Street’ in Tallinn” by **Paadam and Ojamäe** describes an inter- and transdisciplinary process in relation to moving towards more inclusive research-based planning in Tallinn aimed at establishing a dialogue within the city around the development of the quality of urban public space. At the potential advent of a new planning culture, although in a slowly changing difficult political landscape (*context*), it showcases a “*paradigm shift*” in architects’ and planners’ approach. Based on the project leaders’ growing awareness and acknowledgement of the

usefulness of a wider scale of disciplinary competences in the production of in-depth knowledge, the multiple studies initiated provided essential input to architectural competitions and discussions at City Forums. The chapter also self-critically reflects on an experiential experience of architects and sociologists joining in an inter- and transdisciplinary qualitative research process, which, aside from mutual advancement, also inspired the business actors involved to initiate and fund even further discussion occasions on the future of the city centre (*continuation*). The chapter underscores the importance of facilitating learning “*by allowing research-informed imagination of the possible*,” the willingness and capacity to engage with the unknown in order to push for “*transformative change*” within society and ways of creating the quality of urban space.

The case study presented by **Dimitrova** discusses a “top-down” approach to turn a neighbourhood in Sofia, Bulgaria, into a Creative Industries area through a focus on cultural heritage and the preservation of a certain neighbourhood culture. It is a clear illustration of the issue of *time* as it is lived in different “communities” – practice versus academia – but also of the time constraints within academia and funding schemes. Also, the fact that words matter is well illustrated in this chapter. Building on a certain level of frustration, a process of *self-reflection* was initiated to enhance the *learning* experiences among the involved actors.

Chapter 8 in Part II illustrates different types of knowledge the authors **Andersen and Kirkeby** identified around building homes for people with dementia: “*Context-independent knowledge is probably easier to transport with only minor changes in content whereas context-dependent knowledge requires more interpretation and personal acquisition.*” Building on work by Latour, they establish what they call “flexible knowledge.” This does not imply “*that ‘anything goes,’*” but highlights that knowledge, as context-based knowledge, is not independent of place or circumstance; it has to be related to specific situations. This case study is a robust account of aspects of *leadership* within a transdisciplinary process.

The last chapter in Part II, by **Nikšič**, discusses more inclusive urban planning approaches in Ljubljana, Slovenia, and is an excellent showcase of how trust needs to be built between different stakeholders but also of trust in the state as an actor that facilitates participatory planning approaches. This is something that is often overlooked in global agenda-setting (the Sustainable Development Goals) and where the local context needs flexibility and adaptation. The chapter reflects on the approach and willingness to change strategy and adapt unusual approaches to reach different target groups. In addition, strong *leadership*, “*combined with vision and operational strategy*” was a major enabling factor in facilitating the process.

Part III: “Short Stories from Practice”

Part III “Short Stories from Practice” complements the focus on research in Part II by adding the perspectives of practitioners on ITD processes in which they have been involved over shorter or longer time periods. Some practice stories can be seen as different sides of the coin of the same case study presented in Part II. We felt that adding the practice perspective on ITD processes would enrich the “thick descriptions” in Part II and make this volume more applicable for a larger audience. Within the field of architecture and urban planning, there is a long tradition of facilitating participatory and collaborative processes that we found critical to build on in the book.

The first practice story in Part III by **Heslop**, “Protohome,” targets the phenomenon of homelessness in the context of the UK. While this practice story showcases many aspects of our three-dimensional framework, the aspect of *self-reflection* as part of a social *learning* process is key.

“Portland Works – Sheffield,” written by **Cristina Cerulli**, discusses a campaign initially focused on opposing the immediate threat – the redevelopment of the building; it quickly shifted towards being a propositional endeavour, with tenants, activists, local residents, practitioners and academics working together to propose viable alternatives, rather than simply opposing the change of use.

The cooperative housing project “Spreefeld” in Berlin, Germany, is based on an interview with **Michael LaFond**, one of the co-founders of this socially sustainable and ecologically driven project. Challenges of collaboration and decision-making processes are put into the contextual perspective of an increasing neo-liberal setting in Berlin ten years from the project’s completion. According to Lafond, this would not have been possible in today’s Berlin – thus, *context matters!*

Three of the practice stories complement and are based in the same places as Chapters 5, 9 and 12 in Part II. The practice story in Gagliato, Calabria, by **Wills et al.**, describes the next stage of the process where final-year architecture students and newly qualified architects develop a strategy for renewal used for a successful bid to the local government. Around the topic of tourism in a rural and declining town in southern Italy, the involvement of students in a shared *learning* process in the specific context shows the importance of including specific skills and competences into the urban curricula to educate the future generation of architects and planners.

The “City Forums” in Tallinn by **Järg**, with a wide number of participants, is a nice illustration of the changing roles of architects and urban planners and showcases how much context matters in terms of political willingness and a fruitful learning environment.

“Vodnikova Road in Ljubljana” – Slovenia, tells of a ground-breaking local initiative for a pedestrian and cyclist-friendly renovation of a road into the city that is the centre of a neighbourhood¹² in an interview between **Marko Peterlin and Matej Nikšič**.

Providing a broader perspective, the practice story by **Ged** on tourism in rural areas in China shows how horizontal exchanges and shared learning experiences among researchers and practitioners from different countries can be fruitful and lessons learned transferable, but only under the condition of an established long-term engagement *“where only by encouraging long-term processes, with the support of education and mutual learning through experimentation, can the barrier of disciplinarity be conquered. A long-term process requires funding and institutional support, which leads to the third challenge we want to raise awareness about: limited access to funding.”*

Part IV: “Lesson Learned – Beyond Context”

The nine case studies in Part II and the seven practice stories in Part III are also a key source of insight and reflection for the final part, Part IV, **“Lesson Learned – Beyond Context.”** Here, **Woiwode and Bina** ask whether transdisciplinarity “changes everything.” In their contribution, they critically reflect on the relationship between multi-, inter- and transdisciplinarity, complementing the aspects highlighted here and then exploring the possibility of a transformative potential.

Weber and Mennes deliver a reflection on how knowledge is integrated within inter- and transdisciplinary urban research from the perspective of the philosophy of science. This contribution again builds on the case studies and practice stories presented and is a post-reflection on the specific issue of knowledge integration.

Finally, **Fokdal et al.** draw lessons from the experience of the past four years working together as INTREPID and connect it with the global agenda for sustainable development by exploring the dimension of education of future generations for sustainable development (ESD), and articulating further the aspect of competences and dispositions, central to this book’s framework (Chapter I.2).

Notes

- 1 Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen (WBGU) was founded in 1992 with the aim to evaluate, report and develop coping suggestions on climatic and environmental changes.
- 2 Urban sustainability encompasses the basic values of environmental quality, economic dynamics and social justice, and requires their application to areas including transportation, land use, urban form, architecture and building construction practices (Wheeler & Beatley, 2009), and it is often equated with more compact, socially inclusive, better integrated and connected cities and territories that are resilient to climate change (UN-Habitat, 2014). In this context, by sustainable urban development we refer to environmental justice, economic improvement and social equity as reflected in evolving urban systems (i.e. buildings, towns, cities and their infrastructures).
- 3 See Chapter IV.3 in this volume.
- 4 The understanding of knowledge used here incorporates a diverse field of knowledge including systemic knowledge, aim- or orientation knowledge (Schäpke et al., 2017) and transformation knowledge (e.g. Schneidewind & Singer-Brodowski, 2014). It further takes everyday experiential knowledge such as actionable knowledge into account (Forrest & Wiek 2014; Schäpke et al., 2017). In a broader sense the urban knowledge arena also includes informal knowledge (Andersen, 2013, p. 9ff.). This broad perception of knowledge is essential to bridge the gap between urban research and practice, especially when viewed in the frame of the ambitious international agendas for urban sustainability, and the transformational drive uniting these and the science agenda.
- 5 See ESF (2012), Lyall et al. (2013) and Petts et al. (2008) for a critique.
- 6 For useful definitions of interdisciplinarity, the reader might also look at Blanchard and Vanderlinden (2010), Frodeman et al. (2010) and Lawrence (2004).
- 7 See *Mistra Urban Futures*, now *Urban Futures*, which was formed in 2010 as a programme and centre for knowledge and research on sustainable urban development (www.mistraurbanfutures.org/en) and recent outputs: Simon (2016); Simon et al. (2020).
- 8 See, for example, www.transdisciplinarity.ch, *td-net* or Hirsch Hadorn et al. (2008) for a definition.
- 9 Andersen and Atkinson (2013), Owens et al. (2006), Petts et al. (2008) and Simon et al. (2020) all discuss this.
- 10 Various levels of engagement have been defined between civil society and the state in participatory processes (e.g. Arnstein, 1969; Goethert, 2004). A common method of differentiating levels of participation as a continuum of influence in the decision-making process, from full control by planners or external experts to full control of the planning process by the community, is based on the “ladder of participation” proposed by Arnstein (1969). Hamdi and Goethert (1997) suggest not only levels but also stages of participation in planning and implementation.
- 11 And the four-year journey we have all been through together with the COST Action INTREPID.
- 12 See Institute for Spatial Policies (IPoP) “More than a Road to a City” (*Več kot cesta do mesta*), supported by the Municipality of Ljubljana, October 2018, and Facebook: *Iniciativa uredimo Vodnikovo*.

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02

THE INTER- AND TRANSDISCIPLINARY PROCESS: A FRAMEWORK

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Introduction

Enabling the City aims to capture the challenges, the potential and the attraction of urban inter- and transdisciplinary research processes, and their spirit of collaboration.

In this chapter, we summarise our journey to develop a proposed framework for urban inter- and transdisciplinary processes. The framework arises largely from three sources of reflection: our collective exploration in five specific workshops, the case studies presented in Part II and the practice stories presented in Part III. It is, itself, the result of an effort in interdisciplinary inquiry, which required the building of trust, the practice of humility and the creation of a certain feeling of a shared path. This, in turn, was made possible thanks to the gift of time and space for thinking and reflection arising from all the events we shared being part of the INTREPID network and collaborators and invited speakers over four years. These events are illustrated in the diagram on the facing page (Figure I.2.1) which shows the events and their particular outcomes over the four years. These three empirical sources of reflection helped us define, in different ways, our understanding and experience of urban inter- and transdisciplinary research processes, their challenges and enabling conditions; from both an academic and more practice orientated perspective.

The Journey

The journey begins in Lisbon. In November 2015, approximately 50 scholars and practitioners from 23 countries, all with varying interests in inter- and transdisciplinary urban research and practice, met as newly appointed members of the INTREPID network in order to launch their activities. The first meeting was complex, confusing, creative and at times difficult, as it laid the ground for mutual

understanding around INTREPID's core concepts and terms. It also marked the beginning of a joint exploration of the challenges and enabling conditions for inter- and transdisciplinary urban research and practice. This evolved into a co-designed process, ensuring collective ownership and trust between members of this rich and diverse community, who all agreed to join around a vision exploring what can enable the academy and practice to help shape sustainable cities.

Six months later, at Delft University, we began the conversation around our work. Members were invited to present research or practice that they had been involved in, with a focus on the obstacles and enabling conditions experienced in the implementation of inter- and transdisciplinarity. The discussion that followed provided the building blocks for a matrix of perceived barriers from each case study, and for the first rough draft of a co-produced framework.

In a third meeting at the Tallinn University of Technology (TalTech) we discussed methods for enabling inter- and transdisciplinary research and practice and the matrix was further developed based on new presentations of the case studies. The aim was to explore in greater detail aspects of both barriers and enabling conditions: reflecting on key methods, language, funding, culture, time, politics, structure and institutions. This led to an agreement to work together to further develop and publish the work that was being done within the group.¹ An editorial group was selected to develop a book and an open call for contributions was made among the extended network.

Since authors and editors were coming from different backgrounds and cultures in urban research and practice, we planned an exercise in trust building and mutual learning in Berlin in the autumn of 2017. This “writeshop” included peer-reviewing and trust-building exercises. An important outcome was the call to relate our discussion about inter- and transdisciplinary enabling conditions in the wider context of global policy agendas for sustainable urban development, including the Sustainable Development Goals (UNGA, 2015), thus bringing into the conversation local and global perspectives and experiences (see Chapter IV.3, this volume).

A last meeting with most group members took place at the British School at Rome (BSR).² Here, we chose to explore the different meanings and understandings of common terms we use in our work. It became clear that the range of words and concepts in need of some common basic definition was far longer than originally envisaged. A glossary was commissioned as a key part of this publication (see Chapter I.3 this volume), and, crucially, “words” became a key part of our framework. At the meeting, it was also decided that our emphasis on research and practice needed to be reflected and honoured within the book project itself, as a prerequisite for consistency. We thus identified seven practice stories from six countries linked to members of our network, which are presented in Part III of this volume. In Rome, as a smaller group of authors and editors, rather than presenting formally we discussed informally and anecdotally our wider interests and jobs and our relationship with our projects and with writing. This process led to *mutual learning*, *building trust* and *self-reflection* – key ingredients for any inter- and transdisciplinary process.

Looking back at where we started in Lisbon in 2015, we also recognise the intrinsically complex nature of inter- and transdisciplinary knowledge sharing and production – not least when such processes include the additional layer of cultural and linguistic diversity (see Nikulina et al., 2019). In all our events our desire to find effective ways of sharing knowledge led to establishing a combination of novel and established ways to work together: world café sessions, preparing, cooking and eating dinner together – with strictly local and biological products – “walk-abouts” and guided visits. These allowed us to relate our intellectual practices around common concerns and learning about interesting projects in each other's cities, i.e. contexts.

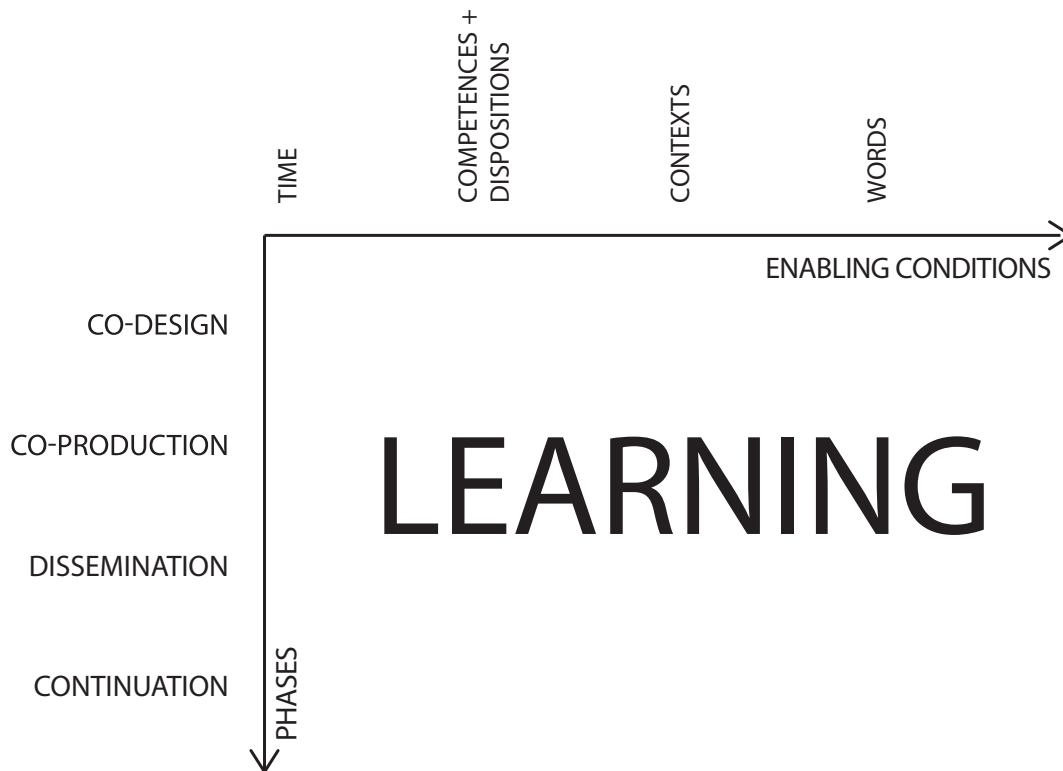


FIGURE I.2.2 The elements of the framework: a journey of reflection on inter- and transdisciplinary urban processes. Source: Authors.

A Framework for “Enabling the City”

The main elements of the approach to inter- and transdisciplinary processes, developed as a result of our journey outlined above, resulted in a three-dimensional framework of what seems to matter:

- The first dimension has four phases that characterise inter- and transdisciplinary processes: co-design, co-production, dissemination and outreach, and continuation.
- The second dimension includes four enabling conditions: time, competences and dispositions, contexts, and words.
- The third dimension describes a predisposition to learning as an individual, in teams and in society: a quality that underpins and influences the workings of both the phases and the enabling conditions.

These are visualised in Figure I.2.2 and I.2.3.

Building from experience, from a holistic perspective of knowledge production for the urban arena, and wanting to bridge boundaries between the academy and practice (including policymaking) worlds, we sought to identify those elements of inter- and transdisciplinary processes that seemed to *matter the most*, given our overall aim of increasing understanding and learning between disciplines and between actors and stakeholders, in academia and elsewhere.

We suggest that it is crucial to address the elements of our three-dimensional framework at different points in time – in preparation, during and after – carrying out urban research and practice. However, the list is not meant to be exhaustive, nor does it claim to provide the “right” way of undertaking inter- and transdisciplinary research or practice. Instead, it identifies the main obstacles we need to look at in *actually occurring work*, based on the network’s cumulative experience of research and practice. For example, we do not address the issue of methods and tools here. We often discussed methods for co-designing processes and co-producing knowledge, and acknowledge that various publications on methods for integration of knowledge in inter- and transdisciplinary processes (e.g. Bergmann et al., 2012; Bammer, 2016) and on methods applied in living laboratories for co-design and co-production in transformative research processes have already been published (e.g. Defila & Di Giulio, 2019). In addition, there are various online toolkits that are available with methods and tools for co-producing knowledge (e.g. td-net online toolkit and the Interdisciplinary Toolkit from the University of Sheffield³). Our discussions revealed that the real obstacles and challenges in actually implementing inter- and transdisciplinary research and practice lie in the constraints of process design, and in the capacity to turn the four dimensions of time, contexts, competences and words or language into enabling conditions.

Our proposals acknowledge and build on existing frameworks (e.g. Stauffacher et al., 2008; Jahn et al., 2012; Lang et al., 2012; Mitchell et al., 2015). Focusing on the involvement of actors in an inter- and transdisciplinary process, Stauffacher et al. (2008) state that the involvement of actors has different intensities at various times throughout the process. Other scholars have developed frameworks capturing the organisation of an inter- and transdisciplinary process (e.g. Jahn et al., 2012). Lang et al. (2012) combined the systemic understanding of the process (Jahn et al., 2012) with the need for actors’ involvement (Stauffacher et al., 2008) in their framework. Yet another framework for transdisciplinary research developed by Mitchell et al. (2015) focuses on what they call “outcome spaces.” These outcome spaces seek to improve a situation, to generate knowledge and to facilitate a mutual and a transformational learning experience. Building on these frameworks, we propose the three-dimensional framework “phases, learning and enablers” to help think through, plan and shape inter- and transdisciplinary processes in a more operational manner (see Figure 1.2.2).

As we go on to explain, several parts of this framework are discussed in great detail in the literature; however, through our journey we have identified specific aspects that matter most based on our experience, and that reveal the somewhat messy and blurry (not just complicated or complex) reality of undertaking inter- and transdisciplinary research and practice. The purpose is to inspire others to strive for innovative solutions to overcome the multiple barriers encountered when conducting inter- and transdisciplinary urban research and practice. In this sense, we will also want to reflect on the potential gap that needs to be filled between the lofty claims and statements in favour of inter- and transdisciplinary processes both in local and global policy documents, and the more prosaic reality on the ground.

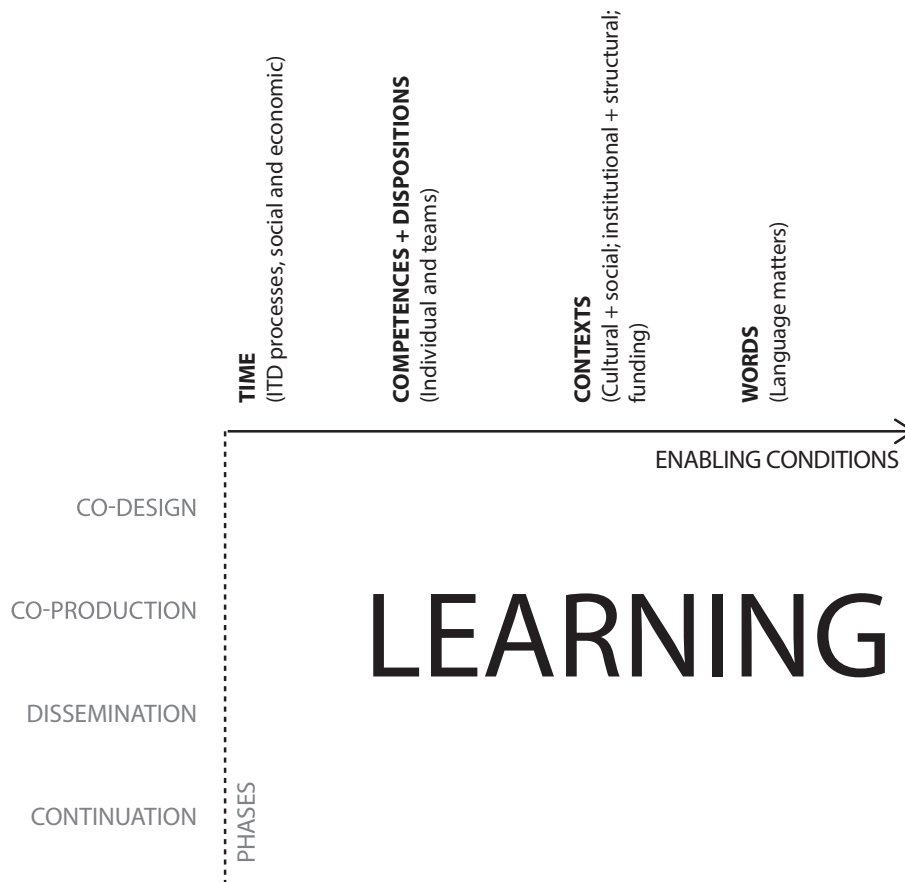


FIGURE I.2.3 Inter- or transdisciplinary process enablers: “What seems to matter.” Source: Authors.

A) Inter- and Transdisciplinary Phases

The first dimension of our framework relates to four phases that characterise *inter- and transdisciplinary processes*: co-design, co-production, dissemination and outreach, and continuation. The first phases draw heavily on the comprehensive study “Transdisciplinary Research in Sustainability Science: Practice, Principles, and Challenges” by Lang and colleagues (2012) who identify three stages in research and related challenges: Phase 1 – Specific challenges in collaborative problem framing and team building; Phase 2 – Specific challenges in co-producing knowledge through collaborative research; and Phase 3 – Specific challenges in (re)integrating, transferring and applying the created knowledge.

As illustrated in Figure I.2.2, following discussions, it was felt that Lang and colleagues’ basis needed to be enriched by one more phase: “continuation,” a fourth phase that seemed to matter based on the processes actually experienced. We also interpreted their Phase 3 (dissemination and reintegration of knowledge) as a recurrent issue that is relevant throughout the whole inter- and

transdisciplinary process and not just at the end of a process. Finally, the exploration of inter- and transdisciplinary processes, with its challenges across disciplinary and practice boundaries, required an additional aspect, which we referred to as a propensity to learning and a fruitful learning environment in which an inter- and transdisciplinary process is embedded. In Figure I.2.2 two of the three parts of the framework: A) process phases and B) the learning environment, highlight the often significant blurring of the phases as they overlap and transform each other along the life of projects.

We discuss our interpretation of each phase in turn, relating to both existing literature and some of the illustrations in Part II. As is explained in Chapter I.1, the cases in Part II were largely in progress before the framework was conceived; they are therefore *ex post* illustrations of *elements* of the four inter- and transdisciplinary phases, and of the four enabling conditions and qualities proposed here.

Co-Design Phase

The first phase is co-design (Mauser et al., 2013) or “formulating” (Polk, 2015), and it includes joint problem framing, research defining and team building (Lang et al., 2012). Based on our glossary, it is “the first phase of an inter- and transdisciplinary project ... in which the goals of the project are determined. It comprises (i) defining the central questions or problems; (ii) deciding on (the nature of) the desired answers or solutions; and (iii) identifying the knowledge and/or skills required for the answers/solutions. Besides referring to a project phase, co-design also indicates that an inclusive approach is taken, i.e. an approach in which the input of all relevant actors and the interests of all stakeholders are taken into account” (Mennes, this volume). This phase will therefore crucially benefit from the propensity to learning as a backdrop of any inter- and transdisciplinary process. In practice, this is rarely the case, especially at the start. It may be the case during the life of the project, especially if leadership (a competence discussed below) makes this a priority.

Co-Production Phase

Co-production or the co-creation of knowledge and solutions includes generating scientific integration and relevance results for policies (Mauser et al., 2013; Lang et al., 2012; Polk, 2015). In this volume, we understand co-production as the “phase of an inter- or transdisciplinary project in which answers to the central questions are generated, or solutions for the central problems are created. As with co-design, the word co-production indicates that an inclusive approach is taken, i.e. one that maintains a dialogue between all relevant actors, and, if applicable, stakeholders” (Chapter I.3).

Dissemination Phase

Dissemination (Mauser et al., 2013) or (re)integration and application of created knowledge (Lang et al., 2012) – in this volume, we talk about dissemination, which is often understood as the last phase of a project. “It is the phase in which the acquired knowledge or solution is implemented and shared” (Mennes, Chapter I.3 of this volume). However, in practice we find that the process of dissemination often overlaps with most other phases, including continuation and learning (below), thus creating a certain tension between end of project and whole process orientations. This third phase is labelled “evaluation” by Polk (2015, p. 115), thereby adding the practice-oriented dimension of evaluating the process and the impact of the results on the phases.

Continuation Phase

Finally, we come to our suggestion to add a fourth phase – continuation – to the inter- and transdisciplinary process. Our glossary states: “Once the goals of a project have been reached and/or the funding for the project has ended, it may be decided that the project is to be continued. This continuation may consist of the writing of a new project proposal aimed at expanding or deepening the original project, or the team members deciding to prolong (and diversify) their collaboration In a broader sense, continuation refers to the drawing on a legacy or previous experience” (Mennes, this volume). The aspect of continuation is crucial when discussing transdisciplinarity as a time-consuming approach against the time-limited funding schemes that most researchers are faced with. It relates to the critique of an increasingly project-oriented mode of research and practice that, while offering efficiency and output-focus investment, risks reducing knowledge production to an almost industrial plant linear process (see for example, Andersen and Kirkeby, Part II of this volume). Continuation in inter- and transdisciplinary research requires the development of more elaborate tools and trust in this approach. It could be viewed as a chain effect demanding further in-depth inquiry into the questions in focus as new questions arise, but also inspiring a wider range of self-reflexive stakeholders to be engaged in considering further opportunities for research and actual implementation of the outcomes.

Part II showcases ways of continuation within or during projects as well as after they have ended. For example, do Dietz et al. (this volume) describe a project that has achieved a certain level of sustainability by being institutionalised and thus is capable of continuing on a volunteer basis, despite the fact that the funding ran out with well-recognised actors (i.e. the university) and through dissemination of project results? Or the example by Nikšič, which describes how residents, initially misinterpreting the role of the local planning institution and hence mistrusting the initiative, demanded the invention of new approaches to continue with the project. In general, the experience of network members confirms that there is no guarantee that inter- and transdisciplinary initiatives will lead to the implementation and practical sustainability of results, since urban development depends on permanently evolving power relations being played out in daily politics. Many Part II case studies and the practice stories allude to this, despite the sometimes successful project experience (see Paadam and Ojamäe or Järg, this volume).

B) Enabling Conditions That Seem to Matter

Having introduced the four phases of inter- or transdisciplinary research and practice, and the critical dimension of learning as an individual, in teams and in society, we turn to the second part of our framework: the four enabling conditions deemed critical by network members. This is what *mattered most* in their experience of inter- or transdisciplinarity: time, competence and dispositions, contexts and words (Figure I.2.3). Here, too, it was agreed that a predisposition to learning, and thus a conducive environment, was essential for conditions to act as enablers.

Time: The Economic and the Social

Time matters to both inter- and transdisciplinary practices as it has a significant impact on their feasibility and effectiveness. An interesting study by Nikulina and colleagues (2019) into ways of analysing the different epistemic communities, linguistic diversities and culture in co-production agrees that “the perception of time could be a challenge” and, quoting Mikkelsen, they suggest a



FIGURE I.2.4 Enablers: Competences (in black) Dispositions (in grey) Linked to Key Roles in ITD Processes. Source: Authors.

distinction between “*economic time*” and “*social time*.” During an inter- and transdisciplinary process, time can be equated with money, and “in a Western planning model (Mikkelsen, 2005) ‘economic time’ plays an important role in the planning of processes” (in: Nikulina et al. 2019, p. 113). This speaks to the pervasive pursuit of efficiency, driving the “need” to produce or deliver more in less time. The intrinsic complexity and, we would argue, the often unpredictable and uncertain inter- and transdisciplinary processes, means that more time – not less – is likely to be needed. Indeed, an appeal for more, not less, time in European Union funding of inter- and transdisciplinary projects was one of INTREPID’s key recommendations to the European Union as it planned its new research programming period (Bina et al., 2017). We discuss time as the first of our enabling conditions for inter- and transdisciplinary processes, because it is a crucial aspect in all four phases. For inter- and transdisciplinary projects linked to research funds, time is almost always too short, as the unequal weight given to economic and social time results in the former trumping the latter. Priority is increasingly given to the need to start and finish projects in (economic) time, where time spans are

defined against mono-disciplinary parameters, virtually by default, with limited understanding of the additional demands of inter- and transdisciplinary processes in terms of social time. This theme was raised multiple times at INTREPID meetings, confirming the findings in the literature on interdisciplinary research: “A good interdisciplinary researcher will also have a high tolerance for ambiguity. This means not prematurely reducing a problem to a limited set of dimensions, but taking time to explore a range of dimensions, to test several potential boundaries to a problem (each of which may imply the involvement of different sets of relevant disciplines) until the apparently optimum boundary and set of dimensions has been identified” (Bruce et al., 2004). The dissatisfaction with lack of time is described in several cases (e.g. Dimitrova, Verdini et al., Nikšič, Paadam and Ojamäe, all this volume).

Competences and Dispositions

Our second enabling condition refers to competences and dispositions of individuals and teams (Figure 1.2.4). This is a nuanced arena, where boundaries cross in terms of definitions, interpretation and practice. Based on our network’s experience, our understanding of competences in inter- and transdisciplinary research processes is that they are broader than specific skills (Hartmeyer et al., 2017, in Giangrande et al., 2019, p. 3) and include two major dimensions: first, characteristics that can – at least partly – be taught (e.g. communication, leadership, facilitation and management); second, dispositions (or “dispositional thinking,” e.g. syntheses of systematic, anticipatory, normative, strategic and interpersonal competences (Reid et al., 2011, in Giangrande et al., 2019, p. 5)), which cannot be taught but can be acquired through experiential learning and/or are innate characteristics of an individual (Fam et al., 2017).

In the framework, competences and dispositions are listed separately on purpose to highlight their potential distinctiveness and relevance, thus making them more clearly visible in the phase of planning for an inter- and transdisciplinary process.

a. Communication: This role includes both internal communication, i.e. among team members, and external communication, i.e. between team members and external actors and stakeholders. In different phases of the research, different challenges related to communication have been identified as the aspect of “formulating” a joint problem framing (Polk, 2015) for example, or team building (Lang et al., 2012). Enabling approaches to communication among team members and partners have been suggested by several scholars (e.g. Erichsen & Goldenstein, 2011; Lyall & Meagher, 2008). Less has been published on enabling approaches to communication towards external actors and non-academic partners in transdisciplinary research, for example. Here we focus on both internal and external communication, as will be illustrated in the case studies. As an enabling condition for communication, Wolf et al. (this volume) describe the easy access to the actual site of research and to information gathered by all actors. Public discussions held in different ways, as open or invited forums or workshops involving academics and different interest groups in the city, are considered informative and educating for both academia and practice. It is asserted that the educational benefits of transdisciplinary research accompanied by communication between students and stakeholders (see Dimitrova, this volume) and between students and professionals in the field (see Gromark et al., this volume) have a special value for students’ academic performance and building future experts’ capacity. Furthermore, Verdini et al. (this volume) point to multi-fold benefits of students’ participation in interactive workshops, which, by embracing diverse cultures, enables students to learn from real-

world challenges and the local community's experiences, and the local community to learn from the participants' expertise.

b. Leadership and Management: In general, leadership and management roles include overseeing the project, making sure the timeline is respected, facilitating joint knowledge production and intervening in conflicts. These competences incorporate multiple aspects, including time availability, time management and facilitation of processes. In most of the case studies examined, it became obvious that there is an even more urgent need for someone to take leadership and to manage in inter- and transdisciplinary research than in disciplinary research (see also Polk, 2015). By management, we also mean facilitation of the process of joint knowledge production, for example, and many other aspects. The chapter by Dimitrova in this volume highlights "management of partnership" in a triad of *ethics, time, funding* as a serious obstacle to efficient inter- and transdisciplinary urban research. It critically reflects on the project leadership's role in the research results, and their confirmation of political decisions about the area's development. This points to all-too-common difficult negotiations of boundaries, as well as responsibilities, of the project leader and mediation between multiple actors with various interests.

The case studies reveal a wealth of dynamics related to different qualities and roles within inter- and transdisciplinary processes, which link to competences and dispositions. In particular, they reveal a concept of leadership and of the role of a leader within an inter- and transdisciplinary process that is in transition from a more classical understanding of leadership towards requesting competences as a facilitator of inter- and transdisciplinary processes. Thus, the role of a leader can be diverse and vary throughout the process of knowledge integration in an inter- and transdisciplinary project depending on the scope and the context. Based on our cases, we find that leadership often includes the skills and qualities of facilitation and change agents, as well as requiring several dispositions discussed here. The contribution by Anderson and Kirkeby in this volume is a good example of the dynamic roles throughout the process. They give examples of the importance of trust, open-mindedness and the willingness to listen as a basis for cooperation. By drawing on a metaphor of "orchestra leader," they point to the need for a project manager to be able to facilitate the cooperation.

The transition observed in practice is also discussed in the literature. Based on Wieser et al. (2014), Hoffmann et al. (2017) identify the following *roles taken by leaders* in inter- and transdisciplinary processes: collaborator, facilitator, scholar and advocator. Looking at the individual inter- and transdisciplinary researcher, Guimarães et al. (2019, p. 4, table 1), summarise a list of competences that have been identified as crucial characteristics of *leaders taking the role as a facilitator*. Among others, the role as a facilitator requires "commitment, connectedness, good communication and listening skills, flexibility, adaptability and capacity to build bridges." In addition, the capability "to promote learning amid the diversity of participants and to explore and clarify their differences so that dialogue and collaborative integration can occur" are crucial competences for facilitating co-production of knowledge within a team.

c. Facilitation: Facilitation is understood as a role and core competence for integrating knowledge in an inter- and transdisciplinary process. Further, it is seen as a means to reach the goal of co-producing knowledge among various actors with diverse interests and agendas. Indeed, there is significant overlap, in practice, between this and leadership, as well as with management. The role of a facilitator and the challenges of navigating in highly contested settings has been described in detail (e.g. Jordan et al., 2013). Some of the competences that they assign to facilitators are context aware-

ness, complexity awareness, perspective awareness, process awareness and relationship awareness. In describing the case of Gagliato, Verdini et al. (this volume) point out the crucial aspect of facilitating a democratic governance process. This requires an openness towards community and the incorporation of local expertise. Dietz et al. (this volume) also focus on the role of “change agents” to facilitate transdisciplinary processes and to manoeuvre between the many fields of interests and hierarchies. They describe how a “fertile ground” is important as an enabling condition.

If leadership and facilitation often overlap in practice, facilitation is also found to share uncertain boundaries with the role of change agents. This is especially true when the purpose of inter- and transdisciplinary processes is transformational. A *facilitator* of knowledge within inter- and transdisciplinary processes aimed at promoting change towards a more sustainable future will often (also) be labelled as a change agent. The cases described by Dietz et al. and Verdini et al. (this volume) include facilitation as an important competence for catalysing transformation processes. Thus, the experience shared by the network suggests that facilitators can include individuals or groups with (at times) trained skills, and, at the same time, dispositions, that can have a large impact on the result of the process.

Dispositions

Figure I.2.4 combines the two aspects of the enabling condition: competences and dispositions. In a study conducted by Guimarães et al. (2019, p. 10) on inter- and transdisciplinary researchers and their motivation, attitudes, skills and behaviours linked to being involved in inter- and transdisciplinary discourse and processes, authors identified specific characteristics that cannot ordinarily be trained but can, at least partly, be learned through experience, such as understanding complex issues and linking different fields of knowledge. Our network finds that these dispositions play a large role, especially when it comes to facilitating processes of co-design and co-production of knowledge. Without them, a facilitator might not be able to provide the “safe space” that is needed in order to build trust and provide the environment for co-design and co-production. As mentioned earlier, we acknowledge that the two dimensions of competences and dispositions are not always easily distinguished. Based on the experience of the network, three dispositions were identified as especially critical to inter- and transdisciplinary processes: self-reflection, trust and humility. These qualities are highlighted below in relation to the framework’s third overarching element of “learning.”

a. Self Reflection: The ability to reflect on the process of co-production of knowledge on an individual level as well as on a group level has been identified as crucial, especially in terms of awareness of power relations and aspects of relationship building, discussed in detail by Polk (2015) and, in the broader context of social research, by May and Perry (2011). Several cases in Parts II and III touch upon aspects of self-reflection as an important skill and disposition of those involved in inter- and transdisciplinary processes, and the main lesson is that there needs to be more adequate attention and resources (including that of social time, above) devoted to it.

b. Trust: Wolf et al. (this volume), describe what in our broader discussions felt like a rather unique process of continued self-reflection combined with trust: an opportunity made possible by a project team that knew each other from previous projects. Paadam and Ojamäe (this volume) also refer to trust built on previous projects that paved the way towards experimenting with a qualitative in situ joint research between practising architects and academic sociologists, with this methodologi-

cal experience having been critically reflected in *ex post* discussions within the team. Also, Dietz et al. (this volume) describe how an urban intervention in the form of a parklet created a space for reflection and meeting among various actors. This allowed for relationship building and the co-production of knowledge about the specific neighbourhood among local authorities, residents and the research team. Nikšič (this volume) reflects on how the residents in a suburban neighbourhood were mobilised to express their interest in the area development after the first unsuccessful attempts by introducing new methods of research enabling civil engagement.

c. Humility: Finally humility is discussed mainly as a necessary trait for those working within the academic establishment, as a quality that can enhance interdisciplinary conversations, conducive to the sharing and integration of knowledge. In transdisciplinary terms, it is critical in allowing the legitimate voice of different ways of knowing to be heard, valued and counted. Chiles et al. (in Part II) describe how the direction of the whole project changed when through time it became clear the community and citizen scientists approach was a more worthwhile and achievable direction to follow.

d. “Dispositional Competence”: Reference to the work of Bourdieu around the notion of dispositions and habitus, sometimes used as synonyms, can help to clarify further the two dimensions of our framework. Habitus is defined as “an open system of dispositions that is constantly subjected to experiences, and therefore constantly affected by them” reinforcing or modifying them (Bourdieu and Wacquant, 1992). The word *disposition* can designate a way of being or a habitual state and, in particular, a predisposition, tendency, propensity or inclination to act (Bourdieu, 1999, p. 214). Dispositions and habitus are mutually conditioning categories, so that one is often defined through the other: they can be thought of as a potentiality, a desire to be, which seeks to create the conditions of its own fulfilment; they can be acquired and constituted in and through the social *experience* in various fields of human conduct, such as that of academia (Bourdieu, 1994; Bourdieu and Wacquant, 1992). Bourdieu’s idea of dispositions also relates to notions of capacities and competence. Thus, action, despite carrying the appearance of rationality, is not always based on reason, because one is disposed to act and react to a particular situation based – either unconsciously or consciously – on one’s experience and capacity: “The dispositional competence or connoisseurship is an art, like the art of thinking or living and is gained through a kind of apprenticeship involving repeated contact with the work” (Bourdieu, 1993, pp. 227–228).

We might therefore conclude that competences and dispositions are two sides, the cognitive and the experiential, of the same enabling condition. This echoes the definition of competences adopted by the United Nations Educational, Scientific and Cultural Organization (UNESCO), which combines them: “the specific attributes individuals need for action and self-organization in various complex contexts and situations. They include cognitive, affective, volitional and motivational elements; hence they are an interplay of knowledge, capacities and skills, motives and affective dispositions” (UNESCO, 2017, p. 10).

Context

Obviously, all inter- or transdisciplinary processes are grounded and situated in a specific context. Every context is broad and complex; however, we believe that it is rather important to keep contextual aspects in mind when engaging in inter- or transdisciplinary processes. First, there are different

layers of context that are of importance: the societal and political context in which the inter- or transdisciplinary process takes place, the institutional contexts, the project context and the spatial context in which the inter- or transdisciplinary process plays out. Obviously, the latter three, institution, project and locality are all embedded in given socio-cultural, economic and political contexts. Innovativeness of a certain (inter- or transdisciplinary) process is also contextual, e.g. what can be considered a “paradigmatic change” in a certain urban planning context may be part of a more established tradition in another.

Various limitations linked to institutional capacities for transdisciplinary processes, for example, have been identified (Robinson, 2008). As several case studies in Part II illustrate, it starts from lack of shared physical space to more institutional hurdles linked to limited access to funding and a rigid administration. Wolf et al. (this volume), for example, describe the initial suspicion of university authorities towards the inter- or transdisciplinary project, as in the case of failure it would have endangered the prestige of the institution, and which required extra efforts and creativity from the research leader to apply for funding. Chiles et al. (this volume) describe how the historical and spatial contexts were crucial in starting a dialogue around new sources of energy. The practice story by Lafond et al. in Part III is an illustration of how societal and political context mattered and provided a fruitful context to develop the Spreefeld project.

Words

The fourth and final element of the framework’s enabling conditions, in Figure I.2.3, is “words.” In inter- or transdisciplinary processes, the importance of words and language, mainly because of the challenge of “ambiguity” linked to so many terms and concepts, cannot be overstated. In von Wehrden and colleagues (2018), we give a detailed account of how the network was confronted with significantly different interpretations of foundational words such as interdisciplinarity and transdisciplinarity. Above, we have given several illustrations of the weak and fading boundaries between, for example, key competences linked to terms such as leadership and facilitation. This, together with the additional reflections offered by Nikulina and colleagues (2019) suggests that, indeed, “words matter,” especially when further challenged by epistemic diversity – almost intrinsically linked to inter- or transdisciplinary work. As a result, we have offered a shared baseline vocabulary, introduced by Mennes (I.3 in this volume), in full knowledge that the field will continue to change and adapt as words both shape, and are shaped by, use, context and cultures.

C) A Propensity for Learning

The third dimension of our proposed framework is learning, and a fruitful learning environment in which an inter- and transdisciplinary process is embedded (see Figure I.2.2). The focus here is essentially on a predisposition to learning at three scales: as an individual, in teams and in society. Having placed learning as a background to Figure I.2.2 illustrating our framework, the implication is that we consider this a fundamental quality underpinning and influencing the workings of both the phases and the enabling conditions.

The integration of knowledge across disciplines and the recognition of different types of knowledge are crucial for inter- and transdisciplinary research and practice (Mittelstrass, 2011; Andersen, 2013). Here, individual willingness to learn, combined with a certain disposition to trust, humility and self-reflection, all seem to help in promoting the necessary openness towards other disciplines

and types of knowledge (including local knowledge). We use the expression “predisposition to learning” to summarise this.

The first phase of co-designing (see above, and Lang et al., 2012) focuses on problem definition, and here the aspect of reflexivity is a key principle that supports learning by the individual, the team and the wider social group, involving various actors aiming to overcome the normative assumptions and values applied (Lawrence, 2015). A predisposition to learning can be helped also by the creation of a conceptual model of how to exchange knowledge in the early phase of an inter- and transdisciplinary process (e.g. Heemskerk et al., 2003).

Learning through experiences and failures: while these aspects of individual, team and social learning often tend to be dealt with implicitly, the idea behind making this the third element of the framework is that it needs to become the explicit object of attention, planning and design of inter- and transdisciplinary processes. In Parts II and III, several cases and practice stories touch upon learning along these terms. Verdini et al., Dietz and Dimitrova (this volume) centre around pedagogical models of including inter- and transdisciplinary learning processes in urban planning education and the role of academia as facilitator of transdisciplinary processes. At the same time, social learning is an important part of the stories told by Chiles et al., Andersen and Kirkeby, and Heslop and Ged in this volume.

Finally, in Part IV, we explore further the theme of learning as central to international agendas for sustainable futures and, specifically, for urban sustainability.

A Framework to Help Plan

The three-part framework presented here is the result of insights and findings from the network’s own debates and reflections over the four years of INTREPID’s COST action, as well as the analysis of case studies and the experience shared in five dedicated workshops. The result is a heuristic-driven framework, explicitly intended to reflect experience of inter- or transdisciplinary processes, their obstacles and the possible enabling conditions that might help to solve them. While the main reason for developing the framework was to learn from each other as heterogenous members of a network of scholars and practitioners, we think the results summarised in Figure I.2.2 can also help in the early stages of designing an inter- or transdisciplinary process; the aim is to avoid as many obstacles and maximise the possibilities for desired outcomes to actually materialise.

Taking time to think about the three dimensions (inter- or transdisciplinary phases, enabling conditions and learning) together, as part of a complex process, rather than in isolation, will hopefully help avoid obvious pitfalls and omissions, while finding opportunities for synergies and, of course, learning. Fully aware of the many excellent sources of knowledge and guidance for inter- or transdisciplinary processes, we encourage the use of the suggested framework as a starting point for early planning. The idea is a simple invitation to allocate the often limited resources of time, competences and dispositions across (A) the four core inter- or transdisciplinary phases; (B) the crucial ongoing process of learning by individuals, teams and in society (C) as the all-important enabling conditions.

We hope the framework can serve as a source of inspiration for researchers and practitioners to guide and conduct inter- or transdisciplinary urban research and practice and maximise learning throughout. Furthermore, given that another key interest of the wider INTREPID network is the programming and funding of such research, we see the potential for this framework to become a heuristic for funding institutions when drafting calls and evaluating research. Our framework resists the seemingly unstoppable drift towards an instrumental and reductionist pursuit of efficiency at the

expense of the qualities of a plural, diverse and inevitably messy and complex process that builds on self-reflexivity, trust, humility and constant learning.

Notes

- 1 “Enabling the City” is only one of many outputs for the whole INTREPID network, this group being concerned specifically with Urban issues.
- 2 The British School in Rome (BSR) is an interdisciplinary research centre supporting the arts, humanities and architecture.
- 3 Interdisciplinary Toolkit: www.sheffield.ac.uk/idtoolkit was developed as a result of the Stocksbridge project, some aspects of which are discussed in Part II.

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03

WORDS MATTER: A SHARED BASELINE VOCABULARY

Julie Mennes

Finding the Right Words

This volume is *about* challenges to and the enabling conditions of inter- and transdisciplinary (ITD) processes in urban research and practice. However, it is also a *result* of these processes: as illustrated in the framework Part I.2. The 16 stories in Parts II and III and analyses and discussions in Parts I and IV are the product of a collaboration between authors with backgrounds in different disciplines related to urban research and practice.

One of the four enabling conditions included in the Framework for inter- and transdisciplinary processes concerns the words that are used, their epistemic diversity and their potential for ambiguity. It stresses the importance of dedicating time and resources to the identification and exploration of differences in the meaning of key terms throughout any collaboration and the subsequent development of shared understanding. The experiences reported in this volume, as well as experiences from the production of this volume, suggest that existing scholarly definitions only constitute starting points for the creation of shared understanding in inter- and transdisciplinary processes (Nikulina et al., 2019; von Wehrden et al., 2018). Ideally, a shared baseline vocabulary is co-designed and co-produced, which also offers the space needed to enhance mutual understanding and learning; this is a theme further discussed in Chapter IV.3. In the process of producing this volume, an effort was made to create a baseline vocabulary in response to the ambiguity of key terms. This chapter presents the result of that effort.

Understanding Ambiguity

In linguistics, a word is called “ambiguous” when it has multiple meanings (Klepousniotou, 2002). If these meanings have a shared etymological origin, they are *polysemous*; if they do not, they are *homonymous* (Tuggy, 1993). Ambiguity is a general phenomenon that occurs in everyday communication. In inter- and transdisciplinary communication settings, the jargon of the different disciplines and professions are an important source of ambiguity. Firstly, some words are part of the jargon of multiple disciplines, but have different meanings across those jargons (Eigenbrode et al., 2007). Secondly, some jargon has a common, non-specialised meaning in everyday language (Wear, 1999). Mere ambiguity does not pose a challenge for inter- and transdisciplinary communication. But, when the context in which an ambiguous word is used allows for different *interpretations* of the word, i.e. for different meanings to be ascribed to the word, the situation can become tricky. Interlocutors can then have the impression that they are talking about the same thing while this is not the case. However, even if interlocutors indeed ascribe different meanings to an ambiguous word, real problems only arise when two more conditions are met, firstly if the word plays a significant role in the conversation, i.e. its interpretation has an impact on the course of the conversation; and secondly if the different interpretations of the word contrast in a relevant way, i.e. the meaning that is ascribed by some interlocutors is excluded by others.

In the case of ambiguity across disciplinary jargons, the different meanings of a word can be closely related; they can be about the same phenomenon, but highlight different aspects in line with the central interest(s) of the respective disciplines or professions (Szostak, 2014). Jargon is interconnected with the methodological, epistemological and metaphysical assumptions underlying a discipline or profession. In cases where the different meanings are closely related, the second condition is better expressed in terms of excluded meaning components, rather than (full) meanings. When these conditions are met, an ambiguous word can trigger different problematic scenarios. In one scenario, the interlocutors (increasingly) struggle to understand each other, and this slows down their communication. In such a case, the interlocutors either become aware of the problem and try to resolve it, which requires the conversation to be paused until a resolution is found, or their communication breaks down entirely. In an alternative scenario, interlocutors are completely unaware of the miscommunication. In such a case, the word can cause huge misunderstandings, (the effects of) which are only noticed after a long time.

The Process of Building a Baseline Vocabulary

The challenges related to words and meanings were experienced first-hand in the process of co-writing this volume. Especially in the early stages, the meetings of the authors were slowed down more than once because of a lack of conceptual common ground, made worse due to diverse disciplinary backgrounds and multiple distinct “key” scholarly references. Whenever this situation occurred, the team of authors resolved it by using a three-step strategy. First, word(s) causing confusion were identified. Next, all meanings that were ascribed to the word had to be made explicit. Finally, a *baseline definition* was agreed upon, i.e. a definition that fixed the meaning that functions as the default one in the context of the collaboration, but that was not assumed to capture the one and only relevant meaning of the word. These baseline definitions were found to be an important enabler for interdisciplinary collaboration among the authors as they increased the efficiency of communication and strengthened the group identity. Therefore, it was decided to note the definitions down and to extend the list into a *baseline vocabulary* that would cover the key words of the volume.

These key words were nominated by the authors of the case study chapters (in a group discussion) or selected by the author of the baseline vocabulary (based on an analysis of drafts of the case study chapters). For key words, baseline definitions were drafted based on a lexicographical study of the case study chapters. These drafts were then evaluated in a moderated group discussion and, based on the provided feedback, the definitions were adjusted and fine-tuned. In this way, it was ensured that the relevant (discipline- or practice-oriented) perspectives of the authors of the case study chapters would be integrated into the baseline vocabulary.

Usage of the Baseline Vocabulary

The baseline vocabulary is a *tool* that was used by the authors in the preparation of this volume, and can also be used by its readers. The usage by the authors was twofold. In the early stages of their collaboration, the baseline vocabulary was used to consolidate mutual understanding in the way described above. At a later stage, when chapters were being finalised, the vocabulary was used to maximise the terminological coherence of the volume: for every occurrence of a key word, the authors made sure that the meaning of the word accorded with its baseline definition, or that, where necessary, a deviation in use was clearly indicated and an alternative definition provided.

For readers, the baseline vocabulary forms an easy guide to the conceptual backbone of the volume. It allows them to quickly identify the key words and to understand their default meaning. The baseline vocabulary is an important tool, its visibility and accessibility increased by including it in Part I of the volume.

The Structure of the Baseline Vocabulary

The baseline vocabulary consists of entries (i.e. key words) and their baseline definition. When a baseline definition is based on existing definitions of the word, the necessary references are included. The entries are ordered alphabetically.

Actor

In the context of a project, actors, or agents, are the entities (e.g. people, institutions, organisations or companies) that make an active contribution to the implementation of the project. Actors can be members of or can be external to the team responsible for the project. In general, team members contribute to a project by introducing expert knowledge or technical skills and/or by managing and coordinating the project. External actors make requests or provide information and feedback to team members. Note that the involvement and role of actors may change in the course of a project.

Agency

In the context of working practices, it is defined as capacities for action. In urban activism, agency implies action, engagement and looking outwards. Involvement and acting in the context of research outside the academy is also about transformation, acting both within and between the fields of research, practice, education and civic life. It is often used in conjunction with alternative practices.

Case study

A case study is a method for studying a phenomenon in a real-life context with the goal of illustrating or learning general principles. In this volume, the cases are (urban research and practice) projects and their study is guided by a framework of analysis that is focused on barriers and enablers for inter- and transdisciplinarity.

Challenge

A challenge, or “challenging condition,” poses a hurdle for the (efficient) execution of a project. By making the necessary efforts, challenges can be overcome. When used in the context of cross-disciplinarity, the concept is implicitly comparative and refers to hurdles that are caused by characteristics that differentiate inter-, trans- or multidisciplinary projects from traditional, disciplinary projects. Examples of such characteristics are “combining knowledge from different disciplines” and “collaborating with stakeholders.”

Change agent

Change agents are actors (individuals or organisations) who catalyse a transformative process within society. Often these individuals or organisations facilitate processes of co-producing knowledge and mediate between the many fields of interests and hierarchies.

Civic – inspired by Putnam (1993)

“Civic” indicates the involvement of citizens or communities, where this involvement can be active (i.e. citizens contributing to the realisation or maintenance of something) or passive (i.e. something that concerns citizens, cities and/or public affairs). Put differently, “civic” means that something is *by* citizens, or that it is *for* citizens. The combination of both meanings is also common.

Co-design – based on Mauser et al. (2013); Polk (2015); Lang et al. (2012)

Co-design is the first phase of an inter- or transdisciplinary project. It is the phase in which the goals of the project are determined. It comprises (i) defining the central questions or problems; (ii) deciding on (the nature of) the desired answers or solutions; and (iii) identifying the knowledge and/or skills required for the answers/solutions. Besides referring to a project phase, “co-design” also indicates that an inclusive approach is taken, i.e. an approach in which the input of all relevant actors and the interests of all stakeholders are taken into account.

Collaboration

When two or more people work together to create or achieve something as one, or to work jointly with others. Collaboration can include networks, coalitions, movements, strategic alliances. In successful collaboration the processes and methods for participating as well as the quality and degree of the participation result in in-depth contributions from both practice and research (Polk 2015).

Community

A group of people who interact with each other because they live in the same area and/or have a similar interest or background. Some community types that are particularly relevant in the context of urban research and practice are characterised by a similar interest (e.g. a community of academic researchers), a similar profession (e.g. a community of practitioners), a similar occupation (e.g. a community of entrepreneurs), a similar living environment (e.g. a neighbourhood community) or involvement in a transdisciplinary project (e.g. a community of collaborators).

Competence

In general, competences are skills and abilities. In the framework for analysis, “competence” refers specifically to those skills that allow the facilitation of the process of inter- and transdisciplinary knowledge generation. Two important examples are “communication” and “leadership/management.” The first includes both internal communication, i.e. among team members, and external communication, i.e. between team members and external actors and stakeholders. Leadership/management includes overseeing the project, making sure the timeline is respected, facilitating joint knowledge production and intervening in conflicts.

Context

The context of a project is the circumstances under which the project is started (and carried out). These circumstances can be societal, financial, cultural, social, institutional, etc. Some examples of circumstances are the reason(s) for starting the project; the amount and source of means available for the project; the research agenda or philosophy to which the project subscribes; the people who show interest in the project; the rules or habits of the actors involved.

Continuation

Once the goals of a project have been reached and/or the funding for the project has ended, it may be decided that the project is to be continued. This continuation may consist of the writing of a new project proposal aimed at expanding or deepening the original project, or the team members deciding to prolong (and diversify) their collaboration, or initiating an additional event inspired by and conducted in the frame of the project. In a broader sense, continuation refers to the drawing on the legacy of previous experiences.

Co-production – based on Mauser et al. (2013); Polk (2015); Lang et al. (2012)

Co-production is the phase of an inter- or transdisciplinary project in which answers to the central questions are generated, or solutions for the central problems are created. As with “co-design,” the word “co-production” indicates that an inclusive approach is taken, i.e. one that maintains a dialogue between all relevant actors, and if applicable, stakeholders.

Cross-disciplinarity – based on O’Rourke and Crowley (2013)

All endeavours that involve multiple disciplines, at least one of which is academic. Different types of cross-disciplinarity are inter-, multi- and transdisciplinarity.

Decision-maker

In general, decision-makers are the people who set the agenda of large organisations such as companies and unions, but also municipalities and state authorities. In the context of a research project, decision-makers are the entities (e.g. people, institutions, organisations or companies) that have the final word about the course of the project. Generally, they obtained their authority by having provided financial support to the project (e.g. in the case of business partners) and/or by being responsible for the result of the project (e.g. in the case of local governments).

Discipline

In a broad sense, “discipline” refers to any area of expertise. Typically, it is used to refer to an area of study as defined by the organisational structure of universities.

Disposition – inspired by Bourdieu (1999)

“Dispositions” refer to distinct capacities of individuals and/or groups to (re-)act, which, rather than being trained or consciously learnt, are shaped through social experience in different fields of human conduct. Dispositions play a significant role in inter- and transdisciplinary processes, especially when it comes to facilitating stages in the co-design and co-production of knowledge.

Dissemination

Dissemination is the last phase of a project. It is the phase in which the acquired knowledge or solution is implemented and shared.

Empowerment

When a person or a group of people is empowered, they obtain the authority for or possibility of taking part in a process (also of decision-making)/taking up a role that is important for them, but was previously inaccessible. Empowerment can be active (i.e. by means of direct participation) or passive (i.e. by changing political, economic or social conditions).

Enabler

Enablers, or “enabling conditions,” are the counterparts of challenges. They make it possible (or easier) for a project to be executed. Enabling conditions may happen to be present for a project, e.g. favourable circumstances or advantageous particularities of the (composition of the) team. However, they can also be actively introduced, for example by using tools, strategies or techniques for organising and/or implementing a project.

Ethical

Generally speaking, ethics is the study of systems of norms, principles and values that demarcate the morally good. An action is ethical when it is motivated by reasons that adhere to an ethical system (i.e. when an intentionalist perspective is adopted) and/or when its effects are in line with an ethical system (i.e. when a consequentialist perspective is adopted). In urban research and practice, this

often comes down to respecting relevant ethical systems and sensitivities and/or creating a positive impact on people's lives and the environment.

Facilitation

Facilitation is understood as a core competence for integrating knowledge in an inter- and transdisciplinary process. Further, it is seen as a means to reach the goal of co-producing knowledge among various actors with diverse interests and agendas.

Innovation

Innovation stands for the introduction of a novelty that, in many cases, once fully implemented, will generate more changes. The introduced novelty can be new knowledge (e.g. on material engineering, sociology, sustainability), new methods and techniques (e.g. urban research and practice processes), or it can be a new product (e.g. a new circulation plan, enterprises). It should be noted that, generally, things are only innovative in specific respects or in specific contexts.

Integration

Cross-disciplinary integration is the process of combining elements from a discipline (e.g. values, methods, information, tools, data, criteria, theories, perspectives, concepts, etc.) with elements from another academic or non-academic discipline. Integration leads to the redefining, re-contextualising or enriching of existing disciplinary elements, or the creation of new elements.

Interdisciplinarity – inspired by Klein (2014)

Interdisciplinarity is a type of cross-disciplinarity that involves the integration of knowledge from different academic disciplines.

Interprofessionalism

Interprofessionalism is the non-academic counterpart of interdisciplinarity. It involves the integration of knowledge from different professions and practices.

Intervention

An intervention is a targeted change that is made to obtain information and/or to improve a situation. Interventions aimed at obtaining information can be direct (e.g. when they consist of manipulating a system and measuring the effects) or indirect (e.g. when they are set up to bring people together who are then requested to provide information). Ideally, interventions that aim at making improvements are supported by research.

Intradisciplinarity

When researchers with a shared disciplinary background collectively reflect on their training and practice in order to gain insight into (different schools within) the discipline, to define a discipline and/or to determine future goals of their discipline, their efforts can be labelled as “intradiscipli-

nary.” Given a broad interpretation of “discipline” (i.e. as an “area of expertise”), “intradisciplinary” can also refer to the self-reflective practice of professionals and practitioners.

Knowledge

Knowledge is insight into or understanding of a certain subject or phenomenon (which can be scientific, aesthetic or ethical). Knowledge can be explicit or tacit, theoretical or practical.

Knowledge production

“Knowledge production” refers to the process of generating new knowledge. When an inter- or transdisciplinary approach is taken, knowledge production is a collective endeavour that involves the integration of input from very different sources and the finding of appropriate (often novel) methods to reach the knowledge goal.

Multidisciplinarity – inspired by Holbrook (2013)

Multidisciplinarity is a type of cross-disciplinarity that involves the juxtaposition of disciplines (instead of integration, as is the case in inter- and transdisciplinarity); different disciplines synchronically address complementary questions on a subject. Multidisciplinarity enables cross-fertilisation between disciplines.

Network

A network is a group of entities (e.g. people, institutions, organisations or companies) that is structured around a certain goal or interest. Generally, entities join a network because it grants them access to information and resources. Networks do not necessarily dispose of operating resources, and its members are not necessarily in direct contact.

Participation

In its simplest form, “participation” refers to taking part or getting involved. In the context of transdisciplinarity, the concept has a strong emancipatory connotation and refers to situations in which people or groups that were initially excluded obtain the opportunity to take part in a project that will affect their living conditions. Because the initial exclusion of such people and groups is generally related to isolation, limited financial means or limited mobility, achieving participation requires a significant effort.

Practitioner

A practitioner is a person whose occupation is non-academic and involves the application of theoretical knowledge (generally acquired via university education) and/or skills that are specific to a given area of expertise. Being a practitioner does not exclude being an academic.

Professional

To be a professional means that one's occupation is non-academic and involves the application of practical and tacit knowledge. Generally, one is only considered to be a professional after having acquired a certain level of experience.

Project

A project is a unit of knowledge production that is characterised by one or more goals, i.e. certain answers/solutions to the central questions/problems or even a physical resolution. Projects are carried out by teams and their duration is often determined by funding. When a project is inter- or transdisciplinary, it spans co-design, co-production and dissemination phases, and the members of the team responsible have different backgrounds.

Researcher

In a broad sense, a researcher is someone who studies a subject to learn more about it. In the strict sense, a researcher is someone who is associated with a university or a research institute and is focused on acquiring knowledge (as opposed to applying knowledge).

Resilient

Like sustainability, the notion of resilience stands for the capacity of surviving, maintaining or continuing. However, while the former draws attention to (the presence of) factors that contribute to this continuation, the latter draws attention to (the withstanding of) factors that threaten continuation.

Stakeholder

In the context of a project, the stakeholders are the entities (e.g. people, institutions, organisations or companies) that have an interest in the project. "Stakeholder" is most commonly used to refer to the funders of the project as well as to the businesses, associations, federations, policymakers, legislators, etc. who are supposed to benefit from the project.

Sustainable – based on World Commission on Environment and Development (1987)

Generally speaking, something is sustainable when it is capable of surviving, maintaining or continuing with minimal external input. The term "sustainable" expresses the idea that something meets a set of desiderata that is relevant at a certain time t , but that it also meets the desiderata that become relevant at a later point in time t' . The adjective can be used in a normative manner, i.e. to say that something *should* be sustainable, or in a descriptive manner, i.e. when stating that something *is* sustainable. When used normatively, the initial desiderata are situated in the present; when used descriptively, the initial desiderata are situated in the past. In urban contexts, the desiderata relate to living, working and/or moving in an urban environment.

Transdisciplinarity

Transdisciplinarity is a type of cross-disciplinarity that involves the integration of academic disciplinary knowledge with knowledge, values and interests from professionals, practitioners, decision-makers and/or stakeholders.

Transferable knowledge – inspired by Kirkeby (2011)

Transferable knowledge is knowledge that is generated in the context of a given project and/or for a specific purpose, but that is applicable to other projects and/or purposes, given that the novel context shows certain (structural) resemblances to the original one.

Transformative

The notion of transformation is closely related to those of novelty and preservation, as it refers to existing things being changed (profoundly) rather than to entirely new things being created. Possible subjects of transformation are theoretical (e.g. scientific knowledge), organisational (e.g. education, research, politics or economics) or physical (e.g. infrastructure).

Trust

Trust in an entity is a necessary condition to be able to outsource a certain task or responsibility to that entity without major worries or concerns. Building trust can take a lot of time because the trusting party needs to ascertain that the trusted party is not likely to abuse the power that comes with responsibility.

Urban

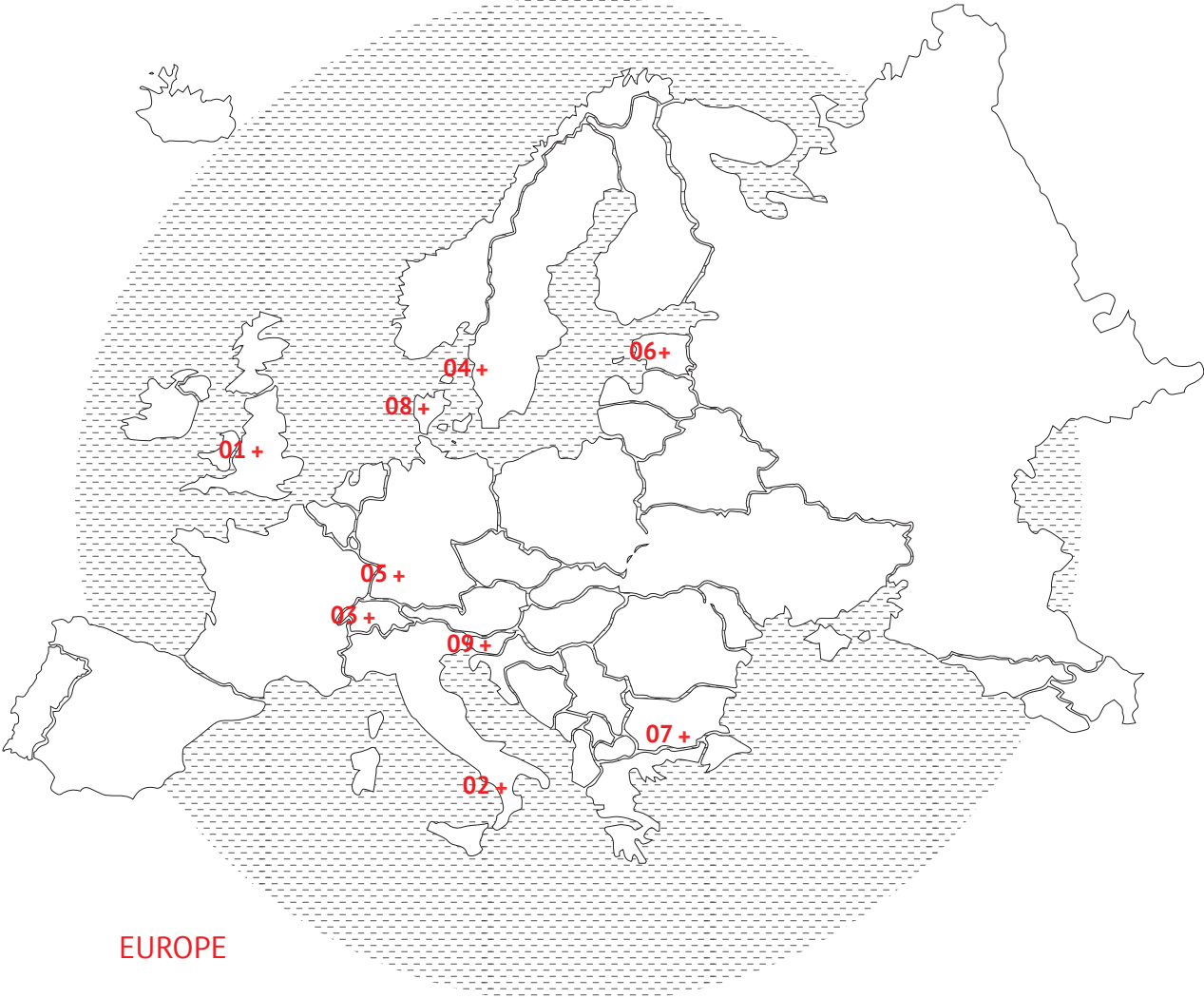
“Urban” is the antonym of “rural” and refers to (the organisation of) life, housing, transport, planning, heritage, the environment and public space in cities and other densely populated areas.

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PROJECT LOCATIONS



EUROPE

- 01** Stocksbridge / UK
- 02** Calabria / Italy
- 03** Lucerne / Switzerland
- 04** Gothenburg / Sweden
- 05** Stuttgart / Germany
- 06** Tallinn / Estonia
- 07** Plovdiv / Bulgaria
- 08** Aalborg / Denmark
- 09** Ljubljana / Slovenia

PART II

Urban Stories Beyond Disciplines



Building



Street



Public Space



City



Housing



Neighbourhood/ Community



Network

Introduction

In Part II a series of nine essays, written by members of the INTREPID network, explore the importance of inter- and transdisciplinary ways of addressing topical themes for today's cities, including new sources of energy, innovative solutions for housing, care homes and design for dementia, liveable neighbourhoods and inviting public spaces, small town development. All contributions tackle in the widest sense our multiple and interconnected socio-ecological crises, emphasising the need for change in cities as well as in ways we approach the city in research and practice.

Each essay in Part II is accompanied by a set of graphics designed to guide readers through the nine urban cases with indications of their geographic locations, the collaborators, partners and disciplines involved.

The small icons at the upper right corner illustrate the specific focus together with interrelated scales and/or nature of spatially situated cases discussed and analysed from the perspective of interdisciplinary and transdisciplinary processes in each essay from nine European cities and towns.



01



THE PLACE AND SPACE OF POWER

Mess, Uncertainty and Change over Time

**Introduction**

This chapter discusses how a collaborative new-energy project in the industrial town of Stocksbridge, South Yorkshire, enabled us to construct our working definition of trans-disciplinarity. Through the methods of research and the curation of conflicting communities of knowledge and ways of doing, we built on opportunities emerging to create the potential for long-term change. At the outset, this was intended as a participatory “citizen science” project, working with residents on new solar technologies. However, the project became a wider concern with ambitious plans for a sustainable energy future for the town, local energy production, and potential neighbourhood projects such as the refurbishment of a community building into a “green” exemplar.

The four-year project was an extensive collaboration between university participants across a number of disciplines and universities, and a self-selecting public in Stocksbridge. Working through carefully structured participatory events, exhibitions and workshops, each stage of the project allowed us to develop a socially-orientated learning process (uncertain and messy, but in which the

FIGURE II.1.1 Part of the model of the whole of Stocksbridge. Photo by Prue Chiles

community of residents began to provide the direction of travel) in order to create meaningful change. It tried to be a genuinely reciprocal project, combining local knowledge, academic knowledge, practice knowledge and “designerly” ways of knowing, to benefit both the community and the university. The transformative action we desired and the consequent shift in power that emerged, came from the tools and skills we deployed and the care and collaboration we developed over time.

The Project, the People and the Place

“Urban sustainability can be established through community activation, as urban structures exist by the grace of urban rituals and interaction.”¹

The debate on the production of renewable energy with the involvement of the neighbourhoods and publics concerned, most agree, can lead to more sustainable urban futures. This is of global concern. How it is achieved is more uncertain. The idea for a research project to address this came from a physicist, Al Buckley, an academic with an industry background and a motivation to develop inventive solar solutions. He set about gathering a group of collaboratively minded academics at the University of Sheffield and elsewhere with the aim to co-produce new knowledge leading to new applications for local energy provision in urban environments. An application to the UK Engineering and Physical Sciences Research Council (EPSRC) was successful and a four-year funded project became a reality.

“We wanted to make solar energy relevant to the way we live as individuals, as families, and as communities and work on how we can change the way we think about and act on energy issues. Solar power technology is unique amongst renewable energy solutions as it offers an energy generation capability for individual homes, and opens the possibility of a new, decentralised energy paradigm.”²

To achieve more locally relevant energy solutions, the academic team was keen to involve energy users as knowledge partners. The project aimed to be critically informed by involving ‘lay publics’ in science and technology debates as “uncertified” experts (Lane et al., 2011), “to produce mutual learning between academics and public stakeholders; a space of ‘science for’ but also ‘science with society’” (Scholz, 2011: 401).

Over the four years the project has been successful in a number of ways and less successful in others. Most notable, we felt, was the way we, over a relatively long period of time, worked closely with the local community of Stocksbridge to develop potential future community energy scenarios. Also, along with academic learning in the fields of energy planning and policy and science and technology studies, a local “Stocksbridge Energy Group” has been established, made up of people passionate about investigating renewable energy sources for the town – including a hydroelectric scheme, the use of geothermal energy from disused mines around the valley, and solar photovoltaics. On a more immediate and practical front, after the project had finished there were plans to improve the energy efficiency of various community buildings. Some of the more ambitious plans for Stocksbridge, however, remain in the pipeline.

Key aspects of this diverse research project, completed in 2017, have already been published – including how the presence of an ethnographer,³ embedded in the project throughout, enabled reflexivity within the interdisciplinary research process. As the project was coming to a close we also published a toolkit for interdisciplinary working at every stage of a project. Every discipline has its limits

and understanding this and placing interdisciplinarity at the core of our work together foregrounded the importance of both disciplinary experiential knowledge and the “spillover” effects⁴ that our different working processes created. These included, for example, a language barrier caused by a conceptual and disciplinary understanding of words – our own private professional languages – that led to misunderstandings. Aside from the more scientific papers, we have also published on the different aspects of the collaboration with the people of Stocksbridge – how we *“created forms of engagement that simultaneously address futures as lived, and futures as open. This means taking responsibility for the performative effects of our methodologies, and dealing with the reality of politics and power in participation processes.”*⁵

There are still many questions to be asked about a project of this complexity and involving so many people, but one early “sticking point” was the many different approaches there were in moving towards a new understanding of the issues of energy generation. These different communities of knowledge ranged from pure science and engineering responses to applied technology, to a community actively developing principles of local energy production as part of their everyday lives. So, during the first two years of the project visions for a future local energy system, local values, aspirations and desires around energy became the central inquiry. It was during this “messy” time that slowly but surely, during the workshops and events, the community agendas took precedence and the shape and direction of the project changed as the balance of power shifted and developed. This chapter looks specifically at the communication tools and processes we devised that facilitated this change in power relationships.

A Place of Power, Energy and Industry – Why Stocksbridge? What Is it Like? Why History Mattered?

We chose to work in the town of Stocksbridge for a number of reasons. We had had an introduction to the town as a group of University of Sheffield Masters Architecture Students were doing final year thesis design projects based there. It is an interesting edge place, a town of heavy industry with a fascinating history and heritage and, because of this, a diverse population and demographic make-up. It is on the edge of the Peak District National Park and 17 kilometres from the centre of the city of Sheffield. Its location in a deep valley cut by river Don which flows into the city centre of Sheffield, and overshadowed by the Underbank reservoir and dam, have meant that water has always been important in its development. The town’s history is all about power, water, energy and industry. Its industrial history started with a cotton fulling mill in the early 18th century which was transformed into an early steel wire mill in 1842 by Samuel Fox. Fox became famous for the invention of the paragon umbrella frame, used all over the world. Stocksbridge is therefore the very embodiment of an early Northern industrial powerhouse, now lessened and compromised but still producing and with huge resources. Stocksbridge plays a large part in the history of the innovative Sheffield steel industry. During our time working with residents in Stocksbridge the plant nearly closed after 160 years but at the last minute found a new owner and high-grade steel is still being manufactured there. However, huge job losses at the beginning of 2020 have put steel production in Stocksbridge under threat again.

Stocksbridge has its own Town Council but would like to be still more independent – recently there has been a sense of political disempowerment and a dissatisfaction with Sheffield City Council. Among other cuts Sheffield City Council closed the town’s leisure centre and swimming pool, with the nearest pool now in the centre of Sheffield. It is not very well connected with the city centre, the bus takes ages and the tram from the city stops 11km away at Hillsborough. Young people want to be nearer the city centre. It feels like an edge place. One of the team of residents we worked with



FIGURE II.1.2 A view over Stocksbridge from the steel mills. Photo by Prue Chiles.

commented that *“I always feel we are the poor relations of Sheffield, just tagged on at the end.”* Working with “real” people formed the whole essence of the project, capturing a deep sense of place. The micro-projects and different aspects of the town we looked at through energy scenarios, brought together different perspectives from different participants in the project.

The People – Building a Team and Assembling a Public

The academic members of the team comprised two physicists, two engineers, three geographers, an architect and her Masters’ students, a mathematician and an ethnographer. The team took different roles and responsibilities at different periods of the project, and other valuable practitioners and academics joined at particular times.⁶ The Masters Architecture students became a valued part of the project and after their studio projects had finished a small team continued to work with us both to produce drawings and models necessary for visualising and recording our work, and to be part of the team of enablers at the workshops and events. Once the academic team was established, gathering a group of people from Stocksbridge was the next big task. Recent governments in the

UK have been keen to involve citizens in the future energy provision at neighbourhood and community level; embarking on this project in Stocksbridge we understandably found a huge repository of local knowledge on energy and actively engaged “citizen scientists” exploring geo-thermal energy – as this is an area of abandoned mines.

The catalyst for assembling the project’s local participants was an initial exhibition at the Stocksbridge Public Library. We curated and mounted a number of ambitious architectural models, posters, technological artefacts, and games, to generate debate and discussion about potential futures of the local energy system amongst the local visitors. The whole academic team were stationed at different parts of the exhibition to encourage visitors to sign up for the project and to invite them to participate in the first workshop.

The motivations of those who signed up for the project varied but for a number of people the desire was to use local energy production as a means to revitalise Stocksbridge. Stocksbridge resident Andy explained: *“what you managed to do was bring a group of like-minded people together with like-minded thinking into a more structured format, lots of people have been talking about renewable energy in Stocksbridge for a long, long time, but not together.”* We were involved temporarily in sharing their public *democratic* lives.

This self-assembling disparate group, mainly living, but some working in Stocksbridge, certainly came with their own agendas. Others heard about the project and joined; some quickly lost interest. At one point a contentious political party (UKIP) with a particular agenda and a desire for publicity tried to get us involved in a controversial local cause and of course we had to back off immediately. One or two residents had companies they thought the work might benefit. We tried hard to get the Steel plant, TATA steel, to be involved and nearly succeeded but their economic fragility at the time meant they could not commit to the project. The steel plant was under capacity and a large proportion of the vast valley site was empty industrial space.

Running an academic research project in the community around the theme of energy for a total of four years allowed the project to facilitate new social relationships as well as new forms of social learning. Regular informal meetings helped to embed and explain any issues dealt with in the more formally-organised workshops. The community then began to trust us and know we meant business – and we began to know they meant business. The ethnographer spent much of her time navigating the many different desires, agendas and understandings from the academic team, and in “putting” the public and the academics together. The two full time research associates, a physicist and a geographer, spent a good deal of their time every week travelling, by bus, the 17 kilometres from Sheffield to Stocksbridge turning up at a specified time at the local café for the drop-ins. The full-time academics helped run the workshops and exhibitions with the research associates. Some members of the team were more suited to staying “within the academy” while others were keen to get stuck in with the residents and the events. The whole was greater than the sum of these parts!

All of us, academics and residents alike, embarked on the project feeling slightly uncomfortable in different ways, all feeling lacking in skills and with a touch of the imposter syndrome. Within the academic team too there were varied “agendas” – for the physicists and engineers, a more experimental and data-driven set of results; for the architects, the sustainable agendas of local energy production through relevant action-research and research-led teaching; for the geographers, understanding processes of energy production, building social capital and so on. For the Masters students and for the academics, developing our skills in participation, in listening, was important, and the Masters students also benefitted from the opportunity to use their design, drawing and model-making skills working with publics. Of course, many of our interests overlapped and

coincided. The Architecture students came to many of the meetings and presented their own design projects built out of the research and their ideas. Their agency and proactive desire to engage with the people and the place, and their youth, all helped in setting up and contributing to the changing processes of the project.

Sessions or reviews in the university with the academic team on the students' projects helped the former develop their ideas, although at times there was also frustration at different and disciplinary understandings. Al, the Physicist, for example was frustrated at architecture students' reluctance to solve energy calculations accurately – they preferred someone else to do this and for them to apply this to broader problem solving and design decisions. As part of the interdisciplinary understanding of disciplines this was one of the first times we realised we all have our own skills and ways of working.

Building Social Capital – Conditions and Tools to Build the Collaboration and Change the Power Dynamics – Models, their Use and Meaning

Models, their Use and Meaning

“Models as objects are a bit ordinary, rooted enough in the everyday to seem familiar, formally intense enough to seem sublime.”⁷

At the first exhibition to introduce ourselves in the Public Library at Stockbridge we, the academic team, hoped the architectural models, posters, technological artefacts and games, would provide visual interest and an engagement with the themes and aspirations of the project. We hoped to inspire Stockbridge residents with the potential project. We understood the power of models to both attract a public and to aid discussion, but were not so aware of their destructive power, their capacity to disrupt and to antagonise the residents. The scaled down truth of a model offers instant totality, a place modelled in tiny but perfect detail and a kind of stark visual reality.

The MArch architecture students had been commissioned and briefed to build two models. One large model to show a “what if” energy future for the whole of Stockbridge (Fig II.1.1) to understand the scale and extent of the town. Many of the conversations and the sharing of ideas collected standing around a model are about distance and proximity – about someone's house in relation to their colleagues'. We found it was a great way to introduce, for example, just how close parks were to them, the relationship of their familiar domain to one they have never visited. There is a shift in power dynamics when communities, or the citizen generally, wanting to think about new buildings, suddenly feel they have an understanding of space or place. They can not only see what they need but they can give some impression of the space they inhabit or would like to inhabit. It performs a “*democratic turn of information*”⁸ and ideas in three dimensions and for this reason is probably the best, and most intuitive, way to construct a plan of what to do next.

The model mainly presented solar technologies, where and how they could be placed. However, for discussion, they had also situated thirty or so wind turbines on the hill above the town. Most of the houses would look out at these. Understandably this had an immediate impact and created criticism and debate on the destructive effect the one (existing) solitary wind turbine had on the neighbourhood. It was noisy and thought to produce disruptive waves that created headaches and dizziness if you were nearby. The thought of thirty turbines was more than some could bear.

We hadn't successfully explained the status of the model, neither had we really thought through the ramifications of wind power. However, getting their point across about wind power, making us



FIGURE II.1.3 A difficult discussion on wind power around the model. Photo by Prue Chiles.

see their worry, and seeing us sympathise and extend the discussion was an important step in our relationship.

At a smaller scale a ply model of a house, at a scale of 1:50 with a lot of detail and the feel of a sophisticated doll's house, complete with photovoltaic panels and opening parts, was only looked at and not really played with by children. It looked and felt too finished, too perfect; even though we wanted children and adults to touch and play with the model, it looked out of bounds. We presented this too early in the process. It was far less successful than the model of the whole of Stocksbridge. Models of terrain and of topography allow the viewer to zoom in and out to see a "god's eye view" of their immediate area. The power of models is in their scale, in this miniature life of their own, they become a realisation of what architecture or a place promises, yet can never actually attain itself.

They can represent or symbolise the structures of power and be a focus for change and development or other practices. Models are a powerful tool.

Working with Scenarios from “an Empty Future” – to a Place-Based Scenarios

During the project we held numerous whole-team meetings, planning events, seven large public workshops, sub-meetings on specific projects, three exhibitions and conference presentations, in academic circles and usually collaboratively with residents. This amounted to approximately one event every month over the main intensive period of collaboration of two and a half years. After the first exhibition in the library, a substantial group of about 25 people signed up to be part of the project and turned up for the first workshop in a community centre in Stocksbridge. Already before the first workshop, the potential benefits of the project’s presence in the town were discussed at the Stocksbridge Community Forum, where a new Community Energy Group was formed with the intention of generating renewable energy projects for the benefit of the Stocksbridge community.

The first couple of workshops were tentative – we were feeling our way. The first half an hour was arranged as a large circle before breaking into round-table working groups of 5-7 looking at different themes within solar energy. Like all well-planned events the organisation was huge – lifts for older members without cars, catering, notices etc. were all put in place. The key scenario for the first workshop meeting was about the solar technologies and about the future of solar energy. The participants had lengthy workbooks prepared for them by the researchers, full of really interesting material and huge amounts of information to absorb and discuss – a veritable Open University offering, slightly intimidating and, we realised, much too much work for the community participants to complete. However, these came into their own later when we reported on what we had done and they developed into a useful diary of events and the progress of the project.

“It’s as if we are in the business of creating frustrations for ourselves, for the participants, all the time we’re just creating very frustrating situations, asking people to do things that are very counter-intuitive, to us and the participants I think” – quoted by one of the academic team in an external interview on the process.⁹

Although some of the discussions were interesting, engaging and fruitful, they were not necessarily relevant to the everyday future of Stocksbridge. An empty future is not a meaningfully liveable one. *“the uncertainty associated with the ‘blue skies thinking’ scenario workshops depend on, becomes an obstacle to generative engagement.”¹⁰* When the participants see themselves as stakeholders in the scenarios, involved in deciding on an alternative way of engaging with the future, “being a public” becomes more valid. We became more and more aware of this through conversations with the participants during the first workshops. We started looking closely at key themes that were emerging for the community and the future of the town. We devised a different approach where everything was related to Stocksbridge, their neighbourhood and place they live.

Co-producing Place-based Scenarios – The Transfer of Information.

“The process also involves a lot of uncertainty, not just with respect to what kinds of projects the residents may propose, but even whether or not they will even engage. In the light of their experiences so far, the core team has become very open regarding what might happen in the future.”¹¹

The rest of the workshops turned to key topics relevant to their approach to energy use in the community and how a different energy future could transform the town. So, the next workshops encouraged residents to join one group they were particularly interested in, approximately six or



FIGURE II.14 Studying the workbooks at a round table discussion. Photo by Prue Chiles.

seven people, including one person from the academic team in each and the process picked up pace. Five core themes coming from the participants, that formed the groups, were:

1. Local Energy Production - investigating the best combinations of technologies for energy generation in Stocksbridge how these could be implemented. A district heating network that could utilise the abandoned underground mine network is one of the options that is being researched in more depth.
2. Transport – this theme collected stories of past transport, talked of health - steep hills and extending the tram from Hillsborough. Resurrecting the train to Sheffield City Centre was a very popular idea. Three people were very interested in electric buses. The transport group linked to the other groups, as any community space that is improved or created will require easy access for all residents of Stocksbridge. In particular, transport linked to the local energy production group as the energy produced could be used as part of a day to day transport system.
3. Sustainable Buildings and Sites – these locations are potential “hubs”. More than one could be taken forward as they could offer different functions. For example a monitoring station in the

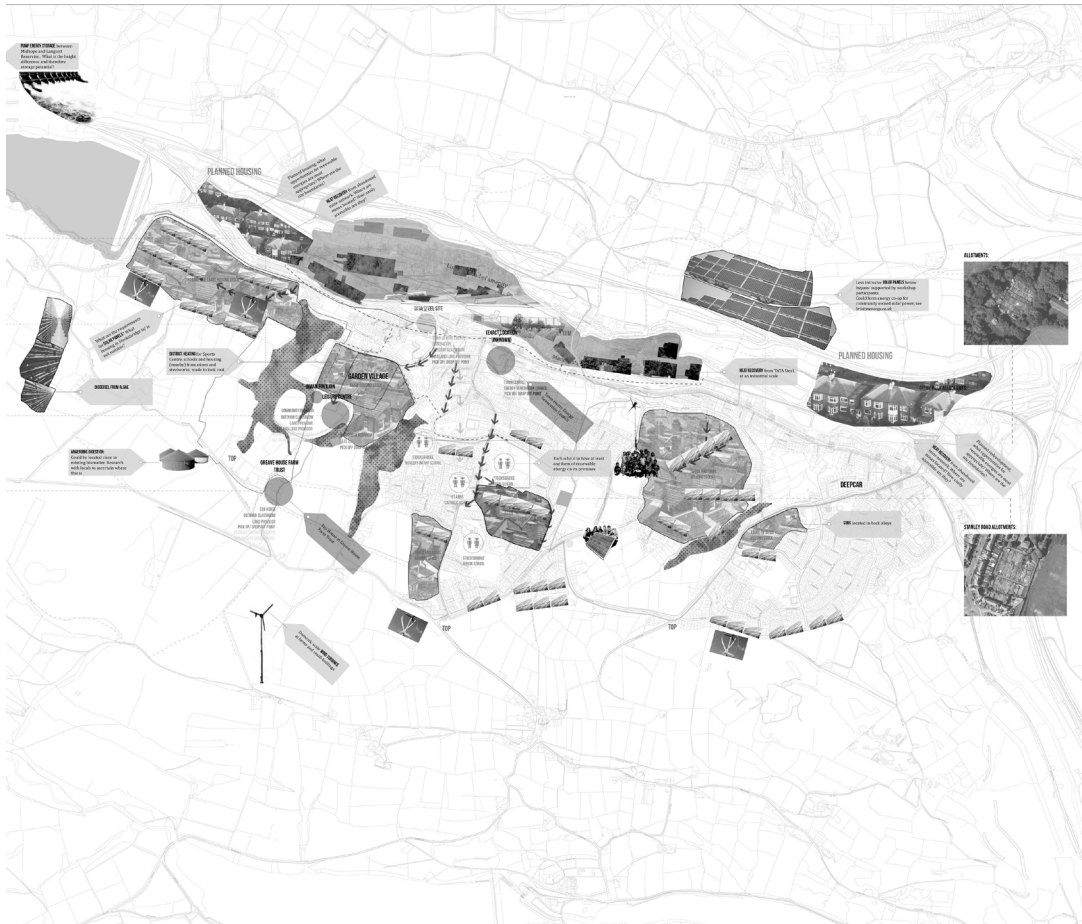


FIGURE II.15 The whole vision for an energy future for Stocksbridge, collating projects and possibilities. Authors: Collaged map by the architecture students.

centre could be an object that shoppers walked past day to day, while the Inman Pavilion could be the location for an outdoor education space, dance studio, community centre and “demonstration building.” This latterly became the focus of this group.¹²

4. Growing Food and Food Production – this group worked on how they could use the excess heat from Tata Steel, creating possible sites for sustainable food production organised by residents of Stocksbridge. The meals ‘hub’ could have an education aspect; it would require a sustainable greenhouse; the greenhouse should harvest and store excess heat energy; it will provide a new focal point which will need easy access for residents of Stocksbridge.
5. Education – taking this work into schools we all felt could have real impact – as children are always ahead of parents in sustainable ideas. Two residents, one a teacher, were very keen to collect materials and arrange workshops and to involve the children in some way in the projects spread around the town. This was particularly linked to the sustainable buildings group.

More than other tools and processes, collaborative visioning, in this case of local energy systems, can enhance social learning and the social capital of communities. In all the groups it was about measuring the achievable with the utopian. Critically reflecting on the process, it was the tension between the “inspiring” and “empowering” role of visions and the situated nature of the visioning processes within broader power landscapes that we had to recognise and respect.

In the groups the relationship between practice and research was also present and discussed in relation to developing tools to work in the project. What we learned here was that it is difficult to understand your roles and your value. Is developing visions enough, should and could we, particularly the architects, do more? Could we be more involved, move from research to a potential tangible outcome? Move from researcher to practitioner? There is always a temptation to break out and do something differently, without explaining why. The reality of modernity is that contingency, uncertainty and lack of control are inevitable conditions we have to face. One of the biggest issues for community projects moving forward is fatigue. Participants are excited and then when they return home nothing moves forward. How can the enabler foster resilience and unlock the energy and confidence required for the individuals and the representative group to continue their empowerment journey?

It struck us in some instances that the transfer of information, sometimes offering something to keep, was our offer of “the gift.”¹³ That was the intention of the workbooks and perhaps also the large model, the whole miniature world of Stocksbridge captured – and which we finally gave to the community. Also, the drawings which we exhibited and wrote over collating changes and comments and then finalising. All these were left with the community of residents. The participants were gifting us local knowledge, their time and experience. With the exchange of gifts comes obligations though, combined with an understanding of social conventions.

Drawing the Scenarios – The Role of Drawings

Developing tools for a collective conversation exchange can take many forms – as with models, drawings and other visual props or in situ graphics, collages, diagrams, maps are all valuable. We used drawings in a number of ways, the most intimate being the creation of sketches with residents, over a table, a shared endeavour, a way to both express yourself and to laugh together, to build confidence and to make collective decisions. It is not easy but things can become more real as you visualise them emerging in front of you. Simple diagrams and maps, pinning down place and scale, were important, measuring distance and seeing possibilities in a different way to a model.

The Architecture students worked with collage for the first collective vision using familiar images and placing them together to suggest ideas and possibilities; to start a discussion. Drawings render the invisible, visible. Drawing with others needs to start simply, something that isn’t fixed and can suggest possibilities – not definite changes. “*The drawing encourages the gaze to proceed beyond the visible image into an infinity of thought*”¹⁴ where something new is encountered. Drawing can help to re-situate neighbourhood discourse beyond its neo-liberal, institutionalized or pure scientific framing, it can allow for the imagination and create confidence but this takes time and patience. A drawing, if it is understandable, can cut through spatial and cultural divides and difference.

The detailed drawings and diagrams for the exhibitions and for explaining the scenarios at the end of the project were a refined and codified transformation of all the collated ideas. Local residents championed each scenario and took responsibility for it, their photographs adorning the drawings and diagrams.

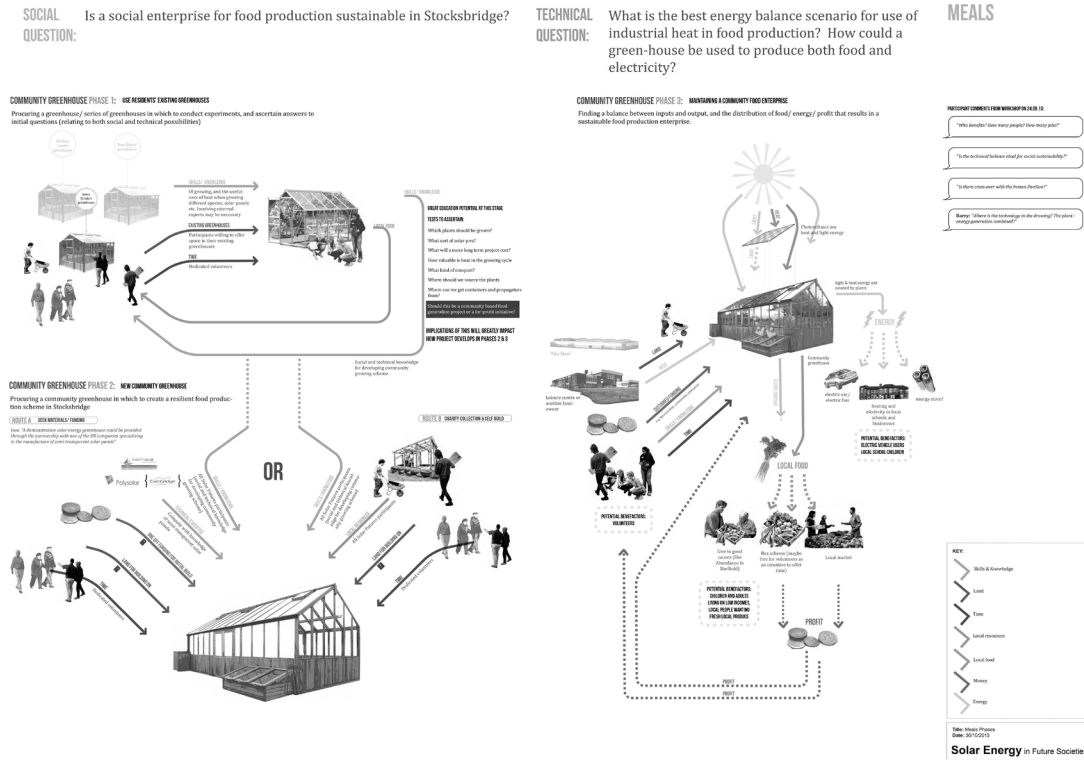


FIGURE II.1.6 Diagram showing the ecology of growing food and food production. Authors: Collaged map by the architecture students.

Values and Principles Emerging

Some values and principles emerged that were instrumental to the way we worked with our tools and ideas. They were important and enabled the changes and the transfer of power from the academics to the community.

Mess

The concept of “mess”¹⁵ acknowledges that the project and the process is not linear, that not all that goes on in such research projects can be ironed out and simplified. Rather “mess” exists and should be accepted for what it is. Throughout the life course of the project, serendipity played its part – the things you cannot plan for. Also messy were the elements of a project which occurred outside of the project’s traditional boundaries, for instance going for a drink with colleagues and discussing the project. “Mess” is the very stuff of our collaboration and interdisciplinary

working. It is what defined our project and bound it together. It is through this mess that we recognised the “added value” of our involvement in such collaborative working: the “spill-over” effects from other disciplines which influence the way we research, teach and learn within our own. The real value of the project emerges when more recognition is given to the small spillover effects of the collaboration and the interdisciplinary modes of working, rather than focusing solely on knowledge outputs and impacts. These spillover effects were in relation to our very different teaching practices, project management and research methods, and these can, in turn, then be taken back to our disciplines to move them on.

Time and Care

A recent turn to “the question of time” is vividly explored in Lisa Baraitser’s *Enduring Time* (2017). She feels that maybe this has something to do with our millennial anxieties about the impact of technologies accelerating time (speed theory). To this we can add the collapse of 20th-century modernity’s belief in our dominance over our future, which becomes more uncertain and unpredictable. The energy debate and the consumption of fossil fuels is at the centre of this uncertainty, and working around this with the Stocksbridge Community there was a palpable feeling that it was “*time to do something*” in the neighbourhood, that the council were unable to fulfil this future-looking role. There was a certain momentum and pace to the project – the rhythm of time altered throughout and this affected the collaboration. Time and transdisciplinarity are intimately wrapped around each other and became for us a particular concern in a project, where we, as a heterogeneous academic community, were sharing time together with a community of people from Stocksbridge who agreed to work with us. People’s generosity with time, whoever they were, needed to be respected as does the contribution of those who are short of time. Care is also positioned centrally in the relationship between interdisciplinarity and transdisciplinarity. Care here is a value, “*a practice that takes the form of an affective engagement with others*” (Baraitser, 2017, p. 14).

Although Baraitser is often talking about more fundamental and personal issues in her book, she speaks of the temporal tropes of staying, maintaining, repeating, waiting, delaying, preserving, enduring and recalling – all surely core qualities to make collaborative, participatory and transdisciplinary endeavours successful. Time and care together created trust.

Hope

Finally, we turn to notions of the future and hope in that future. We saw throughout the project the role of hope, which acted as an enabler in developing public involvement, but simultaneously as a source of tension when hopes for the future are confronted with the inescapable uncertainties. The most serious of these is the uncertainty of the steel industry and of employment striking at the very identity of Stocksbridge: the place, its history and its future. Hope is an important part of our deepest desires expressed in our view of the world – hope that the future will be bright, hope that the world will still be here and a better place long after we have left. A number of the participants in the project talked about Stocksbridge as a place for their grandchildren. Ernst Bloch describes hope as “*an essential force in everyone’s lives, because being strives to fulfill itself by realizing that which is not-yet-being.*”¹⁶

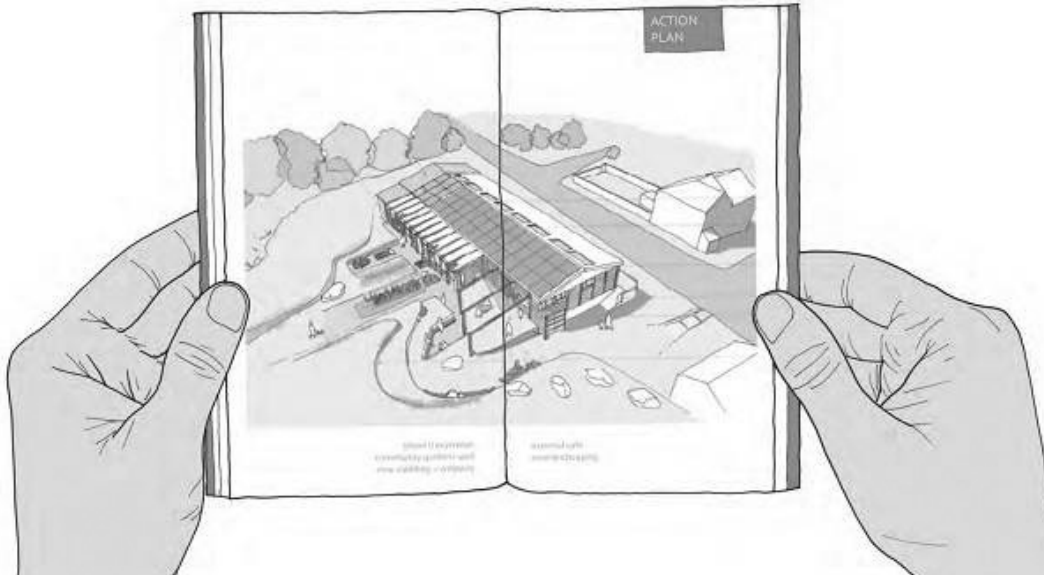


FIGURE II.1.6 The Inman Pavilion as a demonstration building for sustainability and local energy. Photo by Prue Chiles.

Defining Transdisciplinarity - Some Concluding Comments

This chapter has asked the question of whether working in a transdisciplinary, co-productive way genuinely redistributes power relations through environments, technologies and practices in community economies? It also asked what the relationship between practice and research was in relation to developing tools to work in the project? What are the barriers and opportunities emerging from different and sometimes conflicting communities of knowledge, coming from different disciplines and the complexity of processes and their relationship to each other? These acknowledge that practices must evolve to match the complexity of the issues facing today's big questions. What are the methods to enable successful collaborative and relevant research at the neighbourhood level? Reflecting on the project four years on, our conclusions on a successful transdisciplinary way of working combine using a series of hands-on visual and tactile tools and props that enable conversation and allow decision making and learning in time, deeply rooted in space and place. It also combines different communities of knowledge with research and practice. A successful result of transdisciplinary working is a change and oscillation of the power-structures of the project showing trust, confidence and positive change.

“staying, maintaining, repeating, waiting, delaying, preserving, enduring and recalling.”¹⁷

Acknowledgements

We would like to thank the whole team involved in the solar energy in future society project and especially all the residents of Stocksbridge, who gave generously of their time and energy. Thanks also to architect and PhD candidate, Vera Hale, who joined the enabling team. She was unusual in her ability to draw and to discuss, over drawings, with residents. Her PhD explores participation through enabling.

Notes

- 1 Richard Sennett, in his early *The Corrosion of Character: the Personal Consequences of Work in the New Capitalism*. (Sennett, 1999).
- 2 One of the academic team as interviewed by Helen Holmes in: *Interdisciplinarity in transdisciplinary projects: circulating knowledges, practices and effects* (Holmes et al., 2018).
- 3 Helen Holmes in *Interdisciplinarity in Transdisciplinary Projects: Circulating Knowledges, Practices and Effects – and the Interdisciplinary Toolkit* (Holmes, 2015). Available at <https://www.sheffield.ac.uk/idtoolkit/about>.
- 4 *Ibid*, Spillover effects included many small everyday things that changed the course of the project, chance conversations or comments about something found, visiting local sites and finding the unexpected.
- 5 Anna Krzywoszynska in the Participation Laboratory e-publication: Krzywoszynska, A.D., Watson, M., Buckley, A. et al. (4 more authors) (2018) *Opening up the participation laboratory: the co-creation of publics and futures in upstream participation*. *Science, Technology & Human Values*. ISSN 0162-2439 <https://doi.org/10.1177/0162243917752865>.
- 6 Architect and PhD candidate, Vera Hale joined the enabling team.
- 7 From Mark Morris in *Architecture and the Miniature in 2006*.
- 8 Lave, J. W., 1991.
- 9 From the Protee report – Ruth McNally and Maia Galarraga – A mid-project audit carried out on large EPSRC funded projects.
- 10 *Ibid*.
- 11 *Ibid*.
- 12 Developed subsequently in a *Live Project: a six week programme with Masters students from the Sheffield School of Architecture*. Available at <http://www.ssoa.group.shef.ac.uk/>.
- 13 *The Gift*, a hugely influential concept in ethnography. see Godelier, Maurice (1999) on Marcel Mauss.
- 14 These ideas are discussed on p. 7 of the Introduction by Marco Frascari *From Models to Drawings*.
- 15 Donaldson et al., 2010 on mess and written about extensively in Holmes et al. in 2018.
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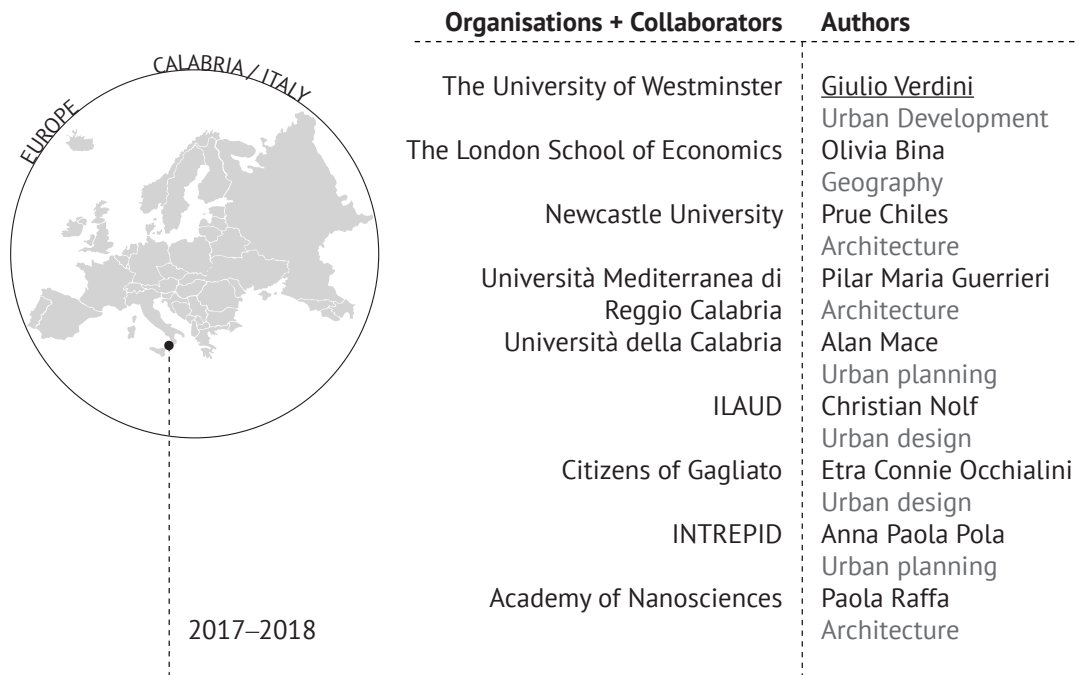


02

A CREATIVE “NANOTOWN”



Framing Sustainable Development Scenarios with Local People in Calabria



Introduction

During a two-year research programme from 2016 to 2018, scholars and students from different disciplinary backgrounds engaged with the local community of the town of Gagliato in Calabria, Italy, to co-produce future scenarios of local development. The aim was to enable a transition towards sustainability for a town affected by economic and demographic decline, like many other rural areas of southern Italy, but also be the protagonist of a promising annual summer science festival which had contributed to raising some expectations of change.

The research has been designed to enable transdisciplinary knowledge production in the urban field that could matter for the local community and would ultimately produce a real, positive impact on people's lives. Despite its broad premises to test innovative learning practices with participating students for an ideal future academia, its concrete outcomes have been deeply ingrained in the local community, becoming part of their discussions of daily life and even informing their political agenda.

FIGURE II.2.1 A view of the Ionian Sea coastline from Gagliato. Photo by Giulio Verdini.

Therefore, the aim of this chapter will be to reflect on the enabling conditions that have made possible the implementation of the co-design and co-production process from various perspectives; in particular, the role of academia in facilitating this process. However, this would not suffice to explain its successful results, which are instead inextricably intertwined with the role played by the Academy of Nanosciences of Gagliato. This non-profit organisation was founded in 2009 to support an annual gathering of international experts, and, since then, it has contributed to create an “atmosphere of change” within the municipality, generating a fertile terrain to test civic engagement tools.

The chapter intends to be both scientifically sound and narratively engaging, given the richness of the work done in Gagliato as experienced by the authors. As a matter of fact, besides the research done remotely, the authors gathered in Gagliato in July 2017 for a one-week participatory design workshop, getting to know the local context, talking with local people, materialising the focus groups implemented on site in future visions of sustainable development. The following sections will introduce a theoretical section regarding current debates on transdisciplinary research and the reason why Gagliato has been considered a suitable case to test it. Later on, a brief account of this experience is reported, particularly focusing on the enablers and barriers encountered in the process. This section will be backed by an ex-post evaluation carried out by the scholars involved. The conclusion will distil some learning from this process.

Transdisciplinary Research in Gagliato: A Theoretical Framework

The discussion on inter- and transdisciplinarity in urban studies is not new. Yet, it seems to revolve around the long-lasting dilemma that, despite a persistent rhetoric about its necessity, results have been quite disappointing (Petts, Owens, & Bulkeley, 2008). The problem is typical of any kind of emerging fields of studies where, in the absence of a certain critical mass, scholars are isolated in a dangerous state of “intellectual marginality” (Aagaard & Siune, 2002). The question in urban studies, and particularly in urban planning, has been quite serious. The demonisation and, in part, the failure of comprehensive planning, as conceived during the welfare state period, determined at least from the seventies a gradual withdrawal of any ambitions to solve, or even understand, urban problems holistically. This has left space for a plethora of approaches mostly involved in dealing with partial urban problems, from the rejection of “grand utopias” and the advocacy for the “collage city” (Rowe & Koetter, 1978) to the overemphasis of architectural design as (the only) solution for cities (Dyckhoff, 2016).

In recent years, a new urban question has arisen, especially due to the dangerous combination of massive urbanisation in the Global South and profound urban restructuring in the West, with increasing and sometimes dramatic social and environmental costs (Merryfield, 2014). This has reopened the terms of the debate. Particularly intense has been the discussion stimulated within the social science on its role in tackling the problems of the urban age and in generating knowledge that could help to address its future sustainability (World Social Science, 2014). To put it briefly, the issue of improved governance, including wider participatory urban politics, inclusion and co-production of urban knowledge has gained momentum and is now increasingly regarded as a precondition for achieving sustainable urban futures (Elmqvist et al., 2018). It is in this context that transdisciplinarity has emerged, or re-emerged in different forms, given the fortune of participatory urban practices in the sixties. However, the intensification of academic research and practices of transdisciplinarity, as also witnessed in this volume, faces some underlying problems, which occurred also in the case object of this chapter. As has been recently nicely summarised, “transdisciplinary co-production

is inherently complex, time consuming and often unpredictable in terms of outcomes, and these challenges are intensified when it is undertaken comparatively” (Simon, Palmer, Riise, Smit, & Valencia, 2018). Moreover, as this edited book suggests, such challenges might lie in the context, the process or the competences employed in inter- and transdisciplinary urban projects.

These points were discussed in an INTREPID workshop held in London in March 2017 from the point of view of the role that academia should play to facilitate a process of transdisciplinary knowledge production (Bina, Verdini, Inch, Varanda, Guevara & Chiles, 2017). It was in that specific context that the idea of “porous” and “open” universities (to the wider society) was put forward, endorsing the practice of the participatory design workshop (or scenario workshop, here used without distinction) as a suitable method to bridge the gap between theory and practice and between academics and the outside world. Far from being just an ordinary design studio, which has become a common practice of architecture and urban design courses, but often resulting in abstract simulations of reality, a participatory design studio has the advantage of co-producing the agenda of work (the “brief” as traditionally addressed) with a community, and has the ambition to face, and possibly solve, problems that matter to people.

It is for this reason that the case of Gagliato was suggested. Gagliato had been previously included in a research study on “Creative small settlements” (Verdini & Ceccarelli, 2017) carried out in 2015–2017 by several institutes across the world to feed the United Nations Educational, Scientific and Cultural Organization global report “Culture: Urban future” presented at the UN-HABITAT III conference in Quito 2016 (United Nations Educational, Scientific and Cultural Organization, 2016). The town was the protagonist of an interesting experience of community engagement linked to various opportunities of local development, as will be explained in the next section, and therefore was “ready” to advance along this path. Gagliato was also quite suitable for another practical reason: being a very small rural town, it was a microcosm where the dynamics and demands of different social groups could be relatively more easily understood, although the complexity of local stakeholders was still high. It is also fair to add that the community, including their political leaders, was also willing (if not excited) to embark in an academic experiment.

In terms of pedagogical process, students and scholars could simultaneously reflect on ideas and ways to implement them. They were exposed for a limited but intense period of time to the local community, and this determined a condition for wider accountability of their actions (Verdini, Bina, & Cioboata, 2018). It is an aspect that Hannah Arendt has addressed in the theory of social action in the attempt to reconcile the contemplative and active life (Arendt, 1958). It promotes an idea of knowledge by making, within the dimension of the public sphere, to achieve meaningful social outcomes. In the Italian context, this was widely experimented in the pioneer educational activities of the International Laboratory of Architecture and Urban Design, often materialised in famous experiences of local participations such as the ones in Rimini and Terni (De Carlo, 2013). It is not the case that the International Laboratory of Architecture and Urban Design was invited to participate in the Gagliato workshop.

In terms of pedagogical outcomes, the workshop followed the recommendations of the agenda put forward by the United Nations Educational, Scientific and Cultural Organization in “Education for sustainable development,” which promotes learner-centred approaches, action-oriented learning and transformative knowledge (United Nations Educational, Scientific and Cultural Organization, 2017). These outcomes will be reported in the next section.

In terms of impact and knowledge sharing, which is ultimately the most meaningful indicator by which one can evaluate the effective sustainability achieved by any action (academic or not), the

local community has been empowered and has started a process of transition towards sustainability. This part is the most delicate and difficult to assess, as it will be possible to understand it entirely only in the long run. Nevertheless, the chapter will also provide evidence of some preliminary and promising results achieved.

The Experience of Gagliato¹

Gagliato is a hilly town located in the province of Catanzaro in Calabria, overlooking the Ionian Sea. Its economy is traditionally rural, primarily based on agriculture, sheep farming and artisanal manufacturing on a family scale. It has witnessed a steady population decline since the 1950s: from 1,768 people in 1951, the town shrank to 524 in the last census in 2011 (–71%). A recent survey indicates an even smaller community of 484 inhabitants (2016), of which 16% are over the age of 60 and only 3.5% are under the age of ten. The unemployment rate is rather high, affecting 18% of the active population. While overall the economy has shifted to public-sector services in the last few years, local enterprises (mostly family-run and small-scale) persist. They belong to the construction sector, with a minimum presence of retail and professional services, and to the agriculture sector, in some cases with emerging niche produce such as oregano, honey and cheese.

The town also benefits indirectly from its proximity to the coast, so that many vacant houses can be rented out, especially during the summer period, providing an alternative source of income for the locals. However, many houses are owned by people already living in larger cities or abroad with limited positive impact on the local economy.

Its urban form is self-contained, around an historical nucleus that is almost entirely abandoned, surrounded by relatively new housing developments (mostly underutilised second homes) and then by fields (Figure II.2.2).

A Preparatory Decade (2008–2018)

Like many other rural towns of southern Italy, Gagliato is a town in decline, still featuring a good quality of life, a mild hilly climate even during the hot Italian summer, and immersed in a typical rural Calabrian landscape, lying in the valley of the river Ancinale. While these have not yet become conditions to fight its decline, as numbers can witness, they have resulted in becoming a valuable asset for a group of international scholars. The unusual story of the Festival of Nanosciences started in 2008, when the first informal meeting was organised.² Later on, in 2009, the Academy of Gagliato was founded to provide support for what will soon become an annual and increasingly famous international gathering in the field of nanosciences. The decade 2008–2018 was *de facto* a preparatory decade for the transdisciplinary experiment tested later on. According to the Academy of Gagliato members, the initiative was initially observed with curiosity by the local community but also seen with sceptical resistance. This is a trait that is not surprising, but would rather confirm attitudes and behaviours of relatively isolated communities, particularly in southern Italy, where a certain lack of trust and disengagement from public affairs have historically prevailed (Putnam, Leonardi, & Nanetti, 1993). Nevertheless, the role of the Academy of Gagliato in the public life of the community has increased gradually with a series of tangible actions. First and foremost, the academy is a joint initiative of non-local members (international scholars) and those from Gagliato. The community of international scholars has also assumed a public profile since the very beginning, opening their debates to the community. The idea was to replicate, on a small scale, famous science festivals where people can participate and listen, and expert knowledge is translated for the general public. This



FIGURE II.2.2 A view of Gagliato with the church of Saint Nicola Vescovo. Photo by Giulio Verdini.

has materialised in the so-called “*Serata in Piazza*” (evening in the piazza), the concluding public event of the summer gathering, which has become an important appointment for the people of Gagliato and beyond. Moreover, a fundamental component of the Academy of Gagliato is the so-called “*Nanopiccola*,” which aims to involve the children of Gagliato in various activities related to science, technology, engineering and mathematics learning, both during the summer event and over the year. It is an initiative that has helped to engage various local families in the life of the academy.

The process described here was a catalyst to build trust among the local community. The turning point was the election of 2015, when a political party formed by a group of young local professionals won the election with a large majority. In 2014, they formed a “civic alliance” (*lista civica*) named “*Gagliato in Comune*,” campaigning for the valorisation of Gagliato and including the Academy of Gagliato as one of its main assets. The electoral programme contained projects and initiatives to improve the quality of life of the town and to boost economic development. The idea of supporting “scientific tourism” was given priority, due to the potential positive impact of the summer festival and possibly the organisation of a series of correlated initiatives over the year. While the seasonality

of the science festival still remains an issue to be overcome, this joint effort between the municipality and the Academy of Gagliato has achieved some results. New retail activities have been set up, a bed and breakfast was opened and some new projects have started, including the restoration of an old oil mill located in the town, which should become the headquarters of the Academy of Gagliato.

Taken together, these tangible results have helped to raise the level of trust of the community, as they have challenged the inertia that is often so diffuse in such contexts (La Spina, 2008). It has to be clarified that, although this “dynamism” has led to some small tangible results, it is still far from being considered a structural process of local development. As a matter of fact, the growth generated is still volatile, pretty much entirely depending on exogenous activities and poorly rooted in the enhancement of local/territorial capacities (Trigilia, 2005). Still, the Academy of Gagliato has gradually contributed to generating a positive “atmosphere for change.” It would otherwise be difficult to explain why the municipality and its leader have so firmly welcomed the idea of a civic engagement experiment in the town and, more concretely, why an estimated amount of almost 10–15% of citizens decided to gather on a hot, sunny Sunday morning in July 2017 to discuss their future development with a group of academics.

The Participatory Design Workshop: Process and Outcomes

As already mentioned, Gagliato was included in the 2016 United Nations Educational, Scientific and Cultural Organization report “Culture: Urban future” as an example of how culture can contribute to rural development, given the presence of the science festival and the related educational activities (Verdini, 2016). This stimulated great local attention, resulting in the organisation of a seminar in Calabria on “Small town, urban spaces and reimagined communities” in July 2016. In that context, members of the local authority, with representatives from the Academy of Gagliato and academics, discussed ways to reimagine the future of Gagliato, setting up a preliminary agenda of cooperation. The role of the Academy of Gagliato was very proactive as they envisioned, within the context of such cooperation, ways to further integrate their educational mission into the local life of the community, enhancing their impact for more sustainable patterns of development.

When the proposal of hosting a participatory design workshop *in situ* was made, they welcomed the idea very much. Regular discussions took place between 2016 and 2017 and a preparatory field visit was organised in May 2017. The proposal was widely debated in the town hall from the beginning, and this helped to engage the community and generate interest.

Scholars and students were selected to ensure a balanced mix of disciplinary backgrounds, particularly from architecture, urban planning and local economic development. Five broad topics were selected and agreed with local stakeholders, as reported in Table 5.1: the town of nanotech; the town of kids; the town of wellbeing; the town of skills and creativity; the town of science and art.

These different scenarios were selected for their current and potential relevance in the future development of the town, envisioning for each of them a potential pool of actors to be involved, and various dimensions of sustainability to be taken into account: territorial/governance; economic; ethical/social; tools; and risks/threats (including environmental ones).

The participatory activity took place by the end of July 2017. A historic palace located in the centre of town was made available to students and opened to citizens during the focus group activity. Each group prepared material for interaction with the local community including maps, posters, models and so on (Figure II.2.3).

	Visions / Futures	Topics	Engagement	Dimensions				
				Territorial / Governance	Economic	Ethical / Social	Tools	Risks / threats
A	The Town of Nanotech	NaoBorgo regeneration; smart village, insiders/ outsiders	Citizens; Academy of Gagliato stakeholders	Gagliato	Cultural and event economics	Knowledge spreading, nurturing science	Master Plan, strategic visioning	Temporariness
B	The Town of kids	Creative Public space; education: schools and informal STEM learning walkability	Nanopiccola (Kids)	Gagliato and surrounding municipalities	Investing in future generations	Nurturing and inspiring young generations, giving voice to vulnerable groups	Guidelines, pilot project	Brain drain
C	The Town of Wellbeing	Public Health, elderly, environmental friendly town, community-based health care	Citizens; general practitioner; pharmacist; nanogagliato public health scholars	Gagliato and its municipal territory	Health economics	Solidarity, healthy, society, reciprocity	Guidelines, pilot projects	Pollution, environmental damages, lack of prevention
D	The Town of Skills and Creativity	Creative industry, rural development, tourism, local and migrants	Industry and SMEs; local authority	Gagliato and the municipalities of 'Vale dell'Ancinale'	Local development, balanced regional economics	Innovation, social inclusion	Local development plan, strategic visioning	Lack of Infrastructure, corruption
E	The Town of Science and Art	Noanoborgo regeneration; public art and open science	Citizens; academy of Gagliato stakeholders	Gagliato and its municipal territory	Cultural and event economics	Knowledge spreading, nurturing creativity	Strategic visioning, pilot projects, guidelines	Temporariness

TABLE II.2.1 Gagliato creative Towns workshop 2017. Living Lab: co-creation of knowledge and scenarios.

As the Academy of Gagliato and the group of international scholars in nanoscience were present for their annual gathering, an additional knowledge exchange meeting was organised to obtain their perspective on how they could better contribute to the future of the town.

At the end of the week, two public presentations were made in the town hall of Gagliato and in the auditorium of the Calabria regional authority. The two sessions were useful to obtain feedback and improve the proposal. Various documents and reports were later released (Verdini, Bina, & Cioboata, 2018) including a follow-up report more focused on architectural propositions (Wills et al., current volume).

Some Tangible Results and the Local Response

Although it is not the goal of this chapter to enter into the details of the overall proposal, it is worth summarising its results, to see what has been taken on board by both the local community and the Academy of Gagliato. This can allow us to relate the transdisciplinary experience tested to



FIGURE II.2.3 The participatory design workshop: Local people discussing the future of Gagliato. Photo by Giulio Verdini.

the impact obtained on the ground. In the policy recommendations document produced after the workshop, the following points were raised:

1. To develop a series of initiatives in Gagliato and the Region of Calabria to explore how nanotech expertise can contribute to local wealth, mainly by looking at synergies between local agricultural productions and advanced research in nanotechnology (Group A).
2. To develop a landscape-based approach to urban regeneration, profiling local productive opportunities in the area (example: oregano) (Group A).
3. To develop pilot projects in the field of education by looking at both the innovation of curricula and the regeneration of the town’s public space as a playground for children, in an attempt to relate a proposed science, technology, engineering and mathematics school to more practical and locally relevant skills (Group B).
4. To improve local wellbeing by developing synergies between food, landscapes, education and innovation in local cuisine (Group C).

5. To improve local wellbeing by developing programmes to enhance the quality of the environment (asbestos being one of the priorities to tackle) (Groups C and E).
6. To start the urban regeneration of the main road as a panoramic balcony, setting up a series of linked events over the year (Group D).
7. To support art-based activities and events to revitalise the old (ghost) town, and improve the public space, such as squares, staircases and so on (Groups D and E).
8. To develop financial and legal mechanisms to incentivise the reallocation of vacant houses in the historic centre for a fixed time, subject to building regeneration and asbestos clearing (Group E).³

In July 2018, exactly one year after the organisation of the participatory workshop, a seminar was held to draft a balance and to appreciate some preliminary tangible results. These can be summarised in two main points: the preliminary exploration of synergies between nanotech expertise and local agricultural production, and the contribution of artists to the revitalisation of the old town.

The first point was surely one of the most debated. The proposal of using the annual gathering of experts as a catalyst for exploring synergies between their specific expertise in nanotechnology and activities that could matter directly to local people was considered most seriously by the Academy of Gagliato. It was a tangible proposal to improve the activities of the academy, often seen as too distant from the local community. It was the outcome of a conversation of focus group A with local agricultural entrepreneurs, which found further consensus locally. As a matter of fact, the academy has already started forms of cooperation with the local University of Catanzaro, where nanotech experiments have been conducted on agriculture. This could support, for example, the development of natural cosmetics from local produce such as oregano.

The other proposal of involving artists to improve the public space has been followed up by the Università Mediterranea di Reggio Calabria, and in summer 2018 the first public staircase of Gagliato was painted (Figure II.2.4).

In addition to this, funding applications have been submitted to ensure a more substantial economic and environmental regeneration process for the old town.

Enablers and Barriers

The enabling conditions and potential barriers to achieve meaningful transdisciplinary outcomes and consequently tangible positive urban transformation of the experience of Gagliato will be discussed in relationship to the various phases of the project. In particular, these are the co-design, co-production and continuation phases.

As argued from the start, it is evident that the co-design phase of the workshop in Gagliato was very smooth and positive from the very beginning. The process of agenda setting came very naturally after public discussions were held in Gagliato. The decade before the workshop gradually saw an increasing engagement of the local authority and citizens in the activities of the Academy of Gagliato. This was a process of building reciprocal trust and developing social capital locally. This is not far from the idea, already widely discussed within international agencies, that outside assistance can help in the process of social capital formation of places, and initiatives to support social capital can improve project effectiveness (World Bank, 1998). Therefore, when the Academy of Gagliato proposed an urban design workshop, the response was enthusiastic. At the same time, while the institutional and social context was favourable, the form of local government was also particularly effective. As a matter of fact, the new “civic alliance” that won the election in 2015 is constituted by a wide participatory base (called the “committee of 60,” as almost 60 people take part regularly



FIGURE II.2.4 The painting of one staircase of Gagliato during NanoGagliato 2018. Photo by Giulio Verdini.

in meetings), and the preparatory work was constantly shared during town hall committee meetings open to the community. This is a case of “empowered participatory governance,” which relies on the commitment and capacities of ordinary people and ties action to discussion (Fung & Wright, 2003), and it is ultimately an example of the specific design of institutions, which can or could deliver transformative democratic strategies (Watson, 2013).

The co-production phase was an exciting and partially unpredictable experience. Five interdisciplinary groups led by scholars based in various countries (Italy, Portugal, the United Kingdom, China and India) with a very international pool of students (from Italy, the United Kingdom, Germany, Norway, Egypt, Lebanon, Mexico and the United States) worked in focus groups or tables of discussion with Gagliato citizens and engaged in knowledge-sharing sessions with members of the Academy of Gagliato and their international guests. Each table had an Italian native speaker that could translate into English. According to the ex-post survey conducted among group leaders, the process was successful overall, although there were some weaknesses that could potentially emerge in the long run. In principle, the interactive, collaborative workshop is perceived as effective with the

potential to build capacities and empower people. It was also an opportunity to collaborate among diverse, different cultures and academic/professional backgrounds, encouraging the participants to reflect on their roles. The benefits were various: the students had the opportunity to learn from real-world challenges and profit from the local community's experience, and the local community benefited from the participants' expertise and was empowered to become "agents of change" (Verdini, Bina, & Cioboata, 2018). It was a way to materialise the recommendations of the United Nations Educational, Scientific and Cultural Organization agenda for "Education for sustainable development" (United Nations Educational, Scientific and Cultural Organization, 2017).

However, scholars within the co-production process have highlighted some limitations of it. *In primis*, it was difficult to find common languages and to overcome the problem of an unbalanced set of skills in each group, particularly given the limited time available, which is a typical interdisciplinary problem. More than that, despite the unanimous consensus on how enriching the interaction of the people was, some concerns were raised in the transdisciplinary process. These are related to: time constraints, a certain lack of skills when engaging with specific target groups (such as children) and, more seriously, the risk of raising expectations of the local community that could not be met, particularly when very concrete solutions to their real-life problems were implicitly required.

In this respect, no matter how smooth the process can be, which was quite unanimously acknowledged as positive (overall good management of the interactive process, and genuine exchange between scholars, students and people), the goal of the entire process may have been misunderstood. According to one scholar, the goal should be to provide ideas that policymakers need to translate into solutions, and not to provide abstract solutions that might look good on paper but are not feasible in practice.

This is linked particularly to the continuation of the process. The question on who should be realistically involved in delivering the proposals of the workshop is not easy to answer. There is an expectation that the academic partner will continue to support the process. This can be partially achieved (via remote support, mentoring, review and so on) but it obviously decreases when the funding comes to an end. It is not the case that the two proposals that have been implemented so far are those that could be more easily "owned" by local partners: the Academy of Gagliato itself, which is now promoting the application of nanotechnology to local produce; and the local Università Mediterranea di Reggio Calabria, which is committed to working with students and artists on improving public space as part of their ordinary teaching activities.

The continuation of the project is a local matter and it will depend on how local stakeholders will utilise the material produced, and how much they will be able to mobilise further resources. It is promising that in October 2018 Gagliato applied for regional funding for urban regeneration using some of the ideas co-produced during the workshop. No matter what the result may be, these ideas will last for a long time and concrete opportunities may arise in the future. Given the presence of the Academy of Gagliato, it is likely that they will be committed to pursue this goal well beyond the end of the funding period of the research, which is understandably one of the major barriers of transdisciplinary research.

Nevertheless, the risk of dissipation of this experience is quite high if its dynamism does not turn into a more rooted development process, creating resilient and long-lasting opportunities and partnerships for development among local stakeholders. This resembles the conclusion that "transdisciplinary processes do produce different types of socially robust knowledge, but this does not necessarily result in the ability to influence change in a sustainable direction" (Polk, 2014).



FIGURE II.2.5 Gagliato: semi-abandoned historic town centre. Photo by Giulio Verdini.

Learning and Concluding Remarks

The experience of Gagliato has been dense and rich for all the participants. After more than one year, we still receive emails from students who wish to participate again in similar experiences. Equally, the channel of communication with local people and the members of the Academy of Gagliato has never really stopped. This could be enough to draw some positive conclusions, at least from the (academic) perspective of the authors. The effort employed in organising such activity has been also huge and, as it emerges from this chapter, most of the successful results of the transdisciplinary experience depended on the “atmosphere of change,” which was patiently developed over a relatively long period of time by people with great passion and determination (namely the members of the Academy of Gagliato). Yet, the question of whether such effort can produce sustainable change and real positive impact on people’s lives is still unclear and remains open for discussion. It is probably too early to evaluate this, but nevertheless, it will be pretty much dependent on how the local context will react to the stimulus introduced during the workshop in the near future.

The Gagliato experience has helped to refine a working process and a set of competences, which

are replicable and may be incorporated into university urban curricula. It is a desirable aspect, which is linked to the reflection of the open university (or the university we want) as put forward in the INTREPID London workshop in March 2017. What would be ultimately very valuable, in terms of teaching and learning innovation, is to learn how to pair inter- and transdisciplinary methods, skills and knowledge, with some learning coming from the Gagliato experience, particularly the dimension of ethical and collective action that took place in that context. As academics, a good result would be to train a new generation of skilled professionals in the urban field who could operate as inter-/transdisciplinary facilitators but could also act effectively as agents of change where they work in their respective contexts, no matter whether in Europe, China or India. If no impact is achieved locally in terms of sustainable development, there is still a high chance that learning for sustainable development will be applied elsewhere.

Acknowledgements

The research reported here was jointly funded by the Academy of Nanosciences of Gagliato and the EU COST ACTION INTREPID (TD1408). A special thanks goes to Paola Ferrari, Mauro Ferrari and Giovanni Sinopoli from the Academy and, it goes without saying, to the citizens of Gagliato, who generously accepted us into their community, even if just temporarily. The support of Alessandra Mossa and Andrea Porelli has been invaluable, alongside the kind help of the team of Paola Cannavò from Università della Calabria. Students from the University of Westminster, Newcastle University, the London School of Economics and Università Mediterranea di Reggio Calabria made the work possible. We are also grateful to Paolo Ceccarelli from ILAUD, the International Laboratory of Architecture and Urban Design and Franco Rossi from the Region of Calabria, who stimulated our thinking along the process, envisioning real action for political change.

This work is *ad memoriam* of Domenico Aspro, the vice-mayor of Gagliato, who wanted us there, and unexpectedly passed away a few weeks before the workshop.

Notes

- 1 The information here reported primarily comes from the chapter on Gagliato in the research report on ‘Creative small settlements’ (Ferrari, 2017).
- 2 In 2008, Gagliato hosted the first international meeting of scientists and biotech leaders, under the initiative of Mauro Ferrari, a pioneer in the field of nanotechnology applied to medicine.
- 3 Group A: Etra Connie Occhialini (group leader), with Martin Miranda Antelo, Erminia D’Alessandro, Luigi Terranova, Anne Kruse. Group B: Prue Chiles and Maria Pilar Guerrieri (group leaders), with Shantelle Edwards, Patricia Mijares Chavez, Luca Venuto, Emma Kingman. Group C: Alan Mace (group leader) with Lara Berton, Diana Tello-Medina, Giuseppe Palermo, Kareem Wellington. Group D: Christian Nolf and Anna Paola Pola (group leaders) with James Anderson, Julian Banister, Manuela Guzzo, Lam Pham. Group E: Paola Raffa (group leader) with Siri Arntzen, Nora El Gazar, Myriam Khoury, Alessia Santaromita.

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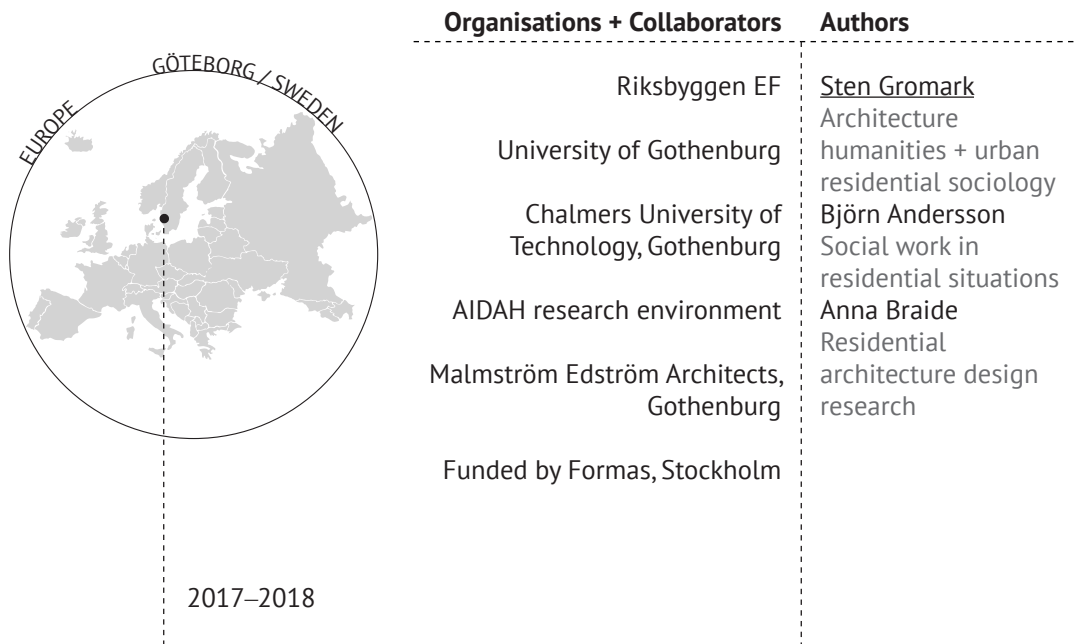
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03



EXPLORATIONS ON RESIDENTIAL RESILIENCE

Brf Viva 2011–2019¹**Introduction**

Demands on housing providers are persistently mounting, urging them to confront current *challenges of social sustainability in residential situations* and to deliver practical contributions, demonstrations and experiments in this field.² One such example in Sweden has been initiated as a research-informed project development process by the cooperative housing company Riksbyggen EF³ in Göteborg, Sweden. This organisation is also a major actor at the national level with its historical origin and legacy embedded in early working-class movements confronting the shortage of housing, starting to build in 1941. The type of enterprise is defined as a “cooperative economic association.” In the following case assessment, it is considered as the major *enabling* and *initiating* factor, strongly supported by an academic environment.⁴

Over a period of eight years, since its start in 2011, a co-design process of a *transdisciplinary* (TD) kind has been jointly unfolded. To support professional actors from Riksbyggen in this innovative

FIGURE II.3.1 Bird’s eye overview, brf Viva on Chalmers campus. Photo by Tomorrow/Riksbyggen EF/ Malmström Edström Arkitekter.

effort, the process involved *interdisciplinary* (ID) exchanges between different expertises and academic actors of Chalmers University of Technology in general and the Department of Architecture in particular, as well as researchers at the University of Göteborg. With building starting in October 2016, the urban residential block will offer 132 apartments in total, situated on high ground in the direct vicinity of Chalmers campus. The first residents were moving in by late autumn 2018. The last phase of delivery of apartments and final inauguration date for the entire project was set for late summer 2019.

The finalised residential project will be considered the first result of the process initiated, the so-called *Positive Footprint Housing*© effort, also known as *PFH* for short. This research and innovation project, jointly initiated by the company and its academic partners, includes the realisation of a number of radical innovations as part of a co-design strategy for sustainability. The multifarious methods of construction enacted are intended to demonstrate *explorations* of a significantly raised *residential resilience* embedded in *brf Viva*, the name later given to the cooperative association and future residential community.⁵

Examples of implementations of substantial technical *innovations*, or applied *procedures*, range from an exceptionally wide variety of components like the sharing of an electric vehicle pool with no conventional parking lots as a radical exemption from regulations, extensive application of façade and rooftop photovoltaic cells, and local electricity production with energy storage components. But also included are *inventive* acts of social solidarity and justice such as the introduction and integration of six affordable starter rental flats for young professionals. Added to this, the extended structural flexibility or long-term *alterability* of apartments with reduced floor areas is particularly featured, also providing the offer of extensive shared facilities such as a winter garden orangery for parties, meetings and cultivation of plants and vegetables. A significant feature has also been the ambition to introduce the project in an open dialogue with the local community. Efforts to create socially sustainable solutions have thus been both *substantial* and *procedural* in character.

The intricate *process* that was unfolded of a transdisciplinary dialogue of exchange within *Positive Footprint Housing*© between different partners and stakeholders, academic and professional, even extended to local inhabitants and future residents, may be considered the very key to the alleged virtual success of the project. It has made it possible, specifically through the tentative exploration of *new ways of knowledge co-production* (Doucet & Janssens, 2011), to materialise far-reaching new residential qualities realised within a context of high-profile sustainable performance, in social and ecological as well as in economic terms. However, the actual impact of all these arrangements upon members of the future residential community is still to be properly assessed in post-occupancy enquiries already outlined by Riksbyggen. How, whether and to what extent has this unique occasion significantly transformed *ways of residing*⁶ in terms of behaviour, resulting in the desired enhanced resilience?

The participating *professional* profiles and knowledge cultures involved are project leadership, initiation and production, selling, maintenance, and branding; in total, practically all branches of the established local unit of the Riksbyggen offices. This local team was complemented with national-level head office expertise, especially concerning sustainability matters as a main guiding force. The design knowledge skills and the experience in residential design was represented by the commissioned local architects with supporting landscape design expertise. The commissioned architects were *Malmström Edström Architects* and landscape architects were *ozlandskap*.

The added *academic* counterpart provided different insights on residential design research issues from a social perspective, combined with experience from residential design research and practice, social work and participatory processes. On top of that, in different phases of the project, various

kinds of relevant technological expertise from other departments of Chalmers or from private consulting branches were also engaged, concerned with, for example, local energy production, structural engineering or small electric vehicles and mobility issues. They delivered reports on different topics as preparation for the building construction phase and decisions to be made. These commissions were lined up primarily along the themes of social, ecological or economic sustainability. As an example, a special study was commissioned to cover the economic feasibility of the cooperative ownership and maintenance of the residential community to be created. Another study provided a referential overview of the state of the art of similar best sustainable residential practices in a global perspective. Yet another was commissioned for researchers of consumer sciences to carry out in-depth interviews and an enquiry on future residents in the buildings, departing from an anthropological perspective.

This chapter will take a critical stance towards the endeavour described above and will build upon related research conducted with insights and observations shared by the three authors while taking part almost from the very beginning, participating within this process of research-informed residential project realisation. The focus for us was set to identify crucial social aspects of sustainability as social solidarity and related architectural residential configurations of design; in particular, those relevant for long-term alterability and short-term instant structural adaptability or immediate flexibility. Throughout this process, the inherent vagueness of general formulations of sustainability, predominant from the beginning, especially concerning *social* sustainability, was made very clear to all. This also underlines the importance of undertaking inter- and transdisciplinary research directly in the conflicting social fabric, where sustainable goals are negotiated and given a concrete, substantial significance.

The chapter ultimately intends to provide an initial critical reassessment of this whole process with an extended special focus on the evaluation of the outcome and value of the project from a *transdisciplinary* and *interdisciplinary* – even from an *intradisciplinary*⁷ – point of view.

However, the *Positive Footprint Housing*® process and the *brf Viva* project are also regarded from a perspective of *sustainability*, as this process and its results, in our understanding, can be conceived and tentatively interpreted as the implementation of new modes of knowledge production, which are particularly dedicated to enabling the realisation of resilient new ways of residing. This was, for example, confirmed and underlined with emphasis by one of the responsible architects of the project; in his perspective, this was quite an unusual approach, a definite far cry from any conventional procedure in similar consulting situations. He went on to say that even if *brf Viva* could perhaps not be regarded, as alleged, as the *best* practice of its kind in a global context, it certainly attempted the *most* numerous, complete and diverse avenues of approach and practical realisations in one single project.⁸

Initiating a Situation of Transdisciplinary Exploration

Chalmers University of Technology, and in particular the School of Architecture, has developed, step by step, in Master's education studios and in related research projects, a specific strategy for transdisciplinary cooperation between university research and education, commercial private businesses and in particular – as well as in contrast to other parts of Chalmers – public societal institutions such as municipalities and regional governments.⁹

Due to this long-established orientation, it came as a natural and most welcome occasion in 2011 when the cooperative housing provider Riksbyggen EF presented the school with an invitation to take part in a long-term development project, at that time coined *Positive Footprint Housing*®, which was later also registered as a branded business trademark. This initiative was related to the ambition to unfold a research-informed experimental housing project almost directly on campus.

In general terms, this step could be conceived as the growing recognition and validity of research-informed support in efforts to develop a different business activity. But it also originated from a manifest search for a more distinguished *sustainable* business profile, to follow up on evidently slowly emerging but fragmented new consumer demands and the mission to reveal appropriate, attractive and unique offers on the market.

Riksbyggen EF had thus taken a crucial step towards the strategic decision to actively support *resilient residential invention*. This was conceived as part of their strong general commitment to construct a sustainable urban development agenda built around specific “in-house” assessment tools of measuring sustainable performance alongside the already established ones such as BREEAM¹⁰ and others. In this case, the *social* aspects were put in specific focus with great emphasis. In this situation, the company was acting locally as a progressive forerunner at the national level, breaking barriers, while Riksbyggen is considered one of the biggest cooperative housing providers in the country – second only to the bigger and similar HSB cooperative organisation – with 176,000 units in 2,730 cooperative associations, with about 350,000 individuals involved.¹¹

For the envisaged cooperation with academia, Riksbyggen EF offered essential resources for a PhD position, extended to four years’ part-time study, intended to finally result in a licentiate degree. In addition, other related resources were provided for preparatory studies supporting the project. On their side, the school offered the general support of *in-kind* commitment of involved professors and researchers¹² and by specifically dedicating the two Master’s studios directly involved¹³ to provide inspiring reflections on the project from different and alternative points of view, in parallel to the actual professional design process. The initiated PhD licentiate project was oriented early on towards a discussion on apartment-level alterability that was later practically implemented on-site, considered as structural flexibility and as a largely so far ignored aspect of residential quality of life in terms of social sustainability.¹⁴

After the initial contract procedures, there followed a long series of meeting engagements between different constellations of academic, institutional and business stakeholders in a process of *enhanced dialogue*, during which members were resolving differences and crossing professional and academic boundaries. With meetings about every second month, this finally ended up in a constructive climate of creative co-design, mutual trust and a distinct *common culture* of commitment to the cause.

The partners primarily included members of the Riksbyggen EF project organisation with its different departments such as the commercial and technical branches, and persons representing local and to some degree regional and even national leadership, such as the head sustainability assessment officer from the Stockholm headquarters; and the academic departments of Chalmers School of Architecture – and several other departments – with involved professors, teachers, the committed PhD candidate and a succession of indirectly participating Master’s studio students from about three consecutive academic years, revealing their designs for the site, inviting the project leaders from Riksbyggen to take part in public exhibitions and critical assessment sessions, along with a number of related Master’s thesis projects.¹⁵ Thus, the spirit of a transdisciplinary culture of knowledge production was transferred to several new generations of young architects. So, one of the important criteria for transdisciplinarity was fully met in this situation, since the project team not only included exchanges

between professionals and academics but also reached Master's-level students, in many cases coming from several foreign countries. On top of this, there were also, on many special occasions, a variety of experts and consultants present with insights into, for example, energy systems, photovoltaic cells, alternative electric vehicles, principles of sustainable development at large and so forth.

Researchers from social work and researchers in economics from the local business school were also represented as well as, sometimes, invited guests from abroad. One particular arranged session assembled a number of local influential architects to discuss the preliminary designs, providing a critical external eye as a sort of occasion for self-criticism. Added to this, in the early phases, before the building permit was acquired and the detailed plan adopted, the representatives of the technical departments of the city of Göteborg and the commissioned team of architects and landscape architects were also taking an active part. It could be added that the team of architects won the commission at a very early stage in the process, almost before it started. This was because the architects qualified for the commission by winning an earlier design competition for Riksbyggen on another project site that was later abandoned and replaced with the present location.

Three things are important in order to understand why this process worked in a transdisciplinary way. *First*, there was a high degree of continuity of individuals involved. This had the consequence that each meeting could simply start from the point where the last meeting ended; there was no need to update everyone. This was an important step to ensure the creation of a common project culture characterised by mutual trust. *Second*, there was a clear structure in the group concerning professional affiliation, competence and mission. It was never questioned why or on what mandate each person was there. *Third*, every member of the group was encouraged to comment and contribute to all issues, even when it was a question outside their personal field of competence. However, taking part in a discussion always meant maintaining one's expert position, not just talking about everyday life experiences. For all participants, it meant a particular learning experience and a significant merger of professional cultures. This is how disciplinary knowledge becomes fully cross-transactional.

This established extended dialogue at the crossroads between partners, stakeholders and different professional profiles, relevant for the planning process and the design, was also extended to a series of organised meetings with external local associations and neighbouring inhabitants in order to hear their opinion and to inform on the character of the project and the changes it would potentially induce, as well as the opportunities it would also eventually and desirably provide for those already living on neighbouring sites. On that point, towards the end, actually, there was unexpectedly very little opposition voiced nor major objections raised to the potential local negative impacts of the building designs during the formal planning process, such as, for example, effects of local densification or line-of-sight obstructions. This was in spite of the sensitive location and well-known proactive local commitments to the preservation of flora and fauna in this now ageing and waning local community of Guldheden with its prestigious and legendary classical welfare state origins of the late 40s and 50s. Furthermore, this part of the city is, by coincidence, intimately connected to well-known major national attempts at residential innovation, in particular due to the important seminal post-war housing exhibition *Bo Bättre* (Good Dwelling) in 1945. So, in this context, the *brf Viva* project can be regarded as the recurrence of similar radical ambitions now transferred to our contemporary reality.

This process of dialogue continued after the building project took off on its own track, even if the number of people participating at the table had diminished. If continued, this extended dialogue will offer an important opportunity to conduct a long-term follow-up and to draw conclusions derived from this project when households have taken residence and established themselves as a community

within the building complex. But, as intended, and as common opinion seems to eagerly agree upon, it will also provide important lessons learned on how to establish such common ground and a common project culture, directed towards residential and resilient innovation, that will be useful in further projects coming up in the future. Actually, this situation has to some degree already occurred, with two new projects that have recently been initiated.

Positive Footprint Housing© as a process is to be continued for a second ongoing project, this time concerned with residential solutions for young professionals with modest income levels. It also explores new communal ways of residing and sharing in *Lindholmshammen*, located on another experimental site of the city, where lessons learned in *brf Viva* can be further fully exploited.¹⁶ Moreover, a competition arranged by Riksbyggen has recently awarded and commissioned the residential project *Slå Rot*, featuring solid wood construction and recyclable building components as yet a third offspring of the *Positive Footprint Housing*© process.

This provides an image of how new knowledge is transmitted via the *Positive Footprint Housing*© platform from project to project, as was initially intended, responding to the established model of co-production of knowledge beyond disciplines, with regards to ways of continuation, implementation and generalisation.

So far, it is quite apparent that the transdisciplinary approach adopted in this case has, to a considerable extent, provided an efficient method to grasp and to integrate a wide spectrum of implementations of sustainable character, embracing the totality of a complex project development process. The *dialogue planning* procedural approach may be considered here as the key notion for the alleged success of the project and is soon, as mentioned above, to be tested again.¹⁷

Innovative Features as Outcomes of the Project

To illustrate the actual impact of transdisciplinarity and interdisciplinarity contributions in this case, we can immediately identify at least three such distinct components of the project as a whole. These are components that probably would not have been imagined nor realised, as things stand right now, if the process of mutual interdisciplinary exchanges had not been initiated. The *first* addresses the challenge of social solidarity and economic justice; the *second* the concept of preconceived long-term alterability and user-provided adaptability on the level of floor plans, considered as a crucial aspect of social sustainability; and the *third* a surprising example of major technical innovation concerning concrete construction dictated by concerns for sustainability and reduction of CO₂ emissions.

Six Apartments for Young Professionals: Accessibility and Affordability

The first example concerns the six integrated one-bedroom flats that will be let with certain exceptional conditions. For these, the price of the share is set considerably lower than the market price, at c. €9,500. At the same time, the monthly rent is higher in comparison. These six apartments will not be available on the market, but offered to young professionals between 18 and 30 years old. The city administration of Göteborg will be involved in the selection of residents. Whoever moves in can also stay after they have turned 30, but the apartment will again be offered on these special conditions once someone moves away. The price of the share will then be calculated on an indexed basis, so that there will be no possibility for the shareholder to make a profit. The residents of these apartments will be full members of the cooperative housing association and will have the right to use all common areas and assets in the neighbourhood.



FIGURE II.3.2 Section cut. Outlines from the design process and not as being built. Source: Malmström Edström Arkitekter.

This construction of mixed “cooperative rental tenure” concerns only a small part of the total number of apartments, but represents a new model and a generally widely appreciated and celebrated attempt to contribute to more socially equalising solutions on the housing market. From a transdisciplinary perspective, these apartments are produced in an interface between social sustainability efforts, extraordinary juridical and economic solutions to the housing arrangements, architectural design efforts to achieve high residential value in a small space and, finally, the municipality organisation to select residents who fit the target group. It must be in doubt whether this formula could have possibly occurred without a research-informed process of project development combined with the dedicated commitment and action undertaken by one of the academic partners involved in the process.¹⁸

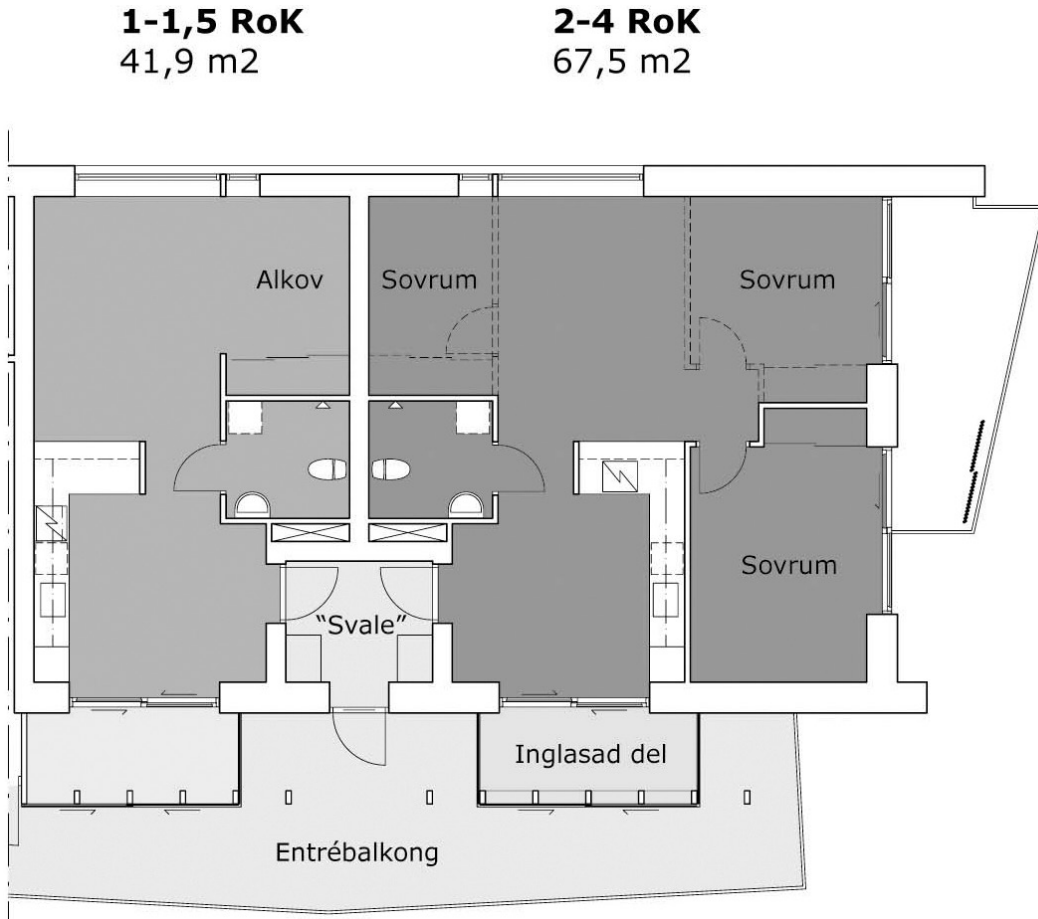


FIGURE II.3.3 Flexible apartment plan with adjacent apartment; 2, 3 or 4 rooms alternatives indicated. Outlines from the design process and not as being built. Source: Malmström Edström Arkitekter.

Adaptable Apartment Design: Alterability, Adaptability and Flexibility

The second example concerns flexible apartments. Larger apartments in the *brf Viva* condominium have been conceived to enable the residents to adapt their dwelling to their temporary, life situation-dependent, residential needs. The potential ability to adapt to users' life situations or residential needs and desires is considered to be an important embedded quality of opportunity. In these apartments, the number of rooms can be adjusted from two to three or even four. This is accomplished by either adding or taking away interior walls. This design scheme, providing a variable number of rooms, has required a partly free-bearing construction and special attention to and adaptation of technical solutions for ventilation and electricity.

These flexible apartments are intended to contribute to an increased social sustainability by enabling a more variable use of the apartment over a longer time frame, which can offer a wider freedom for personal choices and an increased feeling of active participation in the residential situation as a creative, contributing user.

The possibility of changing the number of rooms in the dwelling also opens up the capacity to host a larger diversity of household types, something that can eventually work for increased integration between varying household configurations. The variability of the number of rooms can also make it possible for the household to stay in the same dwelling when the family or household grows or shrinks. Apartments next to each other might even accommodate different forms of co-living together and independently at the same time as integrated ways of residing for the elderly. Over a prolonged time frame, this can provide a stronger and more lasting continuity and rootedness for the residents, as much within their own block as in the surrounding wider neighbourhood. It will potentially contribute to stronger social dimensions of safety, identity and social cohesion as well as longevity of community.

An enhanced diversity of residential solutions can also promote a more sustainable housing stock from the perspective of the ongoing demographic transformation processes. The future demographic structure is, despite the current prognosis, difficult to predict, as are future residential aspirations and lifestyle preferences that might be the object of significant and sudden changes in a longer time perspective. In this context, the flexible apartments can be conceived as more resilient than “normal” apartments with a low capacity of adaptability, as conceived for as yet unknown residential situations of the future.

As the ultimate major achievement of the transdisciplinarity process, the decision by Riksbyggen to include and to fully acknowledge the qualitative notion of *alterability* of apartments and buildings as a vital aspect of life cycle assessment¹⁹ or BREEAM sustainability assessment calculations in their own inherent “in-house” evaluation tool can be considered a significant change of orientation.²⁰

“Green” CO2 Neutral Concrete Framework as a Surprising New Option

A major and crucial decision in any building project is the choice of a structural framework. In this case, concrete and solid laminated wooden structures were considered. From a sustainable point of view, solid wood has an advantage as a natural container of CO₂, as very user friendly and it also carries a lot of other attractive sensuous and symbolic qualities when compared with grey concrete. So, early on during the process, the commission was given to two different providers to make a complete life cycle assessment (LCA)²¹ analysis of their respective offers of structures for the building complex. It appeared at first that the solid wood construction, *cross-laminated timber* (CLT), was considered to be significantly more sustainable than the concrete solution. However, the concrete industry then acted and said, “well, we do have other more advanced and more sustainable solutions, with lower CO₂ emissions, but they are more time consuming, thus also costly.” So, they came up with recalculations built upon a prolonged drying or hardening procedure to make the use of concrete almost equal with the wood alternative.²²

Riksbyggen EF then felt free to decide in favour of the “green” concrete alternative, avoiding the more unknown and unproven prospect of solid wood, which had other potential problems to be dealt with, however cherished and desired that concept was for the time being in professional circles. Furthermore, the entrepreneur of the wooden cross-laminated timber system eventually also withdrew their offer late in the process.

This decision was later to be turned into a great success in the professional media coverage, putting the *bif Viva* innovative ambition in the public spotlight. The situation even produced repercussions in the industry on the national and Scandinavian levels to provide similar and better offers to reduce CO₂ emissions from concrete to 30%. This serves as an indicator of the level of innovation achieved in the process of project development due to the special and accentuated attention paid to the procedure as dominated by advanced concerns for sustainability.



FIGURE II.3.4 Public Launch Project Model, 2 March 2016 by Riksbyggen EF. Construction start on 2 November 2016, 132 apartments in cooperative tenure with highest possible sustainable profile. Photo by Sten Gromark.

Dissemination: Mediatic Acclaim and Recent European Union/ERA Recognition

Beyond the focus placed on the unusual concrete solution projected in a number of recent Norwegian publications and other general newspaper publications, the project as a whole has so far received considerable recognition for its ambition to explore new ways of constructing residential resilience.

This may be a sign that confirms the perceived innovative profile of the project. It received, for example, an international prize awarded recently, distributed in Hong Kong, at the conference SBE17 in June 2017, as a result of a competition arranged by the Swedish Green Building Council, for *one of the five best sustainable projects* in Sweden.²³ Another equally recent first prize award was achieved as nominee and winner of the *Habitat of the Year 2018* in the Swedish magazine *Rum – Årets bostad*.²⁴

A main achievement of the project has been to become a part of the European Union Pilot and Experimentation project IRIS (2017–22), a European Union-level demonstration project. This is

funded by high levels of European Union research and demonstration funds, with significant relevance in the ERA as recently signed with the European Commission under the title *Integrated and Replicable Solutions for Co-Creation in Sustainable Cities*, with a total budget of €18 million for five years.²⁵ Ultimately, the project, as a major recognition, was awarded the prestigious Kasper Salin National prize for best architecture 2019.

Assessment of the Intrepid Approach: *Barriers, Enablers and Transferability*

In this project, the main *barriers* encountered consisted primarily of the restrictions put on the project from a strict commercial point of view. On many occasions, the leadership of Riksbyggen underlined that the limits of an experimental attitude or advanced realisation are delimited by the sheer necessity, in the end, of providing attractive offers to customers, so that apartments could be sold in spite of considerably high costs. Primarily, these were generated in particular by the difficulty of the drastically inclined rocky site of the project. This circumstance might have led to an invisible, cognitive barrier for a more daring, structurally radical, architectural and designerly approach. As close observers, we were confronted throughout the process by some opinions uttered considering the project not to be radical enough or even a mere commercial greenwash of a conventional kind, attracting a green middle-class affluent intelligentsia.²⁶ But, for the Riksbyggen team, as the level of innovation had ultimately been fixed, what was at hand with all its complexities was still already an audacious, *intrepid* and big step out into the quite unknown, entirely uncharted terrain of taking modest, but if possible, well-measured risks for a much desired end result of a project that was sold out.

Concerning the main *enablers* of the project, it has been mentioned above that the decision to initiate the project fell on and grew out of fertile and thriving ground in the university context of Chalmers. The reception could be characterised by a readiness or preparedness to act in this direction well beyond academia, among teachers, researchers and even involved students. The situation provided an unusual, well-balanced meeting point, to promote an enhanced mutual co-creative understanding between academia and education reality on the one side and the professional and commercial reality of Riksbyggen with involved consultants on the other.

From the beginning, there was a lingering mutual curiosity or even a slight doubt on each respective side of the professional cultures. For Riksbyggen, this implied they should better understand the conditions in academia, and for researchers, to better understand commercial realities and the nature of the socially oriented ideology of the cooperative housing provider. But later on in the process, a distinct trust was created and a *common project culture* definitely took constructive and creative shape. This provided vital energy for the duration of the long process. It should also be noted that a distinct point of division was pronounced between the research process identified as *Positive Footprint Housing*© and the actual building project, *brf Viva*, when it was started.

Concerning *transferability*, it has already been noted above that the *Positive Footprint Housing*© process has continued beyond the realisation of *brf Viva* in 2019 and has provided personal experiences of co-production of knowledge among the participants to be applied in further explorations of future building projects that have already been initiated. Themes envisaged are affordable apartments for young people, building in solid wood and also integrated residences for the elderly.

It is important to clarify that, throughout the process, researchers had the right to make suggestions and proposals but were never part of the actual building design process in responsible decision-making positions. Exchanges were very much focused on the highlighted demands of Riksbyggen to put priority on defining ways of promoting *social* sustainability, considered as a growing concern,

while previously energy-saving solutions stood in the absolute foreground of attention in similar discussions. So, the main question put to researchers, constantly repeated, was about what constituted actions and means of social sustainability in this residential situation. The notion introduced concerning alterability of apartments has a key position in this regard, considered as a so far unexplored quality of residence in a wider time frame of enhanced resilience and longevity.

Conclusions: A Transdisciplinary Dialogue Providing New Knowledge

In sum, *the process of transdisciplinarity* as practised in this case represents, in a theoretical perspective, a fruitful occasion to commonly explore *new modes of knowledge co-production* as constructed around the building core project, the *simulacrum*, as a focused object of cultural negotiation (Conan, Gromark, Jantzen, & Bilsel, 1998; Doucet & Janssens, 2011; Gibbons et al., 1994; Hemström, 2018; Nilsson, 2004). It is perhaps too early to say what kind of knowledge has been created, but we can point to some particular illustrations – the small steps – that we find convincing as illustrations, as related above. *First*, the social justice perspective, applied as the six starter flats; *second*, the initiated discussion and actual implementation of flexible and alterable apartments considered as improving quality of life and as an aspect of social sustainability in a longer time frame; and *third*, finally, the technical invention of sustainable green concrete with low CO2 emission impact.

The *transferability* of the new knowledge so produced could be regarded as the experiences gathered from the method applied – the *dialogue process* – and the enhanced transdisciplinary exchanges between partners. Riksbyggen will definitely build further upon these experiences for future projects, one of which is already running with another set-up of partners, as noted above.²⁷ More specific project-related knowledge, as mentioned above, concerning general *availability* and *affordability*, and *alterability* and *adaptability* of apartments, must be assessed in a longer time span after the end realisation and final appropriation of the project among local residents. In the case of promotion of *green concrete*, it has already had significant and widespread repercussions in the building industry in a situation where solid wood solutions are generally considered to be the given choice for sustainability reasons.

As more general themes, as reflections generated by our presence in this residential situation, we see an opportunity to rethink residential situations along the lines of *alterability* – projecting longevity and structural residential resilience into a longer time frame; *adaptability* – widening the offer of diversified household configurations of life projects; and finally, *accessibility* – providing occasions of inclusion for spatial residential explorations of life projects within reasonable economic limits of *affordability*.

The main prospect ahead for the future, beyond 2019, will be to see how the residential community now taking shape, the social subject of *brf Viva*, be prompted, in the long run, to explore resilient common ways of life and significant new ways of residing as a realisation of the main objective of the *Positive Footprint Housing*© transdisciplinary knowledge co-production process – considered as a huge secondary social challenge behind the project within a far wider time frame.

Acknowledgements

This chapter contribution by authors to the European Union COST Action Intrepid and the participation in the *Positive Footprint Housing*© project was made possible by substantial support from Formas²⁸ of the AIDAH research environment at Chalmers ACE and through collaboration with and vital support also provided by Riksbyggen EF.

Notes

- 1 This chapter builds upon a paper, awarded best conference paper, presented jointly by the authors in Porto, at the Green Lines Institute conference on Sustainable Housing (Andersson & Gromark, 2016).
- 2 For two similar and typical building projects in Sweden see Xplorion featuring residential sharing solutions cf. <http://futurebylund.se/project/ec2b> retrieved 26 November 2018 and Cykelhuset Ohboy! (Bicycle house) on alternative mobility cf. Lidström (2017), <https://www.boplatssyd.se/nyproduktion/cykelhuset-ohboy> retrieved 26 November 2018.
- 3 Ekonomisk Förening.
- 4 Actually, the project was personally initiated by an officer of an innovation centre at Chalmers in close cooperation with the regional Chief Executive Officer of Riksbyggen EF.
- 5 Brf is short for bostadsrättsförening (English: “co-operative tenure association” or housing association).
- 6 Gromark, Ilmonen, Paadam, & Støa (2017).
- 7 Intradisciplinarity: internal, inward-directed, academic condensation, consolidation and reinforcement, theoretical and methodological, cf. a case related in (Gromark, Mack, & Toorn, 2019).
- 8 Architect SAR/MSA Andreas Norrman in a lecture at Chalmers, 21 November 2018.
- 9 Cf. Roos (2017): Chalmers’ strategy for interdisciplinary organisation in order to promote sustainability was initially inspired by the example of the Stanford Center on Longevity, an interdisciplinary strategy applied to improving residential healthcare conditions and quality of life for the elderly, supported by Chalmers’ vice-dean Anna Dubois. The general conceptual approach towards futures of universities is to a large degree inspired by extensive writings on the topic by Professor emeritus John Goddard (cf. (Goddard & Vallance, 2013).
- 10 Building Research Establishment Environmental Assessment Method (BREEAM).
- 11 In Sweden, 48% of the population live in multi-family, rental or co-operative housing, and 45% in single-family residences; single households maintain a constantly increasing percentage. Source: SCB.
- 12 Later in the process, the national research organisation Formas supported the Architecture in Effect and AIDAH projects and also guaranteed continuation of researcher participation for the PhD candidate engaged after she completed her licentiate thesis.
- 13 The Housing Invention Studio and the Matter, Space, Structure Studio.
- 14 The result is a licentiate thesis (cf. (Braide-Eriksson, 2016), developed further into a PhD thesis, defended in spring 2019 (Braide, 2019).
- 15 Such as, for example, (Anderberg & Leffler, 2018; Axelsson, 2014; Granberg & Mirjamsdotter, 2016).
- 16 <http://lindholmshamnen.se/projektet/> retrieved 01 October 2017.
- 17 For the much featured concept of dialogue in the local planning context, cf. (Eriksson & Nylander, 2016); and for an extensive account of application cases, cf. (Fröst, Lindahl, Eriksson, & Gustavsson, 2017).
- 18 Riksbyggen, 2017.
- 19 Livscykelanalys (English: life cycle assessment (LCA)).
- 20 Current Swedish research at Chalmers confirms the importance of considerations of alterability among customers in situations purchasing a new apartment; cf. (Femenías, Holmström, Jonsdotter, & Thuvander, 2016; Jonsdotter, Femenías, & Holmström, 2016). In general, it is also an accepted and growing quality feature on the residential market, signalled by many other sources.
- 21 Cf. report presented at meeting, 25 January 2018; TEMA: Uppföljningen av Brf Vivas LCA; Slutrapportering 2018 (Eva-Lotta Kurkinen).
- 22 Brick, Johansson, Rönneblad, & Kurkinen, 2017).
- 23 <http://www.mynewsdesk.com/se/riksbyggen/pressreleases/brf-viva-utvald-att-representera-sverige-paa-internationell-konferens-i-haallbart-byggande-1954444> retrieved 26 August 2017.
- 24 (Masnic, 2018); <http://www.mynewsdesk.com/se/riksbyggen/pressreleases/riksbyggens-brf-viva-nominerad-till-aarets-boende-2018-2332904> retrieved 25 January 2018; <https://www.mynewsdesk.com/se/riksbyggen/images/bild-fraan-prisutdelningen-den-5-februari-paa-oscarsteatern-1203182> retrieved 08 February 2018.
- 25 <http://www.iqs.se/om-oss/aktuellt/nyheter-2016/170927-iris/> retrieved 01 October 2017.
- 26 Question raised, for example, in the first public project presentation discussion on 02 March 2016 at Svenska Mässan, Göteborg.

- 27 Affordable starter apartments for young professionals in Lindholmshamnen, with more than 200 units; and the solid wood experimental project, the winning competition entry Slå Rot by Sweco Architects and Cajsa Crona in 2017.
- 28 Formas: The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning.

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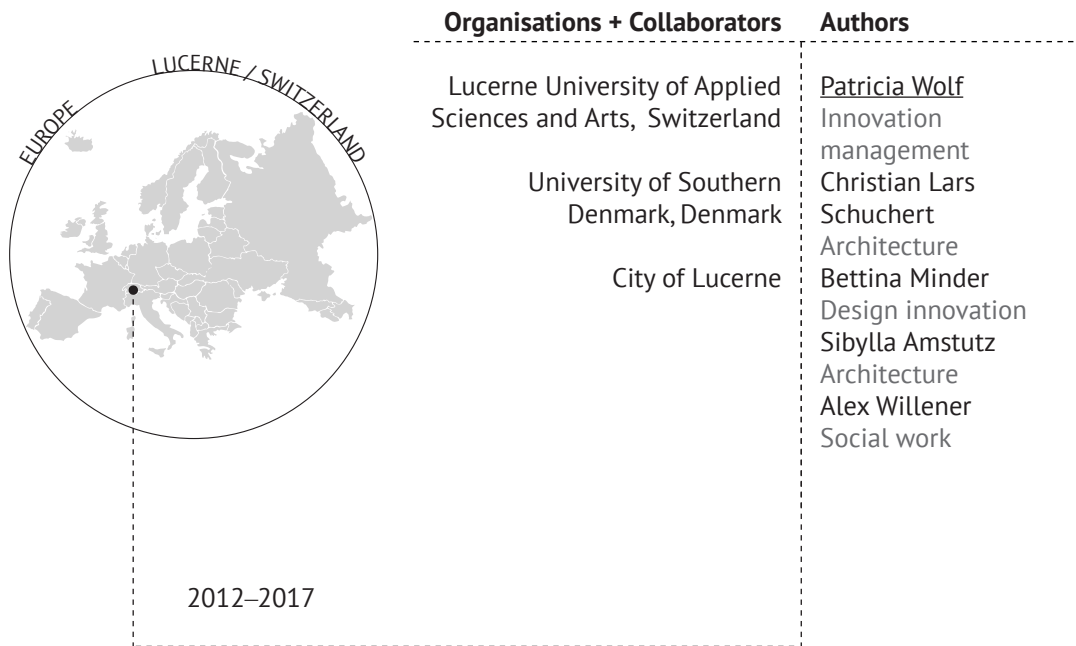


04

SWIMMING FREE



The Citizen-Driven Transformation of Neubad Lucerne

**Introduction**

In March 2012, the City of Lucerne, Switzerland, announced the strategic objective to become a “Creative City” by 2020 and launched an open call to tender for concepts aimed at concentrating the creative communities in the city in the building of the former public indoor swimming pool. The call required the place to be run in a self-financing manner. The winner of the competition was a self-organised polycentric network of approximately 100 people from the creative scene of Lucerne called the “Neubad Association.”

This chapter describes the remarkable cooperation of formerly disconnected players from the creative economy, cultural organisations, science, innovation promotion and residents of the neighbourhood. The Neubad concept foresaw turning the former public swimming pool into a place for inspiration, incubation and innovation in an open source manner. Architects, professional gastronomes and many voluntary workers helped with the transformation. Today, Neubad consists of co-working ateliers, an Open Pool used as a unique venue for exhibitions, seminars, and events (flea markets,

FIGURE II.4.1 Neubad Pool Dinner. Photo by Christian Felber.

repair cafés, etc.). The Neubad Bistro connects users of co-working spaces with visitors and people from the neighbourhood. Neubad's location in the city centre with its extraordinary interior spaces affects the social and economic development of the city.

The case illustrates and analyses the challenges, with a focus on joint knowledge production, within the frame of an interdisciplinary research project that accompanied and investigated the transformation. The research team, whose members were architects, designers, management scholars and social work researchers, had to deal with processes of high complexity and uncertainty. Involving diverse actors in such a research process necessitated managing the integration of diverse perspectives, problem definitions and research practices as a cognitive task. The analysis highlights how the research team, whose members knew each other from previous long-term collaborations, managed these challenges by means of co-designing the research project, co-producing knowledge and regular reflection.

Neubad

In March 2012, the government of the City of Lucerne, Switzerland, set the strategic objective to become a “Creative City” by 2020. One of the measures to achieve this objective was the launch of an open call for tender for the four-year temporary use (2012–2016) of the former public indoor swimming pool building. The call asked for concepts aimed at concentrating the creative communities in the city. It included the requirement to run the place in a self-financing manner.

The Neubad (which translates as “New Pool”) Association, a self-organised polycentric network of approximately 100 people representing organisations and individuals from the creative scene of Lucerne, won the bid. This newly funded association included players so far largely disconnected from each other, such as actors coming from the creative economy, cultural organisations, science, innovation promotion and residents of the neighbourhood.

Although not used to collaborating in urban development projects, some of the players had been contacted together at about the same time when the call was launched by researchers from Lucerne University of Applied Sciences and Arts to participate as external experts in a research project called “Urban Vision Lab.” The interdisciplinary Urban Vision Lab research group aimed at setting up a continuous dialogue between citizens and institutions on questions related to city development and shifted a part of the project's budget and resources to the support of the Neubad Association during the phase of writing up the tender proposal. They managed to overcome initial suspicion about the engagement of Lucerne University of Applied Sciences and Arts by emphasising their sincere interest in the initiative, not only as researchers, but also as citizens who were not just “sent” by Lucerne University of Applied Sciences and Arts to “study” what was going on.

The space is situated close to the city centre and has access to public transport. The Neubad concept foresaw turning the former public swimming pool into a place for inspiration, incubation and innovation in an open source manner. Architects, professional gastronomes and many voluntary workers helped with the transformation. Nowadays, Neubad consists of the following elements (Neubad, 2016):

- **Co-working and ateliers** for creative economy start-ups, knowledge workers and culture producers.
- **Open Pool** – the large swimming pool and its adjacent area are used as a unique venue for exhibitions, seminars, conferences, theatre/dance/music events, flea markets, repair cafés, etc.

- **Neubad Bistro** connects users of co-working spaces with visitors and people from the neighbourhood.

Today, Neubad claims a central role as a place for creativity, culture, education and social engagement. The location, with its extraordinary interior spaces, impacts the social and economic development of the city. The initial period of four years was later extended to eight years.

The Accompanying Research Project

Research on entrepreneurial cities (for a summary, see Wolf, Schuchert, Amstutz, Minder, & Willener, 2018) indicates that

- (1) Play instead of managerial approaches as planning and governance strategy,
- (2) Stimulation of grassroots movements that drive initiatives, and
- (3) (Re)use of temporary spaces for initiatives that have a meaning to communities

are approaches which potentially act as enablers for initiatives concerning a creative entrepreneurial city. However, to date, knowledge about how cities can apply these three approaches in their initiatives for an entrepreneurial city remains a puzzle. There are pieces and parts in different bodies of literature, but they have not yet been put together into a comprehensive picture. The set-up and transformation of the old public swimming pool was therefore accompanied by the above-mentioned research project that focused on shedding light on the following research question:

RQ: How can city governments and municipalities stimulate grassroots initiatives towards an entrepreneurial city in a playful way?

The project was funded by the Future Laboratory CreaLab (CreaLab) at Lucerne University of Applied Sciences and Arts. The CreaLab emerged originally in 2010 as one of the four interdisciplinary programmes funded by Lucerne University of Applied Sciences and Arts. Its mission was to establish collaboration concerning the topic “future of society” across the Departments of Engineering and Architecture, Management, Design & Arts, Music, and Social Work. The programme is composed of a portfolio of about 60 associated interdisciplinary projects, and a core team of 18 researchers coming from all departments of Lucerne University of Applied Sciences and Arts.

The core researchers involved in the Neubad accompanying research project were core team members of the CreaLab, and they called in other researchers whose competencies were required. The project started with a nucleus of researchers who were interested in the topic of the local development of city residential districts – two architects from the Department of Engineering & Architecture, an urban developer from the Department of Social Work as well as a regional economist from the Department of Management – who then involved a researcher who was studying participative event design methods from the Department of Design & Arts. Together, they approached the director of the CreaLab and asked her for funding.

Researchers gathered data from the initial phase of creating and shaping the temporary use, which lasted from January 2013 until March 2014. During this phase, the Neubad building was reconstructed, the different use types were defined, and the financial and organisational bases were created. They consisted of:

- a) A design phase where the mechanisms of financing and organisational elements were set up;
- b) A reconstruction phase that included the collaborative creation of new space concepts and the building of them; and
- c) A transition phase where the building started to be inhabited but was still in a provisional status.

As one of the researchers was also a member of the board of the Neubad Association (the same person who was previously the project manager of the Urban Vision Lab project) and there were very good relations between the CreaLab core team and the Neubad board, there was no suspicion between the research group and the Neubad initiative.

The Process of Joint Knowledge Production

Inter- and transdisciplinary research projects face several challenges to joint knowledge production because they usually deal with themes of large complexity and uncertainty, and involve diverse stakeholders (Hirsch Hadorn, Pohl, & Bammer, 2010). This necessitates managing the integration of diverse perspectives, problem definitions and research practices as a cognitive task (Hollaender, Loibl, & Wilts, 2008; Kruse et al., 2015).

One of the enablers in the interdisciplinary project team was that the researchers knew each other from intensively working together for almost three years in the CreaLab. They were aware of the challenges of inter- and transdisciplinary research projects regarding joint knowledge production, and they regularly reflected on this. Their approach was very much influenced by the findings of a study conducted earlier by other researchers from the CreaLab (Wolf, Harboe, Kummeler, & Kipouros, 2016). Based upon a literature review and interviews, this study identified four principles that seem to enable and foster integrative transdisciplinary research. These principles are (ibid, p. 797f):

1. Dialogue acts as a development and communication tool – from meetings to a conscious exchange and development process.
2. Materiality creates objects and images by concrete modelling and visualising (including prototypes) that allow the team targeted negotiation processes.
3. Iterativity provides a dynamic process flow and flexible planning.
4. Reflexivity supports a continuous placing and reflection of the team in relation to the project objectives and results.

The interdisciplinary project team thus consciously approached and reflected challenges using the framework of these principles. Continuous reflection is identified as an enhancing factor for transdisciplinary projects (Polk, 2015).

As this was a transdisciplinary project, it was important that also external stakeholders, i.e. the Neubad team, would a) participate in the data gathering and b) make use of the study findings as a learning and reflection opportunity. The Neubad team members were very busy transforming the Neubad. They were, however, also interested in a careful and science-based documentation of the set-up process and therefore very open to participate in interviews and in reflection sessions and group discussions where findings were regularly presented and interpretations by the researchers were challenged. The opportunity of gaining “free” process documentation, the mechanisms of reporting back results to the interviewees and intense discussions certainly acted as enablers for the research project.

As mentioned above, communication between research team members was unproblematic in this case. The same applies to the communication between the project team and the Neubad actors. One important factor was that some members of the research team were involved in the “Neubad Association”; one of them was even a member of the board. This might in general produce biases in research projects, but the regular reflection mechanisms described above helped here. For the research group, this situation produced the opportunity to have their work present in the minds of the people whom they wished to support with their research, and to feed findings back to the Neubad board in almost real time.

The Methods Applied for Joint Knowledge Production

The methodological approach of the project was designed in a way such that all methods of data gathering stimulated the continuous discussion and reflection on the process between the researchers and the Neubad team. As the core sample of a qualitative case study must include informants able to provide essential insights to answer a research question – the so-called “pivotal target group” (Davies, 2007, p. 143) – researchers focused on three groups of actors who were strongly involved in the first phase, directly influenced the atmosphere and transformed the physical building of Neubad: (1) operators; (2) members of the board; and (3) volunteers and users. As researchers were particularly interested in the subjective viewpoints of actors from the three groups, they accepted Flick’s call for triangulation (2009, p. 26) and used different qualitative methods, i.e. interviews, observations and group discussions. This approach allowed them to improve scope, depth and consistency in methodological proceedings.

The researchers first conducted 12 problem-centred interviews (Witzel, 2000) with representatives from the three actor-groups (four operators, four members of the board, four volunteers and users). Interviews lasted between 20 and 60 minutes, were transcribed verbatim and resulted in 42 pages of transcripts. Furthermore, interviewees were asked to take pictures of their favourite places. Flick (2009) emphasises that what interviewees “select and take as a picture allows the researcher to draw conclusions about the views of the subjects towards their own everyday lives” (p. 242). Although this approach to documenting changes in buildings and perspectives of the people involved is not new, it is rarely used. In this project, it proved to be very helpful not only for the analysis, but also for the discussion with the stakeholders. The photos reflected their point(s) of view, and it was easy to communicate research findings while providing a visual hook at the same time.

Second, the researchers ran two three-hour group discussions (Flick, 2009, p. 196) with the six members of the board, four operators, and nine volunteers and users in March and October 2013. Such group discussions help to filter extreme attitudes and render common opinions (Pollock, 1955). They were documented by means of videos, photographs and field notes. Participants felt that these discussions were particularly interesting because they brought together different types of people involved in the set-up process of Neubad. The researchers gave them a kind of “organised reflection time,” something they would not have done if there was no applied research project, and this was perceived to be helpful.

Third, researchers observed the process with the aim of getting hold of the changes in the space and its use. They regularly took photos of important spots like the pool, the co-working area and the bistro area at different points in time to document changes in the observed environment that are too complex to catch for the eye without such documentation (Flick, 2009, p. 241). These photos helped the researchers to document and map changes while they were happening.

The findings of the study were presented at different points in time during the two group discussions, twice to the board of the Neubad Association and to all members at the general assembly. The board referred to them in the annual reports, which were in turn cited by the local media. The findings highlighted the significance of the achievements of the Neubad for city development and explained in an understandable manner the mechanisms by which these achievements were accomplished. They confirmed that the board of the Neubad Association and the initiative were on the right track, and provided the board with opportunities to reflect upon the observed challenges. For example, the observation made by the researchers that some of the board members were suffering great pressure led to the removal of operative management tasks from the board.

Funding Aspects of the Context

From the start, the project suffered from difficulties in accessing funds. Although funding bodies approached by the Neubad Association liked to fund the “action,” i.e. the transformation of Neubad, funding accompanying research was considered as less interesting and seen as “nice to have.” Thus, the only possibility was to try to acquire internal funding from Lucerne University of Applied Sciences and Arts. Two interdisciplinary programmes – one focusing on urban studies and the CreaLab – offered their help. However, some powerful actors at the university felt that it was risky to engage in funding such a study, because in the case of Neubad failing, the university might become associated with this failure. The urban studies interdisciplinary programme was therefore not allowed to use its funds for the study. The CreaLab therefore decided to fund the research project in a way that this support would not become visible until the findings were achieved: they allocated funding to the account of an already existing project with almost the same team to allocate funding that was then used for the study. Since the Neubad was a success, the university is now happy about the research results.

As in other transdisciplinary projects, time was an important issue. The research team was very busy with collecting data, analysing them and discussing findings with the stakeholders – something that is not very common in science, although it is important for transdisciplinary research projects to support stakeholders by “providing a basis for justifying their decision-making and actions“ (Tranfield, 2002, p. 378). In this project, publication of research results was delayed, and was not covered by the funding, which was completely required for data gathering and analysis. It took the researchers almost one year to write up a working paper after the project. Then, they became involved in a COST action, which provided the idea to publish the results within the scientific community in a new drive. Researchers managed to acquire internal university funds for publication and, during the last year, two book chapters, one conference paper and one article for a peer-reviewed journal were written.

Furthermore, the project team aimed to study for a longer time period – not just the initial phase of the Neubad transformation – but was not able to acquire further funding during the set-up phase. This issue has now been partly dealt with: the case study results are published in well-recognised outlets, which provide evidence on the (scientific) importance of the topic and the experience of the team in undertaking such accompanying research within the context. Also, the COST action helped the team to understand where in Europe there were other similar initiatives, create networks and think about common projects at a European level. This will hopefully allow them to secure funding for follow-up projects.

Discussion and Lessons Learned

Inter- and transdisciplinary research has a relatively long tradition in Switzerland. For example, since about ten years ago, transdisciplinary research has been supported by the Network of Transdisciplinary Research (td-net), which was set up by and “assists the Swiss Academies of Arts and Sciences in facilitating exchange and collaboration between disciplines and between science and society” (td-net, online). Urban study research is accustomed to inter- and transdisciplinary practices. This is also reflected in the td-net award, which is relatively regularly given to urban study research projects. For example, in 2015 it was won by the architect Emmanuel Rey and his team from the Federal Institute of Technology in Lausanne “who engaged in a scenario process with sixty students and integrated authorities and other stakeholders in order to explore urban densification issues” (Zinsstag, Perrig-Chiello, Paulsen, & Truffer, 2016). Such types of inter- and transdisciplinary urban study research projects where architects, engineers and urban planners are integral parts of a joint knowledge production process in which urban scenarios and visions are created or new neighbourhoods are planned are relatively common in Switzerland. Rare, however, are inter- and transdisciplinary urban study projects where researchers are not a central part of the action but just observe and accompany it – as in the case presented here. This research project is even more innovative in so far as it managed to study *in situ* one of the rare cases where playful rather than managerial city government processes stimulated the emergence and activities of grassroots initiatives in city development. It is thus instructive to city municipalities and similar grassroots initiatives, but also to interdisciplinary research. The following conclusions and lessons learned can be drawn from the case.

One of the major success factors of the project was that the project members had already worked together in inter- and transdisciplinary projects (Hirsch Hadorn, Pohl, & Bammer, 2010). They were thus aware of the general challenges regarding joint knowledge production and consciously built in reflection mechanisms to ensure the integration of the diverse perspectives, problem definitions and research practices. Such activities are suggested to similar research projects.

Regarding the cooperation between the project members and the Neubad actors, there was a considerable amount of trust involved from the beginning, which was the result of the convincing engagement of members of the research group as participants of the initiative and as citizens. This is, in general, regarded as a problem in research as it can produce biases (Flick, 2009). In this case, the research group consisted of members who were participating in the initiative and others who were not, and together they consciously and regularly discussed whether and how far observations and conclusions were biased. This helped them also to differentiate between perspectives from inside and outside the initiative. In the end, they benefited from this a lot because it helped them also to better understand what they observed – but to stay neutral at the same time.

Of similar importance were the regular presentations of findings to the Neubad actors for the researchers to validate their interpretations through member checks (Lincoln & Guba, 1985), but also for the Neubad actors to benefit from an external perspective on their recent actions. That the research and the observed transformation process were strongly interwoven contributed to this in many ways; it ensured the relevance of the research findings to those whose actions were studied and stimulated reflections at the point in time they were useful to manage the initiative.

To the researchers, this represented a dilemma: they wanted their findings to be useful to the Neubad actors (Tranfield, 2002), but at the same time, they were not able to allocate resources to the equally important tasks of publication and securing follow-up research grants. Similar research

projects are therefore strongly advised to acquire greater funding at the beginning, which will allow more resources to be allocated to tasks other than data collection and analysis.

Another idea might be to benefit from the goodwill and interest of the citizens in the same way in which the initiative that is studied here does. As Neubad benefited in many ways from the volunteer work of citizens, the project team might have launched a call for volunteer citizen scientists. As social media were very popular among the Neubad crowd, the team might have asked the people involved to contribute observations and pictures of changes through an app instead of interviewing and observing people. In this way, they would have had to invest less money from the research budget for data collection.

Yet another way of making better use of a small research budget might be to design the project in such a way that less data would be collected at the beginning of the research project, and once the first convincing findings had been achieved and the importance of the research to the Neubad actors had been scientifically proven, more effort could be put into the acquisition of follow-up funding which in turn would, if successful, allow the study of the initiative for a longer period.

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05



REAL-WORLD LABORATORIES AS CATALYSTS FOR URBAN CHANGE

The Example of CASA Schützenplatz in Stuttgart



Introduction

The Sustainable Development Goals and the Paris Climate Agreement both call for an urgent improvement of environmental conditions and innovative solutions to move beyond business as usual with a strong emphasis on the role of cities and urban development. Tackling such great societal challenges requires innovative science and practice with a more integrative approach to knowledge generation. The past 20 years have shown that, both in development practice and academic research, closer cooperation between various actors is necessary to understand and impact the ongoing unsustainable urban development processes. It calls for new methods in urban research and practice, new forms of decision-making and a questioning of the normative understanding of knowledge production.

This is where co-production of knowledge as a means for coping with these challenges becomes relevant to ensure a more sustainable urban future.¹ The term “co-production” covers a broader range of meanings.

FIGURE II.5.1 Brunch at Schützenplatz in July 2016. Photo by CASA Schützenplatz e.V.

In this article, we rely on the following definition of co-production of knowledge within urban development processes: “Knowledge co-production refers to collaboratively-based processes where different actors and interest groups come together with researchers to share and create knowledge that can be used to address the sustainability challenges being faced today, and increase the research capacity to contribute to societal problem solving in the future” (Polk, 2016, p. 35). Thus, we see joint knowledge production as a promising mode of governance due to its questioning of normative perceptions of knowledge and knowledge generation, its innovative² approach to relationship building and shared decision-making in practice and research, and the applicability of results to practice and policymaking.

Three discourses concerned with co-production of knowledge can be identified. The first perspective is the sustainability discourse, which opts for transformative science for sustainability and interdisciplinarity and new methods in research and practice to capture the increasing complexity of the urban reality of the 21st century (e.g. Cornell et al., 2013; Schneidewind & Singer-Brodowski, 2014; Wiek, Talwar, O’Shea, & Robinson, 2014; Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen, 2016). It calls for inter- and transdisciplinary research to incorporate the complexity of unstructured problems and consequently the co-production of knowledge (e.g. Klein, 1994, 2004; Lawrence, 2010). The second strand is related to the urban development discourse within development studies, which recognises modes of co-production (service and knowledge) as a means of empowerment (e.g. Mitlin, 2008; Patel, 2004; Satterthwaite, 2005) and which is based in the roots of action research and participation. The third discourse in the field of planning theory sees modes of co-production as a new method beyond participation to overcome social inequalities (Robinson, 2002; Watson, 2003, 2012; Yiftachel, 2006; Herrle, Ley, & Fokdal, 2015). Whereas previous theoretical approaches, such as communicative and collaborative planning, work inside the institutional framework, modes of co-production go beyond participation, and work outside the formal governance arena and help to expand the scope of planning thought (Watson, 2014).

The case of CASA Schützenplatz in Stuttgart, Germany, illustrated here, positions itself within the discourse on transformative science for sustainability, arguing that in order to tackle environmental issues related to mobility, one urgently needs to gain more insights into mobility cultures (Bott, Stokman, & Uhl, 2015). The hypothesis is that using transformation experiments to establish a dialogue around sustainable mobility can potentially catalyse change in mobility cultures towards a more sustainable future.

A Real-World Laboratory for a Sustainable Mobility Culture

The University of Stuttgart hosts various real-world laboratories, one of them with a focus on sustainable mobility culture. This article will elaborate on one of the conducted transformation experiments related to sustainable mobility culture. Real-world laboratories are a new and innovative way of conducting transdisciplinary research financed by the state of Baden-Württemberg in Germany (Ministerium für Wissenschaft, Forschung und Kunst Baden-Württemberg, 2013). They are seen as one possible research strategy to enable inter-, transdisciplinary and transformative research (Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen, 2011). As one of seven real-world laboratories in the first funding line (2015–17), the Real-World Laboratory for a Sustainable Mobility Culture (Reallabor Nachhaltige Mobilitätskultur – RNM) makes the city of Stuttgart a space for cooperative experimentation. Beyond researching and observing human patterns of mobility behaviour, it asks researchers to work together with local citizens, civil society

and various departments of the municipality to develop and initiate real transformational processes in order to derive relevant practical knowledge and concrete solutions for the broader challenges concerning mobility facing society in the future.

Stuttgart is a city defined by cars. It is here that the largest automobile industry cluster in Europe provides employment for a great part of the regional workforce (Industrie und Handelskammer Region Stuttgart, 2017). Cars are therefore an important factor for the identity and economy of the city. At the same time, there is a growing awareness of the urgency of addressing the negative effects of vehicular transport – traffic jams, fine particle and CO₂ emissions, land consumption, and noise pollution – and to move towards a more sustainable concept for mobility in the Stuttgart region. While previous municipal efforts focused on technological and efficiency aspects such as the promotion of car-sharing, electric vehicles and moderately successful campaigns for the voluntary renunciation of car use, the Real-World Laboratory for a Sustainable Mobility Culture made the cultural dimension of the transition towards a more sustainable urban mobility system its central theme. As such, its focus lay not on technologies or strategies for optimising traffic and transport systems, but on engendering a culture of mobility and activity that, in line with a broader understanding of prosperity, has the capacity to enhance our quality of life at a personal level and in the city as a whole. A sustainable culture of mobility aims not only to reduce the consumption of resources but also to promote health and physical activity, to encourage social interaction and to cultivate a new quality of life and urban space in the city and the region. Furthermore, it addresses the question of how the needs and rights of every individual to mobility could be implemented in such a way that later generations can also benefit from a healthy, liveable and intact environment. Following this definition and aiming to develop and evaluate innovative methodologies for transformative research, the overarching research questions of the Real-World Laboratory for a Sustainable Mobility Culture were: how could a transformational process be set in motion; which direction should it take; and what role could local citizens play in actively shaping and enabling this process through social innovations?

The Real-World Laboratory for a Sustainable Mobility Culture served as a forum and network for new partnerships. In addition to an interdisciplinary team of researchers and students from transportation planning and technology management, architecture and urban planning, sociology, and sports sciences, it also actively involved civil society initiatives, cultural institutions, stakeholders such as local businesses, associations and federations, as well as local city administration and policymakers in the research process. A special role was played by so-called “change agents” (Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen, 2011) who were already actively developing and implementing social innovations and innovative sustainable mobility projects. Their actions have the capacity to change how we live on a day-to-day basis and serve as inspiration for others. In the case of CASA, a student and a couple of residents from Schützenplatz, who were already articulating their interest regarding a planned redesign of the square, acted as “change agents.” The aim of the Real-World Laboratory for a Sustainable Mobility Culture as a platform for such niche innovators was to strengthen, promote and link up their projects and initiatives – and to jointly reflect on the experiences and results of the cooperative research process.

The Experiment as a Method for Transdisciplinary Research

Laboratories are made for experiments. In a real-world laboratory, the experiments take place in an actual (spatial) environment. Here, we will refer to these experiments as “transformation experiments” (Parodi et al., 2017, p. 80) in order to avoid the negative connotations that earlier use of

the vocabulary “real-world experiment” has. Making the city a space for cooperative experimentation, they aim to explore what effects new ideas can bring about. Within urban planning there is a long tradition of participatory practice and research (e.g. collaborative planning or the communicative turn (Healey, 1993, 1997)). The real-world laboratories situate themselves within the tradition of action and intervention research (Parodi et al., 2017). Thus, as such, the Real-World Laboratory for a Sustainable Mobility Culture invited the people of Stuttgart to tackle the challenges of urban mobility and try out new possible solutions in the form of transformation experiments to examine how these influence a range of ecological, technical and social boundary conditions. This comparatively new research format focuses not only on researching and observing human patterns of behaviour, but also asks researchers to work together with local citizens to develop and initiate real transformation processes in order to derive relevant practical knowledge and concrete solutions for the broader challenges facing society in the future. Transformation experiments offer the opportunity to govern change and produce scientific evidence in parallel (Schäpke et al., 2017). In a multi-stage public participation process, local mobility initiatives and citizens worked together with students from the University of Stuttgart to develop a range of different transformation experiments. Following a call for ideas, a transdisciplinary jury was formed by members of the scientific staff, city administration, cultural and economic institutions, students’ associations, and representatives of the target groups of the research project. Supplemented by a public vote the jury selected several projects for funding, ongoing monitoring and support (Puttrowait, Dietz, Gantert, & Heynold, 2018). Members of the public were able to follow the progress of the experiments and contribute to or play an active part in the development. Transformation workshops were conducted to co-design research questions, define appropriate research methods, evaluate the success of the transformation experiments and reflect on their impact. Every transformation experiment concluded with a co-written report, which served as the basis of a comparative analysis and the formulation of the mechanisms of their impact on mobility transitions in Stuttgart.

Within the Real-World Laboratory for a Sustainable Mobility Culture, four transformation experiments were conducted and evaluated with “change agents” and their mobility initiatives:

- **Cargo-Bikes as Urban Commons: The rotating cargo-bike**
How could communally used bicycles contribute to forming cooperative neighbourhood structures and how could cargo-bikes help to reduce noise and particle emissions while making urban transport enjoyable? (Rudolf, Becker, & Puttrowait, 2017).
- **Cycling Without Age: The people’s rickshaw**
How could active mobility choices of elderly people be improved and how could transport bring people together instead of separating them? (Bleibler & Brandt, 2016).
- **The City as a House: The Stäffele gallery**
How could Stuttgart’s Stäffele³ be improved as places for movement and activity and how could they unfold further potential as meeting places for the neighbourhood or stages for cultural events? (Heynold, 2017).
- **Reclaiming the Street: Parklets⁴ for Stuttgart**
How could tightly parked inner-city streets be reclaimed as urban space and how could parklets encourage residents to recognise the street as a space for people to meet and interact? (Lazarova, Helfenstein, Dietz, & Alcántara, 2018).

Learning Together and Co-Producing Knowledge

Within this setting, the seminar “Stadtraum Stauraum Lebensraum”⁵ became a major component in the realisation of the transformation experiment “Reclaiming the street – Parklets for Stuttgart,” implementing a practice-oriented learning approach. Practice-oriented learning is nothing new within the realm of planning education, with its twofold agenda of educating and generating societal change. Within higher education with a spatial focus, methods such as “service learning” (Alten-schmidt & Stark, 2016) and “case study” and “transition experiment” (van den Bosch & Rotmans, 2008) approaches have increasingly gained momentum (Porter et al., 2015; Rooij & Frank, 2016). Here, concepts such as “partnership for co-creation of knowledge” (Rooij & Frank, 2016), “place-based co-creation of knowledge for sustainable development” (Trencher, Yarime, McCormick, Doll, & Kraines, 2014) and “partnership for education” (Porter et al., 2015) are prominent. What they have in common are: 1) that they all include various disciplines, and non-academic partners as well as local communities. The main didactic aim is to facilitate an experimental learning environment and to foster inter- or transdisciplinary competencies (Porter et al., 2015; Rooij & Frank, 2016); and 2) that they encourage students to develop problem-based solutions and to critically reflect on their role as planners.

Five major groups of actors were involved in the seminar and the experiment: the civil society actors⁶ who were the driving force behind the parklet project (referred to from this point onwards as “Team Parklets for Stuttgart”); the academic staff of the Real-World Laboratory for a Sustainable Mobility Culture, mainly represented by the Institute of Urban Planning and Design; the Department of International Urbanism of the University of Stuttgart; students of architecture and urban planning; and local wardens who would later be responsible for the parklets and different departments of the city administration (for a more detailed display of the actors involved, see Lazarova et al., 2018). Team Parklets for Stuttgart and the academic staff of the Real-World Laboratory for a Sustainable Mobility Culture jointly took charge of organisational issues, supervision of the students’ activities and consultations over their designs, selection of locations and contact with the local wardens, public communication (including local political committees) and the official overall permission for the project. They also supervised and conducted the data collection, analysed the different datasets and synthesised them into a research report (Lazarova et al., 2018).

Each student had to design a single parklet based on their analysis of the location and in coordination with the local wardens. With their design as a base, they had to apply for a separate permission for each single parklet and finally build the parklet. For this reason, they were granted a budget of €400 each, which was funded by the Real-World Laboratory for a Sustainable Mobility Culture. After the parklets were completed, they were officially inaugurated, including a public presentation from the student, and finally handed over to the local wardens. The student’s responsibility now was to conduct research on their particular parklet. The methodology was set up together with scientists from urban and social sciences, sports sciences, transportation science, and geography at a transformation workshop at the beginning of the design studio and mainly focused on public life studies (Gehl & Svarre, 2013).

The local wardens were responsible for observing their parklet, giving answers to any questions and maintaining the parklets during the experimental phase. They were also welcome to contribute to the construction by providing space, tools, manpower or financial help on a voluntary basis. After the parklets were demolished, the wardens took part in an interview with the research team to share their valuable experiences as those who had the best knowledge about “their” parklet.

Finally, the city administration contributed by providing consultations, granting permission without charge and managing official complaints. The fact that this permission was justified by the scientific setting of the project makes clear that a private initiative would have barely been successful and that the scientific legitimation was key to enable the project.

As a result of this inter- and transdisciplinary design studio and transformation experiment, 11 parklets were realised and remained for a period of three months during the summer of 2016 in different locations in the inner-city districts of Stuttgart, causing a public discussion about how such functions in public space were distributed. One of these parklets was CASA Schützenplatz, which is described in detail below.

CASA Schützenplatz

Schützenplatz is a 1,300 m² circular urban space in a semi-dense residential area of central Stuttgart. One of the major challenges is that the square is split by vehicles crossing (two intersecting roads) and strongly dominated by parked vehicles (49 parking spaces). However, there is weak mixed use in the surrounding ground floor buildings, with a good connection to public transportation at walkable distance and good population density, which are potential assets for becoming a vibrant active public space.

To challenge the status quo and to facilitate the reimagination of Schützenplatz as a high-quality public space, the transformation experiment “CASA Schützenplatz” was applied as an open-ended design, from April 2016 onwards, with the aim of generating knowledge about the specific context and catalysing synergies in a multi-stakeholder environment.

The initial experiment consisted of a physical project (the parklet) occupying two parking spaces and a series of analyses, campaigns and exercises that helped to gather data on the uses and types of mobility on Schützenplatz.

The Experiment

As this project on public space was meant to activate public life around it, four components were key for its strategic design:

- An understanding of the surroundings and its context: a previous scouting of the area and a basic knowledge of the potential of the public space.
- The community: the project should look to invite and involve the community in the process, capture their concerns for a human-scale public space design and their commitment to activate it.
- A basic pedestrian infrastructure: for the development of an active public space, the community should have access to basic features that allow time to be spent in the public space, like seating, shadowing, communal information. In this case, those features were provided by the parklet. In the second phase (autumn/winter), seasonal differences became an issue and led to adding a roof and changing the furniture in the parklet.
- A programme: a series of constant activities and meet-ups that tested in how many different ways the public space could be used, looking to reinforce the potential that a public space has to generate and keep active communication among a community.



FIGURE II.5.2 First walks in the neighbourhood before the intervention. May 2016. Photo by CASA Schützenplatz e.V.

The *transformation experiment* approach not only monitored the feedback generated in a scientific manner, but also actively contributed to its improvement. Qualitative data were generated through an active interaction with the community and quantitative data through monitoring of the surroundings by the student. This mixed-methods approach, in combination with a temporary physical project in the shape of a parklet, served as a catalyst for the experiment.⁷ The different phases of the experiment are described below.

Phase 01: 01 April–16 September 2016 – The parklet CASA Schützenplatz

The original experiment: in this case, Phase 01 was meant to last three months, during which the parklet was situated in the public space. In preparation, field research and analyses took place in the first two months to better understand the dynamics in the square. This included mapping and analysis of 1) the number of pedestrians crossing and using the square as well as the number of vehicles crossing; 2) a mapping of how pedestrians moved across Schützenplatz at different



FIGURE II.5.3 Schützenplatz e.V. and initiative Wanderbaumallee Stuttgart create the temporary intervention, City forest in Schützenplatz. August 2018. Photo by CASA Schützenplatz e.V.

times of the day; and 3) an observation of how many parking movements occurred throughout the day and how long the cars stayed parked. In the next months, from July to mid-September, the parklet was installed and the first intended on-field analyses took place.

Phase 02: 17 September–30 October 2016 – Extension of the experiment

An extraordinary petition was granted by the city authorities to extend the permission for the parklet. At that time, the community decided to continue the experiment, still assisted by the Real-World Laboratory for a Sustainable Mobility Culture but now under community responsibility.

Phase 03: November 2016–March 2017 – Neighbourhood initiative CASA Schützenplatz

The residents organised in a formal manner to seek support among the neighbourhood, other organisations and the authorities. At this particular stage, it was possible to rent a store facing the square. This allowed the initiative to have a headquarters and allowed them to continue an activities programme.



FIGURE II.5.4 Street festival at the Schützenplatz with dancing and movie screening on “parking day.” Photo by CASA Schützenplatz e.V.

Phase 04: April 2017–February 2018 – CASA Schützenplatz e.V.

The legal status of the initiative was fully formalised with the foundation of the registered organisation CASA Schützenplatz e.V.⁸ The two main objectives of the association are 1) to pursue the conclusion of the square’s refurbishment and 2) to maintain a community network.

To trigger reactions and test the value of public space in the community, small campaigns took place during Phases 01 and 02 aimed at generating knowledge about the physical context and the neighbourhood, and at actively showing the potential of the space by using it as an arena for activities, gatherings and discussions.

These campaigns were based on two complementary approaches to public space design: placemaking to understand the space qualitatively (e.g. Whyte, 1980), and public space–public life studies to explain it quantitatively (e.g. Gehl & Svarre, 2013).

Campaign A: From brunches to workshops

This consisted of a series of organised events in the parklet that transitioned from informal gatherings to organised workshops in a span of three months with a threefold purpose: inhibiting the activation of the new public space, initiating the dialogue with and between the community about the value of an active public space in Schützenplatz, and spotting key actors in the local community.

Campaign B: Interactive boards

Inside the facades of the parklet, two blackboards were intended to generate some passive interactions by asking two different questions, one regarding the potential that the neighbourhood saw for the square: “What do we need at Schützenplatz?” and one regarding the potential the neighbours saw for other uses in the public space: “How do you use CASA?”

Campaign C: Neighbourhood festival in the public space

With the intention of scaling up the potential of the public space to host different activities, a neighbourhood festival with diverse and more spatial activities took place for one day.

With these interactive campaigns, the neighbourhood grasped the potential of their public space and the value of regular gatherings for the engagement and enhancement of an active community in a long city development process. Such interaction gave a quick overview of how the community felt about the public space in their proximity. At the same time, the mapping and observations helped to show the ineffectiveness of space occupied by vehicles and the hostile environment left for pedestrians. The information helped to establish a fair base for negotiation with the city authorities about the need for a change in priorities set in the public space at Schützenplatz. The actual situation is about to change in Schützenplatz! The refurbishment of the area, delayed already for 15 years, is planned to happen in summer 2019.⁹ For this refurbishment, the community was able to achieve a prominent role in the last step of the design as decision-makers (furniture and minor details). Their role as a knowledge source for the design of the area was increased by the data generated during the experiment.

Enabling Conditions for Co-Producing Knowledge at CASA Schützenplatz

Several lessons can be learned from this case. First, a set of enabling conditions can be identified related to the experiment Parklets for Stuttgart in general, and second, the specific condition of an already concerned and organised group of residents:

- **The scientific setting** of the interdisciplinary real-world laboratory served for legitimisation both of the permission from the authorities to occupy parking spaces in the city of Stuttgart and of the acceptance of the civil actors by the administration and politicians (which included a leap of faith). By the example of CASA Schützenplatz, the experiment was able to strengthen community ties, generating acceptance of the installed parklet, and encouraged discussion about the transformation of the public space with an active community around it during the first phase. Since the initial phase created enough momentum, the experiment extended into further phases with a more independent community and a more detached but still present interdisciplinary research body that was in constant contact with the authorities to negotiate and build trust. Even though the future sustainability of the project cannot be assured after the transformation experiment, it is clear that the new levels of participation and appropriation achieved so far will increase Schützenplatz’s chances to become an active public space.

- **Building trust, providing legitimacy:** That the transformation experiments could be carried out required a leap of faith on the part of the administration who granted permission. This leap was based on the reputation of the university that functioned as a door opener. Two factors can be named here:
 1. The official permission for the parklets was justified by the “freedom of science,” which is one of the highest values in German democracy, a higher value than the personal rights of the citizens to park their cars in public space.
 2. The city was a partner in the research projects and city representatives were actively involved in taking the decision over which experiments were to be conducted, including the parklets. In retrospect, some city representatives told us informally that such projects would never have been allowed if a (group of) private person(s) had applied for it, but that the involvement of the university was key.

By presenting the findings¹⁰ to the administration and political stakeholders, this leap of faith was retrospectively justified, which was key for the continuation of the project as well as for upcoming new projects to prevent a “scorched earth” phenomenon. In addition, trust and legitimacy among the community were confirmed to be a key aspect of the continuation of the experiment.

- **The importance of data:** It is important to remark on the value of the generated data to the sustainability of the project. Appropriation and facts are now arguments that the community can use to empower themselves and become a trustworthy stakeholder in the decision-making process. This is a common aspect discussed in development studies focusing on the power of knowledge and information held by civil society actors in order to negotiate with local authorities (Herrle et al., 2015; Ley, Fokdal, & Herrle, 2017). The combination of the data collected and the sense of appropriation generated by the neighbourhood at Schützenplatz strengthened the arguments from both the research body (the Real-World Laboratory for a Sustainable Mobility Culture) and the community about the need of such an approach for public space design and legitimised the experiment in the eyes of the city authorities and social organisations.
- **Initial funding:** The transition experiment Parklets for Stuttgart was supported with initial and clearly limited funding from the university of €5000. This was helpful for the acquisition of material for the construction of the parklets that could not have been raised gratis. It lowered the financial involvement of the actors and so required mainly personal participation. It also signalled the involvement and the will of the university to truly realise the project and in that way made it easier to convince further potential participants. In the case of CASA Schützenplatz, it finally led to the development that the neighbours looked out for alternative ways of funding for the continuation of the project.
- **Fertile ground:** The original experiment at CASA Schützenplatz has been turned into a formalised neighbourhood association that seeks to strengthen a community network and the active use of public space. The interactive campaigns applied during Phases 01 and 02 have become part of the core activities of the initiative: brunches, weekly gatherings, neighbourhood festivals, etc. The benefits of an active community for the quality and maintenance of the public space are clear. The community have created a cooperative environment around the process, inviting others, proposing new experiments and networking with other programmes and organisations. One major “fertile seed” was the student who engaged and acted as a “change agent” to mobilise and build trust within the community.
- **Participation of students:** Finally, the integration of the transformation experiment into academic teaching helped to find motivated students who put their creativity and technical knowledge into the design and, of course, provided the manpower that was necessary for the construction itself. In return, they gained precious experience by leaving the theoretical framework and presenting their ideas to the public, and realised the possibility of combining their educational efforts with a socially relevant topic.

One of the major challenges both for the parklet project as a whole and for CASA Schützenplatz in the beginning was the resistance within the public to occupying parking spaces in inner-city locations in Stuttgart: people who agreed with the proposed changes tended to remain quiet, while opponents raised their voices. Thus, a few loud protests may produce the false image of a broad opposition against a small fraction of supporters. Therefore, projects with such a potential for political conflict need careful preparation in terms of collecting and communicating arguments for their relevance. One key finding on the topic of “opposition” is that the long process helped to ease the “noise” created by the first wave of negative feedback and also gave the project time to create its legitimisation. Now that there is a group of neighbours meeting regularly, either in the parklet or in the e.V. headquarters, and an organisation was created to maintain and administer the “new public space,” the complaints have almost disappeared. The outcome would have been totally different if the experiment had finished after the three months, as the pieces of negative feedback concerning the parklet were still fresh and numerous. Furthermore, the experiment had not yet reached a sufficient level of engagement to sustain itself.

Conclusions

Besides the scientific aims of gaining systematic knowledge about the transformative potentials of “parklets” to repurpose parking space as public space for people, the aim of the transformation experiment in terms of its societal impact was twofold:

1. In the specific context of Schützenplatz, the aim was to change the dynamics among the relevant local stakeholders (residents, city planners and users) and to open up a space of negotiation through a spatial project – CASA Schützenplatz. CASA was a “parklet” occupying two parking spaces for a period of three months; however, this temporary experiment functioned as a catalyst for change with a long-term impact. Here, the role of science as a mediator between actors on different levels (engaged citizens and local authorities) became explicit and allowed for a more constructive dialogue between supporters and opposition. The CASA Schützenplatz transformation experiment helped to activate public life around Schützenplatz by empowering the neighbours with a sense of appropriation and by co-producing knowledge about their public space. Thus, it essentially contributed to the legitimisation of the community before city authorities.
2. Within the framework of a larger project on parklets in Stuttgart, the aim was to create awareness and a public debate around the quality of public space that could be increased by limiting motorised private transport and the urban space claimed exclusively for parking. One major achievement of the parklet project was to win over the local authorities to a culture of experimentation in spite of critical voices and protests from local residents and media.

Thus, joint knowledge production in this case pushed for improved relationship building with local authorities and for shared decision-making processes concerning the future of Schützenplatz in Stuttgart. Using the transformative approach of experiments as part of a transdisciplinary process established a dialogue around the quality and sustainability of a public space dominated by car mobility and catalysed a rethinking towards a more sustainable future at a very local scale.

Notes

- 1 Urban sustainability encompasses the basic values of environmental quality, economic dynamism and social justice, and requires their application to areas including transportation, land use, urban form, architecture and building construction practices (Wheeler & Beatley, 2009), and it is often equated with more

- compact, socially inclusive, better integrated and connected cities and territories that are resilient to climate change (United Nations Human Settlement Programme, 2014). In this context, by sustainable urban development we refer to environmental justice, economic improvement and social equity as reflected in evolving urban systems (i.e. buildings, towns, cities and their infrastructures).
- 2 Rammert et al. (2016) differentiate between “Innovation überall” (innovation all over), “Innovation aller Art” (innovation of all kinds) and “Innovation jederzeit” (innovation at any time). They define “innovation” as a dynamic social process with sociological relevance; thus, beyond the traditionalist technological understanding of innovation and towards “innovation zones” that bridge various dimensions (e.g. social, technological, institutional and economic). Here, innovation is understood as new modes of knowledge production that are embedded in the triangle between politics, planning and civil society and that seek to break with existing routines and practices. These modes include practices that are not generally recognised and established as common within the field of urban development; thus, a generic understanding of planning as defined by Christmann, Ibert, Jessen, and Walther (2016).
 - 3 Local name for public staircases that were formerly used to connect the many vineyards in the hilly setting of Stuttgart and nowadays play an important role for pedestrian connectivity within the city of Stuttgart. However, many of them suffer from a lack of maintenance and are therefore in a rather poor condition.
 - 4 “Parklets repurpose part of the street next to the sidewalk into a public space for people. These small parks provide amenities like seating, planting, bicycle parking, and art” (City of San Francisco – Pavement to Parks Program, 2015, p. 3).
 - 5 City space – congested space – living space.
 - 6 Three architectural students at the University of Stuttgart, who put their private effort into the project.
 - 7 On the metalevel, a comparative analysis of all the parklets was conducted, as was the public discussion. It included a content analysis conducted by a sociologist. In addition, interviews with the different “*Wardens*” about their observations were conducted.
 - 8 e.V. is an abbreviation for “eingetragener Verein” and means a registered non-profit association.
 - 9 At the date of publication, the refurbishment has again been postponed to 2024. Meanwhile CASA Schützenplatz still occupies the square and has grown from the single parklet to a semi-formal public space including an urban gardening initiative and hosting diverse community events on a regular basis (<https://schuetzenplatz.net/>).
 - 10 Regarding the main results, there are roughly three layers, regarding: A) the Real-World Laboratory for a Sustainable Mobility Culture as a whole, B) the Parklets project, C) Casa Schützenplatz.
 - A) See Reallabor Nachhaltige Mobilität (2018).
 - B) Public life studies for all the parklets, feedback and interviews with the local partners. Analysis of public discussion.
 - C) Public life studies from the student, who was in charge of the CASA parklet, including pedestrian counts, movement tracking, observation of activities, etc. A and B were presented at various occasions to city representatives, and ultimately at the Umwelt und Technikausschuss (UTA) when the Real-World Laboratory for a Sustainable Mobility Culture was completed. C was presented to the local district council (Bezirksbeirat Mitte) as part of the argumentation for extending the permission (which was granted).

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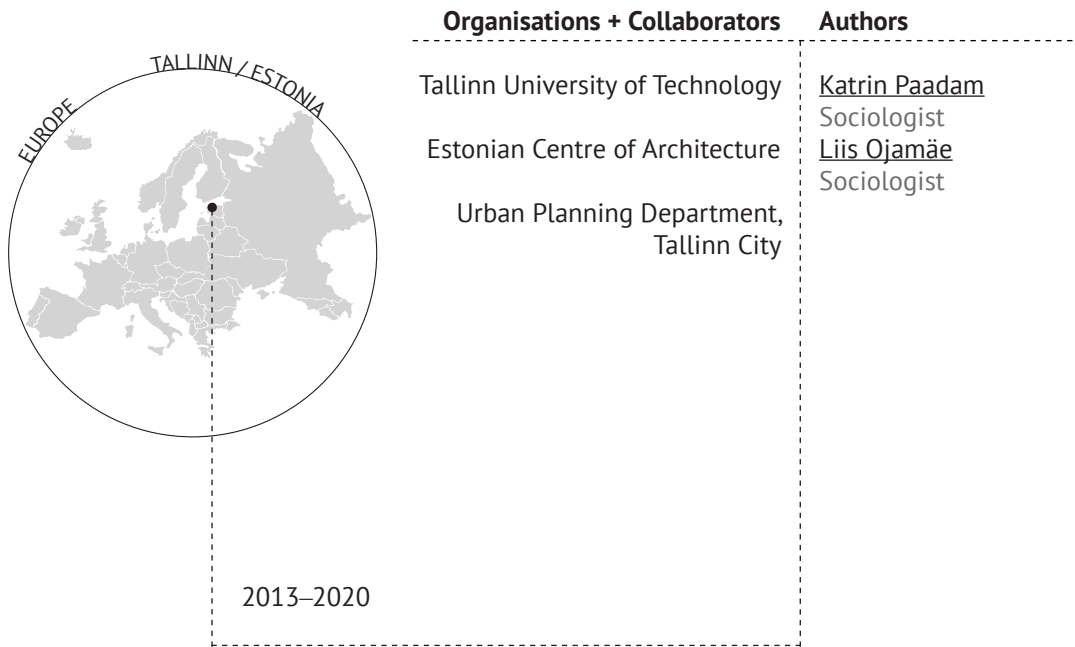


06



A STEP TOWARDS AN ENJOYABLE CITY

Joining Expertise in Redesigning Public Space Along the “Main Street” in Tallinn



Introduction

“How to act in a situation where you feel that things are not right, when you know that something has to change and you have a wish to do better? When you have a perception of a goal but you find yourself on an entirely untrodden path?” (Sild, 2017, p. 21). These were the questions the coordinator admits having faced at the outset of the urban renewal project “Main Street” in Tallinn.¹

The project was given a somewhat symbolic name, “Main Street” (Tallinna Peatänav, as in Figure II.6.2), to manifest a new strategy for the liberation of space in the central city, where two roads are heavily packed with public and car transport stretching along the east–west axis, disruptively joined by an intensive traffic junction in the middle. The adjacent medieval Old Town (Vanalinn, as in Figure II.6.2) and the developing urban waterfront with the harbour area (Sadam in Figure II.6.2) to the north only emphasised the urge for intervention.

FIGURE II.6.1 The Main Street in anticipation of redesign. Photo by Tiit Sild.

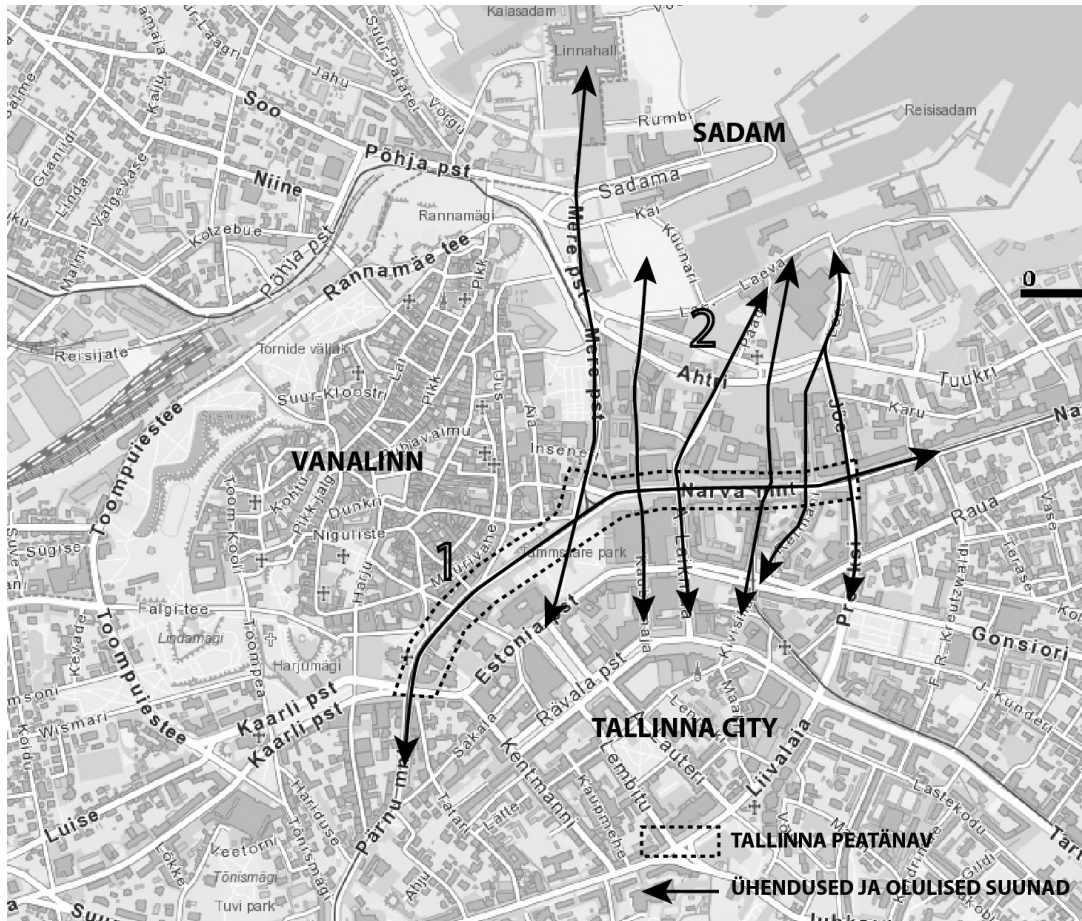


FIGURE II.6.2 Schematic plan of the “Main Street” area. Source: Estonian Centre of Architecture.

Hence, the “Main Street” project was called forth to seek solutions for the redesign of an urban area with limited space for pedestrians, with an exception in one section locating the city park next to the opera house and a theatre building on one side of the road. The place is perceived as a fragmented jungle of disconnected opportunities to enjoy the abundance of cultural, public and commercial services, yet impossible to escape due to the presence of these opportunities as well as public transport nodes connecting the centre and other parts of the city. Always crowded with too few crossings, the narrow pavements walkable but not inviting for strolling or staying (Gehl, 2006) this anonymous space, unavoidably open to everyone, even democratic by nature (Zukin, 1995, p. 11), currently lacks the ambience of the *oeuvre* (cf. Lefebvre, 2008) in the very heart of the city.

Recognising the potential of the corridors of passers-by to be transformed into attractive public spaces of open opportunities for being, convenient consuming or doing business by creating a clean, environmentally sound, safe and user-friendly urban atmosphere for pedestrians and cyclists, combined with public transport and calmed-down car traffic provided with smooth flows of movements between different places of interest, shaped the core of the imagination and inspired the conceptual approach of the project.

The “Main Street” project was co-initiated by the City of Tallinn and the Estonian Centre of Architecture (a non-governmental organisation) in cooperation with the Estonian Union of Architects and the Ministry of Economic Affairs and Communications during 2013–2015. The primary funding agencies were the Estonian state, the City of Tallinn, and European structural and investment funds; smaller contributions were made by different research funds as well as companies substantially active in the area. Conducted in two phases, the project broadly involved:

1. The research phase, together with two architectural competitions and discussions at City Forums from 2016 to 2017.
2. The implementation phase, to be started in 2018 and completed in 2019–2020 (currently put on hold).²

This chapter primarily discusses the modes of knowledge production in the research phase of the project, intersected with considerations on inter- and transdisciplinary approaches to understanding *the urban* in terms of creating an experience of high-quality life in shared city space.

Regarding the complexity and scale of the project and the importance of its promise of creating a sustainable strategy to develop urban public space, the chapter comments on how the project was designed and communicated between the research parties involved in the first phase of the project, as well as how it was introduced to and received by wider audiences of citizens. Critical reflections are also provided on a rewarding but challenging experience of urban sociologists and practising architects collaborating in an interdisciplinary qualitative joint inquiry into business actors’ self-perceptions and dispositions towards anticipated spatial changes on the site. The analysis of this shared experience linking academia and practice is supported by ex-post interviews with leading architects from the Estonian Centre of Architecture and Tallinn City Planning Department. Self-reflexive analysis of this experience allows the authors, as consultants and researchers, as well as participants in a series of open forums that have also continued beyond the project, to be constructively critical in their accounts on the exchange and transfer of knowledge and, in particular, the conditions observed to enable the advancement of interdisciplinary and transdisciplinary urban research.

Underlying Considerations

The questions echoing a challenge, as expressed by the coordinator of the “Main Street” project, have been only confirmed in ex-post comments of professionals and practising architects involved in the project. There was a lot of ambition and yet uncertainty before launching the project, with no previous experience to rely on. Especially due to the historical societal path from the 20th to the 21st century – the 50-year occupation period and socialist planning ideology, followed by the burst of developer-centred urban development after the regaining of independence and the return to the capitalist system from the 1990s onwards – public-sector interventions on this scale were fairly new in Estonia until the “Main Street” initiative. The approach taken in the “Main Street” project raised high expectations, as this new city planning strategy to redesign public space was believed to be truly “groundbreaking,” as the winner of the architectural competition also avows (Kauge, 2017, p. 28),³ endorsing the project coordinator’s assertion of this attempt to have reached the “brink of a paradigm shift” (Sild, 2017, p. 28).

The assumptions behind these assessments demonstrate the profundity of the planned transformation of the city's central public space as well as the unanimity of agreement found between the different institutions involved, and in particular, the unprecedented scale of new research-based knowledge produced in the first phase of the project, extending beyond the familiar planning and architectural practices. As asserted by the leading architects:

“City planning is sometimes arbitrary. [...] Different city departments deal with their own business, have their [own] data but this is not brought together in a cooperative manner. [...] [Usually] there is not enough research or transdisciplinary collaboration between practices and disciplines.”

“There was more information from research than ever before prior to the architectural competitions. An entirely unique project, not business as usual!”

The Chief Architect acknowledges that the amount of knowledge from research rather complicated the setting down of the conditions/terms for the architectural competition,⁴ which, instead of the quotidian practice of addressing single buildings, was extraordinary in its content and scale of redesigning public space.

A series of research projects conducted by experts and academics from different fields as well as discussion forums involving wide audiences of stakeholders with entrepreneurs and representatives of neighbourhood associations among them all served the architectural competitions and the potential decisions to be made for the implementation phase.

There was obviously some perception of the complexity of the “Main Street” project, which demanded complex thinking to be supported by complex knowledge. On the conceptual level, the project builds on an understanding of the need to draw upon an integrated approach along two intertwined basic aspects: first, an acknowledgement of the socio-physical nature of space as an ultimate condition to be considered when redeveloping urban public space; and second, joining together expertise for the production of knowledge as a precondition for a successful redesign of the area. Aiming at transforming public space in resilient design terms, the project pursued liberating space (cf. Smith, 2003) and creating conditions that enable enjoyable and sustainable life in the city. However, as also asserted elsewhere: “it is easier to build cities than urban life” (Stanek, 2014, p. xxvii).⁵ The enjoyment of space in *Lefebvrian* terms, which seems to be continuously relevant, does not arise from the object *per se* but from the encounter with the object (Lefebvre, 2014). In other words, to create the urban space of the desired *oeuvre*, we need to gain perception through insights into the socio-spatial practices, aspirations and actions of different actors and interest groups present in the city. This is to study and understand the dynamic between the materiality and sociality in the creation of quality public space by elucidating the dual, reciprocal nature of ways that space and architectural objects in space are attributed symbolic meanings, which, while informing action, are constructed in actual and imaginative spatial practices (Paadam & Ojamäe, 2012; Paadam, Siilak, & Ojamäe, 2014; Paadam, Siilak, & Gromark, 2017). Striving for in-depth understanding assumes a “feel for the game” (Bourdieu, 1994; 1998; cf. 1993), an inclination towards learning about the unknown by allowing research-informed imagination of the possible to embrace the fixed and flexible, as well as the unpredictable and spontaneous (cf. Stanek, 2014; Madanipour, 2017) inscribed in the nature of public space. It is asserted that this disposition seems

to have also characterised the approach taken by the leading architects of the “Main Street” project. The perception of the need to incorporate multidisciplinary and transdisciplinary knowledge into reconceptualising public space in the city centre, and a later attempt to conduct a project in an interdisciplinary perspective, indicate an innovative turn in the Estonian planning culture. As has been argued elsewhere, “the orientation towards innovation may, of necessity, engender a pragmatic approach to the challenge of fostering interdisciplinary research” (Barry & Born, 2014, p. 17). This is regardless of the process in “Main Street” having started with a search for expertise from other disciplines close at hand.

The Legacy of Experience

The “Main Street” project leaders admit that while setting up the core group of practising architects, planners and a couple of mobility specialists, they went down known paths and did not incorporate academics into the project, as this was felt unnecessary in the first instance. Neither was there a comprehensive research programme. Nevertheless, the research programme was gradually being shaped and expanded along the perception of the need for individual research projects. With the emerging availability of funding, the research was then commissioned from different universities and research institutions. The 12 research projects in total predominantly focused on different aspects of modelling traffic schemes, public transport and mobility of cyclists and pedestrians, also connecting their potential with the business environment and city branding as well as environmental pollution and related health issues. The research programme remained relatively modest in terms of the study of citizens – an important stakeholder group whose perceptions, practices, needs and expectations would have been an essential source of information to reconceptualise such a crucial issue as public space in the central location. As also asserted elsewhere, architectural design works, and hence spatial practices, would benefit from the knowledge and know-how about society through the residents’ “skills” incorporated into thinking “with them and not for them” (Mendes and Sá, 2017, p. 48 on Pinson, 2007). The citizens, as “non-experts” in specific disciplines or fields of human conduct, drawing on their daily experience, are increasingly valued for their contribution to knowledge production, adding to its accountability (Weszkalnys & Barry, 2014, p. 196) as active agents and hence a potential of transdisciplinarity (Novotny, 2004, p. 15). The counter-argument from one of the leading architects draws specifically on professional skills, which the people outside the field do not possess:

“Although I am not sure about [the] involvement of inhabitants... this is a complicated process to generate something that does not yet exist [...] It often happens that people do not understand or trust your ideas before the project is completed and visible. Only then can you involve them by research.”

A brief flash survey on user views in the area hardly compensated for the missing, more substantial research. It was later commented by the project leaders that in-depth research on citizens could not be included into the overall research plan, nor added at later phases of the research period, partly due to not acknowledging the need and partly due to limited funding opportunities. The information on citizens’ views was hoped to be collected by an open web forum – the Stickyworld platform (<http://peatanav.ee/motle-kaasa>), which, however, did not meet expectations as public participation remained insignificant.

It is thus argued that although a number of discipline-based studies conducted in the frame of the research programme were rich in new information and produced considerable knowledge primarily to serve architectural competitions, they left the competitive teams of architects on their own and relying on their subjective experience-based imagination of citizens' preferred spatial practices, with no input from specific social science research.

In ex-post interviews, one of the leading architects agreed with the critique on the part of the authors of this chapter that projects on urban (re)development would benefit considerably more if designing the knowledge production phase embraced a wider disciplinary representation regarding the involvement of the expertise of social scientists. As is seen from the quote below, the entire research phase became a learning process for the initiators of the project:

“At first, we could not imagine that we [would] need such in-depth research. But now when ideas on the development of the heart of the city have advanced [in interactive communication across disciplines], I think sociologists should be engaged from the very beginning.”

Likewise, preparatory discussions among research teams would put the multiple research projects of different profiles into a more consistent perspective. In the “Main Street” project, communication between different research groups was limited to the City Forums or special events introducing individually produced research results to groups of stakeholders. City Forums that took place during the research phase were *per se* enlightening and educating occasions that enabled exchange between academia and practice as well as to learn about one another's ways of perceiving and conceiving of the urban development. Enhancement of exchange between different research groups throughout the research process would enable emergence of the synthesis of interdisciplinary and transdisciplinary knowledge and be in the interests of collaboration between academia and practice. The only exception in a series of multidisciplinary studies was a qualitative inquiry on business actors' perspectives, which, by combining knowledge from architecture and urban sociology, attempted an interdisciplinary approach on the initiative of the managing team of architects (to be discussed later in this chapter). However, in this study, there was a strong twofold element of transdisciplinarity, represented by practising architects and the involved managerial staff of businesses active in the area.

Lefebvre's salient suggestion (2008, pp. 150–151) that only combining disciplinary knowledge can take us closer to comprehensive understanding of the urban is by no means outdated:

“The architect, the planner, the sociologist, the economist, the philosopher or the politician cannot out of nothingness create new forms and relations. More precisely, the architect is no more a miracle worker than a sociologist. Neither can create social relations, although under certain favourable conditions they help trend to be formulated [to take shape]. [...] [They] can individually or in teams clear the way [...] And also [and especially], through a maieutic nurtured by science, assess acquired experience, provide a lesson from failure and give birth to the possible.”

The debate on urban space – “a meeting point” for different disciplines – has been evolving with varying intensity since more than half a century ago, continuously articulating the necessity, possibility and capacity to cooperate on an interdisciplinary basis (Stanek, 2011, pp. 136–137).⁶

As recognised and clearly stated, individual disciplines can no longer be considered to be able to cover the complexity of the urban (cf. Schaffer, 2014 on Bayoumi & Rubi, 2000). This argument is more pertinent in the modern circumstances of the uncertainty of social life, economy and politics, calling for conceptual instruments to be continuously designed with reflexivity and growing interdisciplinary cooperation (Mendes and Sá, 2017, p. 47).

Despite these acknowledgements, a number of recent contributions yet again raise concerns about the applicability of interdisciplinary or transdisciplinary approaches by stating, for example, that “the current research landscape around the urban is marked by ‘structural holes’; that is, distinct disciplinary clusters of research and practice exist in isolation and are insufficiently linked” (Iossifova, Gasparatos, & Doll, 2018, pp. 294–295). This is despite the overall growing awareness and understanding of the benefits of taking the trouble to work in an interdisciplinary manner. It is suggested that to reach a new quality of transdisciplinary research and practice paradigms, different disciplines and practices need to be encouraged into collaborative activities on the emerging in-between areas in urban research (ibid.).

Searching Close By and Beyond Boundaries

There is, certainly, evidence of how disciplines of greater proximity, e.g. architecture and engineering, are relatively more inclined to look for a joint path, as in the experience of “Main Street.” But, as seen from the recent research, there is still space for advancement even in these close fields of research and practice. As has been argued, the search for connecting points to tackle the complexity of interdisciplinary practice should start from the actual education: “It is the universities’ task to lay the foundations in academic education to overcome the aggregated barriers that arise from a lack of understanding among *architects, engineers and urban planners* (authors’ emphasis) for the responsibility and competences of the respective other groups” (Bögle, 2016, p. 10).

Collaboration is relatively more complicated where there is an attempt to introduce and join knowledge between apparently more distant and distinct academic disciplines, more so between the practices based on specific academic and distinct disciplinary research fields, e.g. architectural practice and sociological research. This is also claimed by one of the project managers of “Main Street”:

“An average architect does not even imagine that sociologists could be of use in urban planning. Our education has not supported acquiring an understanding of how society functions – the direct relationship between architecture and sociology. We miss the tradition of taking interest in [these issues][...] Everyone lives in their own box and communicates their own thing. [...] Therefore, we invite people [to join the project] that we know think the way we do.”

Mendes and Sá (2017, p. 47) argue that urban planning in particular needs greater participation from social sciences, but this assumes recognition on the part of architects as well as greater openness on the part of social scientists in the search for concrete answers to the needs of projects. The authors emphasise the importance of dialogue in modern urban science, posing a challenge to teachers and researchers working at the crossroads between architecture and the social sciences (ibid.). In many a case, the links between more distant disciplines are less developed for the encountered ontological as well as epistemological distinctions that are characteristic of specific disciplines (Weszkalnys & Barry, 2014, pp. 196–198).



FIGURE II.6.3 3D visualisation of a streetscape in “Main Street” area. Winning project of the architectural competition by Kavakava Architects, Linnalahendused, Extech Design. Source: Estonian Centre of Architecture; Kavakava Architects.

However, aside from intellectual barriers, there are also institutional (either academic or public) obstacles that favour disciplinary rather than interdisciplinary or transdisciplinary research and are reinforced by non-supportive funding programmes or political indifference, as admitted also by the “Main Street” project managers.

“Generally speaking, for politicians, urban planning is not a popular topic; 95 per cent usually take no interest in these matters.”

These cross-culturally acknowledged continuous tendencies in academia and daily practice of urban governance are more curious in light of many a recent European Union policy document and research funding programme, which encourage inter- and transdisciplinary approaches to be applied in policies and research in the search for sustainable urban futures, for example the United



Nations Sustainable Development Goals or the Urban Agenda for the EU or other related documents. Let the quote speak for itself:

“The various dimensions of urban life – environmental, economic, social and cultural – are interwoven and success in urban development can only be achieved through an integrated approach. Measures concerning physical urban renewal must be combined with those promoting education, economic development, social inclusion and environmental protection. It also calls for strong partnerships between local citizens, civil society, industry and various levels of government” (European Commission, n.d.).

As concerns the “Main Street” project, the managers were well aware from the start that the projects of this scale of anticipated urban spatial transformation needed to be well communicated to the decision-makers to enhance funding, on the one hand, and to gain public support on the

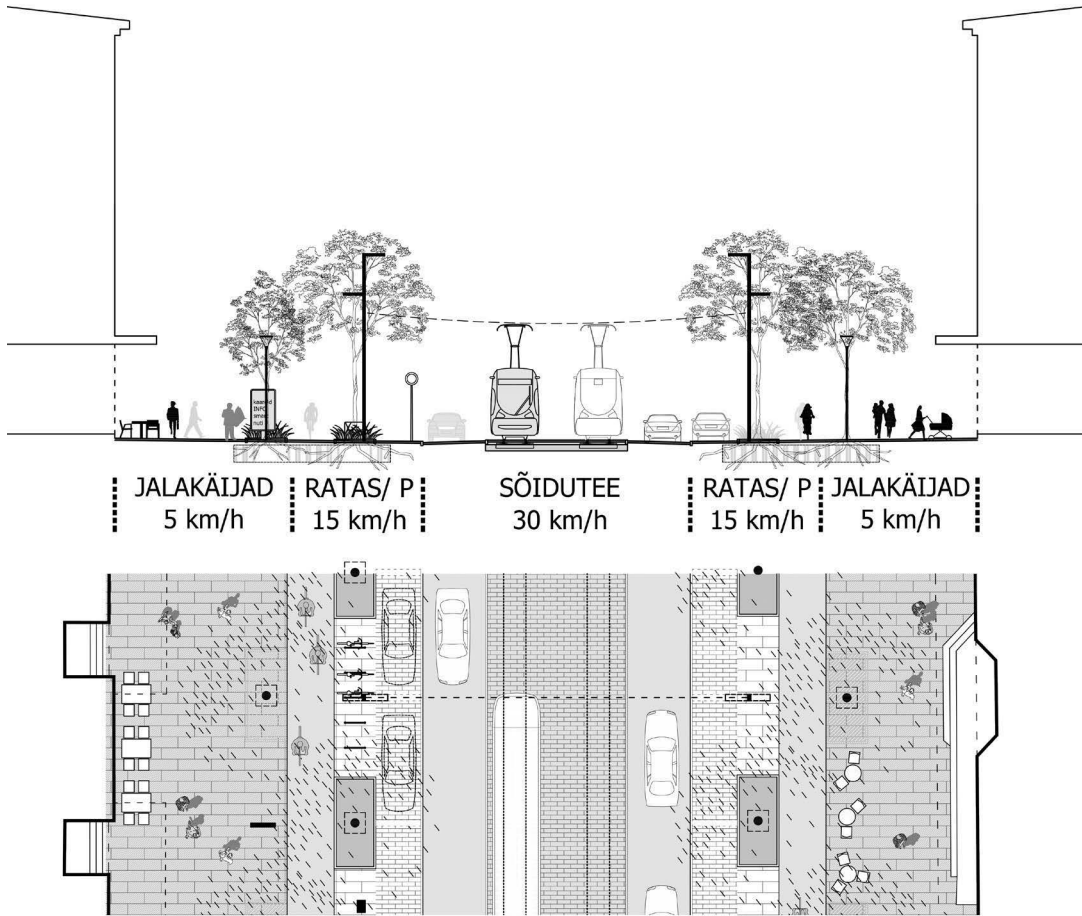


FIGURE II.6.4 A cross-section of a streetscape in “Main Street” area. Winning project of the architectural competition by Kavakava Architects, Linnalahendus, Extech Design. Source: Kavakava Architects.

other. The leading architects, though, admit that while they have been fortunate in timing the project introduction in the period prior to the local elections, the project received attention from only some top politicians. Already with some deep-rooted scepticism about politicians’ modest interest from previous experiences, they, however, highly appreciate “*the engagement and substantial support of the Mayor of Tallinn,*” and believe in the prospective benefits that the communication of the project idea has brought to urban society on a wide scale.

“Main Street’ was the first project that was brought into political discussion. Naturally, the elections were looming and it was a good moment to show support. But it was profitable for both sides [the politicians and the project] [...] because the project directly influenced our thinking about opportunities the urban [public] space can offer.”

Nevertheless, the project is considered to have had a broadly “*positive image*” and was successfully

communicated by the professional media agency that was hired. The two architectural competitions gained particular attention; more so because the implementation of the proposed redesign plans would have affected everyone present or visiting or driving through the area.

As observed in the research experience, the idea of major renewal of the central public space became especially inspiring for the main business actors in the area, informing further development of their businesses and engagement in continued public discussions. In June 2017, the leading business actors in the area initiated and funded another City Forum after the completion of the research phase of the “Main Street” project which focused on the redevelopment of the central area of the city on a larger scale. The City Forum was conceptualised by the Estonian Centre of Architecture. This somewhat unanticipated move coming from the practice may be viewed as an encouraging contribution to the continuation and advancement of inter- and transdisciplinary approaches to be applied in urban research and planning practice.

Experimenting by Joining Competences

Judging from recent experience, it is asserted that inter- and transdisciplinary collaboration has a potential in the case of creative, constructive and friendly interactions between the project management and research team(s), when there is willingness to learn about and exchange different methodological understandings as well as to experiment and develop new methods and data generation techniques across disciplinary expertise (e.g. architecture–sociology). This collaboration, however, is not entirely uncomplicated. As acknowledged, we are bound to our disciplinary paradigmatic and methodological structures, respective expertise and, no doubt, identities (cf. Durham DeCesaro & Sharp, 2016 on Baldwin, 2007), which tend to affect flexibility as well as the courage to initiate this type of research endeavour. Concerning primarily the institutional disciplinary conventions, which need to be overcome, though not ignored, Durham DeCesaro and Sharp emphasise the role of involved individuals, motivated by “facilitating learning” in order to facilitate “transformative change” in joint research (ibid.).

The qualitative study with the main business actors in the “Main Street” area, conducted jointly by urban sociologists and practising architects, was a challenge approached from a threefold motivational basis: (1) to achieve comprehensive understanding (knowledge as an ultimate goal in the project context and its potential for implementation) of the accounts of significant stakeholders’ own perceptions of the current circumstances in the area, their interest in and expectations of potential changes as well as their strategic dispositions towards area redevelopment; (2) to test the combination of different disciplinary expert tools; and (3) to exchange, learn and elicit opportunities for inter- and transdisciplinary research.

Equipped with our different discourses and disciplinary knowledge, yet with similar intentions to produce substantial new knowledge that contributed to the idea and realisation of the redesign of the area, the sociologists’ task was to design the conceptual framework and the interview plan, to produce the analysis of the data generated, as well as to “teach” the architects about their request concerning the procedures in the actual joint interview situation.⁷ Several discussions were held prior to the beginning of interviews and in between different interviews, which in each case combined the talks with visual materials provided by architects. This approach enabled business actors’ direct engagement in knowledge production by expressing their experiential *in situ* percep-

tions and imagining the potential future. All interviews were conducted in on-site offices of the businesses concerned. The architects' ex-post reflections were overly appreciative of face-to-face interviewing, which for them was a novel experience that qualified as a valued learning process, both about business people as partners in urban planning and design, as well as about themselves as representatives of the profession:

“Transcriptions alone do not tell you about the real dispositions. You perceive this by being present, the facial expressions, tone of voice, emotions. Can this be achieved from a distance? [...] To learn about businessmen’s positive attitude, their sense of participation... [...] It is important to get to know these people personally and to learn from these meetings the very practical issues you need to consider [in the urban planning project]. [...] With some enthusiasts of good architecture, they have much stronger connections with the world of architecture than we could have imagined. And you understand that quality space is also in the interests of their business – a guarantee of success. And their success affects the quality of public space. To understand – this is the question! If you get into a conflict with these people you are finished!”

Hence, the involvement of stakeholders such as businesses in the location proved to be a matter of two-way communication. This approach helped to define the problems in the area and the expected solutions. It enabled informing the businesses about the spatial opportunities and potential limitations that accompanied redevelopment plans, as well as listening to and taking their views and concerns into account. It is asserted that instead of building barriers, in-depth engagement of stakeholders into the research enables the avoidance of potential misunderstandings or conflicting situations or even resistance on the part of those concerned. But, most importantly, this joint research cast light onto the potential of transdisciplinarity in urban research and practice.

Concerning joint practice methods, our observations, however, suggest that despite sharing similar values and beliefs in the idea behind the “Main Street” redevelopment project or pre-existing mutual trust from earlier positive professional encounters between the research partners (as in our case), there is no guarantee that the jointly conducted research entirely meets the expectations of both parties. This is regardless of the sociologists’ and architects’ talks, discussions and negotiations on the research instrument conducted in the co-design phase of the research. As the architect comments:

“This research was very useful! [...] [But] the outcome is less concrete than I expected. [...] The research results must be translated to architects. I am a practitioner, I am interested in concrete things, like where exactly a lamp-post should stand.”

It has to be admitted that this experience was also a learning process for the sociologists; in particular, the concerns of designing the method of applying a mixed research tool in the same research procedure conducted jointly with architects. The team of urban sociologists was experienced in making use of visual materials in interviews, but this time it was different due to the presence of the architects. Different disciplinary experiences became explicit in the ways that interaction was conducted between the interviewers and interviewees with the use of visual materials. To put it simply, compared with sociologists, architects tend to rely more on “plans put on the table” than

on verbal expressions. This difference was not noticed during the intensive and in many ways rewarding interview situation, but rather afterwards, when it was discovered that some information was missing from the transcripts. The interviews were only audio recorded and the need for video recording could not have been foreseen. Nevertheless, the important data generated about business actors' main dispositions towards the area redesign from the transcriptions and follow-up inquiries on detailed plans conducted by architects allowed the analysis to provide essential new knowledge.

This experiment, acknowledged as a positive experience by both the architects and sociologists, showed, however, that to enable the production of particular interdisciplinary knowledge on urban situations, considerably more time and in-depth discussions have to be devoted to introductions to and exchanges on disciplinary interests and expectations, capacities and specific methodological knowledge, and – by no means the previous research experiences – before entering the arena of an actual research situation.

A Hope for the Future: Concluding Remarks

As has been consistently stated in this chapter, the production of knowledge on this scale prior to the implementation of urban redevelopment plans is hardly a normalised strategy in the Estonian planning process. Yet, this innovative approach taken in the context of the “Main Street” project has been a promising experience for all the involved professionals, researchers and various stakeholders in the city, as public space in its multiple dimensions is everyone's matter of interest.

The project, which was initially designed from a multidisciplinary perspective, evolved with experience and acknowledgement of the demand for more complex knowledge produced by transdisciplinary and interdisciplinary research. It has been asserted by the initiators and managers of the project that although the ideas behind “Main Street” have perhaps not reached every group in society or policymakers, it has “*set a quality standard to strive towards*” and “*has already changed the principles of designing urban public space.*” Despite the current city government's decision to postpone the implementation of the project for the next five years, it is hoped that the “*ideas of intervention explicit in the winning project of the architectural competition are not disappearing for good*” and will be re-encountered for the sake of creating sustainable conditions for enjoyable urban life.

Acknowledgements

The authors of this chapter are sincerely grateful to Raul Järg and Tiit Sild, the architects and leaders of the “Main Street” project (Estonian Centre of Architecture) and Endrik Mänd, the Chief Architect of the City of Tallinn for their reflections on the experience of this complex endeavour taken to redesign public space at the heart of the city and to take a wider view of urban planning.

Notes

- 1 Tallinn is the capital city of the Republic of Estonia with 441,062 inhabitants; 1 August 2019, <https://www.tallinn.ee/est/Tallinna-elanike-arv>.
- 2 In 2018, after the local elections, the new city government decided to put the project on hold: first, for additional inquiries on the feasibility of the redesign plan of the central transport scheme in the location and, in particular, its impact on a larger network of city streets; and, second, due to the need to complete the unfinished road projects in the city. This downturn in the project programme clearly expresses changed political priorities and recent alterations in power positions at the municipal departments.

- 3 Interview with architect Siiri Valner, a member of the winning team of the “Main Street” architectural competition.
- 4 The open architectural competition on the public space redesign was the responsibility of the city’s Planning Department.
- 5 A quote from Gaviria’s introduction to the Spanish translation of Lefebvre’s *Right to the City* in Ł. Stanek, Introduction: A manuscript found in Saragossa: Toward an architecture. In: Lefebvre, H. (2014) *Toward an architecture of enjoyment*. Minneapolis: University of Minnesota Press.
- 6 Ł. Stanek on a series of discussions held on interdisciplinarity in urban research in France in the 1960s and 1970s.
- 7 A number of interviews were later independently conducted by the architects because of the late start of the project and the time planned for interviews was running out for the sociologists.

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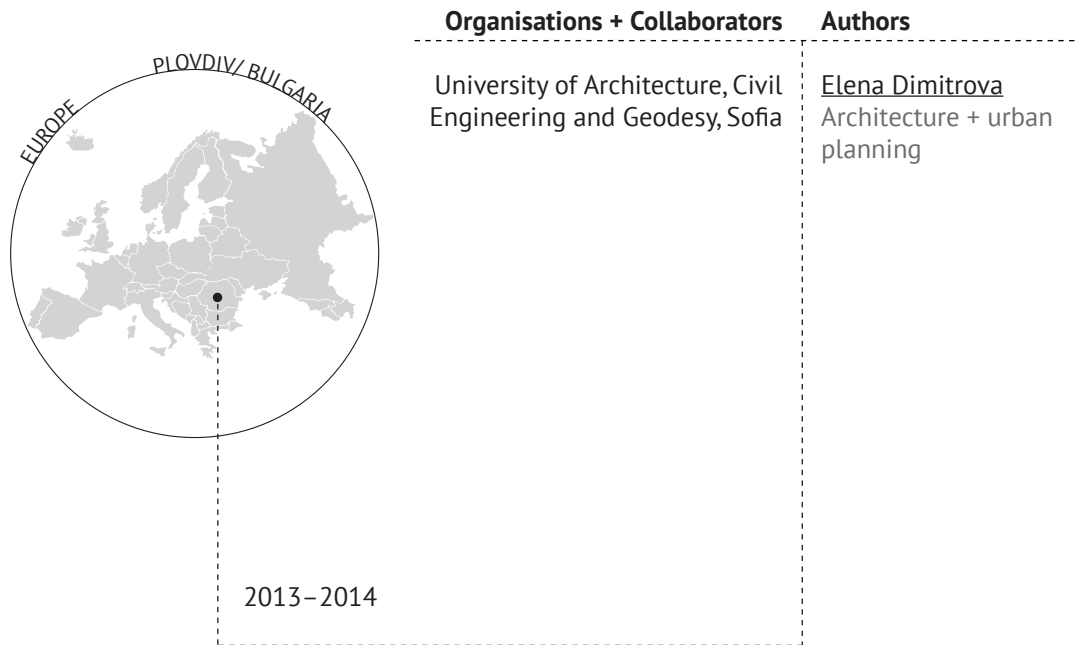
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07



PARTNERSHIPS FOR URBAN REGENERATION: WHO NEEDS ACADEMIC RESEARCH?



Introduction

Approaching the city as an undertaking in which energy, resources, and social and cultural practices have been invested in providing the conditions for just and sustainable human development brings forth a request to empower people to take charge of their lives there. Such an approach poses challenges to the urban planning profession and requires urban experts with complex socio-technical knowledge. It also requests that urban experts not only cross disciplinary boundaries but also enter a transdisciplinary dialogue with local communities about their needs and values in building a path to the future. The growing awareness about the role of culture in that process has been clearly outlined in numerous political documents on sustainable urban development adopted at the global and European Union level at the beginning of the 21st century (European Commission, 2018; United Nations Educational, Scientific and Cultural Organization, 2013, 2016; United Cities and Local Governments, 2010). There, culture is referred to as a broad frame of urban communities' self-identification through values, memories, attitudes and behaviour modes. European Union-supported

FIGURE II.7.1 Kapana quarter, Plovdiv, October 2014. Photo by Elena Dimitrova.

initiatives like the European Capital of Culture (ECoC) and the European Year of Cultural Heritage (EYCH) have broadly supported the practical implementation of the concept. A closer study of the practical implementation of the initiatives on-site could help in better understanding the emerging practical challenges to transdisciplinarity in such complex urban processes involving the efforts, capacity and expectations of multiple actors.

A culture-based initiative in 2014 addressed urban regeneration challenges in the Bulgarian city of Plovdiv.¹ It involved diverse academic, administrative, business and non-governmental organisation actors. The author's personal involvement in the initiative as the leader of an academic team of teachers and PhD and postgraduate students from the urban planning field was an opportunity to face real-life challenges to inter- and transdisciplinarity in the process. The discussion on challenges and lessons learned by the urban planners' academic team concerns the motivation and capacity of a Bulgarian university to join in real-life urban initiatives where the academic effort for a transdisciplinary dialogue on urban regeneration has to face short- and longer-term local policy considerations, business interests and citizens' concerns. Building a clear vision about the actors' diverse motivations for entering a partnership, communicating expectations about project results and agreeing in advance on each partner's role and responsibilities appeared to be among the major enablers on the path to effective transdisciplinary research partnership.

The Kapana Quarter Project in Context

The urban structure of Plovdiv maintains the material traces of millennia-long history. The Kapana quarter² is centrally located in the city at walking distance from the architectural reserve of the historic town. After developing in the late 19th century as a place of handicrafts and small businesses, the quarter underwent numerous transformations, while keeping its peculiar morphology – the curved narrow streets that outsiders often experience as a “trap,” the small-scale buildings and the public places that are irregular in plan. For all these features, the Kapana quarter was officially declared an architectural reserve in the mid-1970s. Being close to, yet outside the traditional tourist paths in the city centre, the quarter kept its spirit and comfortably sheltered small business activities but also locally famous pubs and cafes. Despite an ongoing general decline, Kapana's vitality is still highly valued by local citizens, authorities and experts. Various initiatives have been undertaken in the quarter during the last two decades,³ drawing the attention of different actors to the quarter's development potential.

The Kapana Possible 2014 project was one of the numerous projects commissioned by Plovdiv municipality in support of Plovdiv's application to the European Capital of Culture 2019 programme.⁴ The application was in line with the municipality's strategy⁵ to build its present-day success upon its abundant cultural heritage and the joint creativity of numerous actors. Being a European capital of culture is nowadays considered not only a prestigious title but also one that opens up opportunities for culture-based urban development and urban regeneration (Stanganelli, 2019; Patel, 2013; Garcia & Cox, 2013; Rampton, McDonald & Mozuraityte, 2011; Palmer/Rae Associates, 2004).

The idea to invite four teams of students and teachers to join in the Kapana Possible 2014 project came from the One Foundation,⁶ a private organisation with a long track record of successful artistic and publishing initiatives in the field of architecture and culture. The one-year-long academic research project was intended as part of the larger long-term urban regeneration project undertaken by the municipality in 2013 to transform the historic quarter into an “area of creative industries.”

The invitation to join in the regeneration project in the Kapana quarter was gladly accepted by

the teachers from the programme in Urbanism at the University of Architecture, Civil Engineering and Geodesy (UACEG), as it was considered a good opportunity for closer communication with real-life urban practice by joining an innovative creative effort. The programme in Urbanism at the University of Architecture, Civil Engineering and Geodesy had been established in 2002, responding to the need for new planning experts in the country; it was also motivated by the growing interest of urban studies, globally and at the European Union level, in the sustainable development (SD) concept (Campbell, 1996; Næss, 2001), and the ongoing theoretical and policy debate within the planning community on the necessary rethinking of modernist planning and introduction of strategic and participatory planning approaches (Healey, 1997; Fincher & Iveson, 2008). The programme had therefore been explicitly sensitive since its very beginning to the importance of contextual knowledge and to opportunities for urban research and collaboration with local urban practice (Dimitrova, 2014).

The Academic Research Project: Process, Actors and Interactions

In mid-2013, the One Foundation invited university teachers from four departments in three Bulgarian universities⁷ to organise their student teams and join in a small multidisciplinary research project on the Kapana quarter in Plovdiv. The project results were to be presented in the autumn of 2014 at the annual One Architecture Week international festival in Plovdiv as support for the city's application to the European Capital of Culture programme. The project was to be based on the *creative district* concept, recognised worldwide as a successful approach to regenerating urban areas in decay (Florida, 2005; Amsterdam Institute for Social Science Research, 2010) and already adopted by the municipality.

Establishing the Partnership

As the deadline for submitting the European Capital of Culture application was fast approaching and the activities schedule was tight, the partnership was officially established in November 2013. The contracts signed⁸ with the three invited faculties in early 2014 envisaged a one-year research process to be integrated within the ongoing teaching programmes. The official aim of the partnership within the Kapana Possible 2014 project was to apply a complex approach to an existing historic urban structure with significant architectural, social and cultural potential to develop a creative district close to the city centre. The four academic teams were expected to analyse the spatial and cultural identity and the development potential of the quarter from their specific professional points of view – ethnology, sociology, urban planning and architecture. No explicit interdisciplinary interaction was envisaged due to the estimated shortage of time, yet the importance of a transdisciplinary approach was acknowledged and on-site meetings with diverse local actors – the municipal administration, non-governmental organisations, small businesses – were planned.

Regrettably, it was by that time too late to apply for funding within the research plan of the University of Architecture, Civil Engineering and Geodesy, and the One Foundation could provide no funding for the research activities, except to partially cover the teams' accommodation expenses during the planned field trip and the autumn festival. Yet, the benefits for all the "signing partners" were jointly acknowledged in advance: the project was expected to enrich the working experience of the academic teams – teachers as well as students – and the One Foundation in a real-life situation. The project was also seen as a potential basis for developing further joint projects together, thus providing for the continuity of the transdisciplinary partnership with the municipality of Plovdiv.

General Methodology Framework of the Project

The four academic teams agreed upon a common methodology and a coordinated work schedule that comprised three main stages: desk research, field investigations including visual study, and meetings with local actors. The project proposals were to be presented at a festival in the quarter planned for October 2014. The project activities were supposed to be integrated into the ongoing educational process of the faculties in accordance with the teachers' estimation of the topic's relevance to the teaching modules. Due to the peculiarities of their disciplinary fields and the specific opportunities provided by the curricula, the teams chose to focus their analyses on different aspects of the urban process and to develop different types of intervention proposals. The urban planners proposed to put their emphasis on developing a strategic concept framework and operational guidelines for transforming the quarter. A joint mid-term reporting on the analysis results and the initial intervention proposals of the teams was planned for the spring of 2014 in order to enhance students' understanding about the peculiarities of different disciplinary approaches. This was considered an effective educational step to introduce the idea of interdisciplinary dialogue among future experts. Some collaboration with the graphic designers involved in the preparation of the festival was also proposed by the One Foundation and gladly accepted by all the teams, as it was expected to enhance students' competence in presenting their project results to the general public.

The Urban Planning Team: Actors and Actions Undertaken

After considering the potential opportunities provided by the summer semester curricula, the leading teachers of the planning team decided to organise the project activities outside the taught modules in order to enable greater flexibility and integrity of the research process. An open invitation was launched to all students from the programme in Urbanism, and the PhD students and graduates of the Urban Planning Department with specific experience and interests in the topic. A team of three teachers and ten students⁹ was thus constituted and started work.

Conceptual Framework and Desk Research on Creative Industries

At the first team meeting, it was claimed to be important that a broader framework should be set and development scenarios other than the "creative district" should be also considered; yet, due to the time restrictions, this was impossible to undertake. The conceptual framework of the urban project was thus built upon the scenario already chosen; it linked three emphases – creative industries, urban life in the quarter and creative neighbourhood networks. The desk research, undertaken next, outlined *creative industries* as a global phenomenon stimulating cities' competitiveness and identified successful practices worldwide. Applying a "bottom-up" approach, building vital multi-functional networks, and outlining the cultural and spatial identity of the urban environment were perceived as crucial for the efficient functioning of a *creative industries* area. The team analysed in parallel the historic transformations and the current morphology and functions of the Kapana quarter. The "hard" urban development factors included the material aspects of the urban process – the technical as well as the social infrastructure, location and accessibility of the quarter. The major "soft" factors considered were safety, cultural and social identity, diversity, tolerance, etc. The existing public places were estimated as key supportive elements in building and maintaining the creative neighbourhoods' networks.

The Field Study in Plovdiv and the Mid-Term Internal Reporting

A two-day visit to Plovdiv jointly undertaken in April 2014 by all three student teams from Sofia enabled a brief on-site study in order to map the existing physical structure and the urban functions and flows and to build the visual image of the place. It was an opportunity to experience the rhythm of real life; the student team from Plovdiv provided some guidance, as they had been naturally able to spend a lot more time on-site. The visit was also combined with meeting some key local actors: municipal planning experts, a specialist from the city library, and representatives of citizens' organisations and small local businesses (arts and crafts). This provided a chance to ask questions about the past and present of the quarter, and to listen to various visions about creative industries in general and the envisaged future of the area.

A half-day joint seminar was hosted by the University of Architecture, Civil Engineering and Geodesy in Sofia in May 2014 for the teams to present their analysis results and discuss possible linking of the project proposals. A range of topics had been interpreted through different disciplinary approaches: ethnology, urban sociology, architecture and urban planning. Students as well as teachers were able to weigh the variety of issues addressed and ideas generated by the different teams. The opportunities stemming from linking them together were briefly discussed, yet were not practically used further, as each of the teams had to finalise their own project proposal by the end of May, which was also the end of the summer semester.

The Urban Project: Process, Results and Messages

The planners' team tried to comprehensively analyse the past and present of the Kapana quarter: its role in the historic development of the city and the ideas reflected in the urban plans adopted one after the other over the years. Comprehensive analysis of the physical structure was followed by estimations of its accessibility, morphology and everyday functioning (Figure II.7.2 and Figure II.7.3). Alternative development scenarios were compared with the one in the active city plans. Possible urban interventions to shelter creative industries in the quarter and provide for their mutual enrichment were considered. The team agreed that any change should be respectful of the *genius loci* of the quarter and specific rules of action and interaction there were needed.

The theoretical framework developed to guide the planners' work during the second stage of the project outlined two processes to take into consideration: (a) fragmentation; and (b) integration of the social and physical environment. These were then related to two development modes: from "inside-out," through bottom-up action initiated within the quarter and the city; and from "outside-in," through external interventions – investment, administrative restrictions on initiatives, competing interests, etc. The development factors identified concerned the importance of the quarter for the city, the presence of creative industries there, the changes in behaviour modes and living comfort of the inhabitants, the ongoing governance and self-governance practices, the traffic and parking pressure, and the visual impacts of the interventions in the urban environment.

By the end of the summer semester, the urban planning project had been generally structured, and a first draft of the proposals had been developed. However, the planning students already had to focus on finalising other educational projects and preparing for their exams; the enthusiasm to finalise the Kapana project was, in addition, negatively impacted by the single meeting with the graphic designer, who perceived the maps and schemes developed and the professional language used by the students as rather boring and difficult for a non-professional to understand. The coordinators were themselves already running out of time and eager to keep to their own schedule, so already in



FIGURE II.7.2 A pedestrian street bordering Kapana quarter, 2014. Photo by Elena Dimitrova.

early summer they preferred to contact students from the planning team directly in order to obtain the graphic materials needed for the exhibition. Some of the students were also individually invited to join in the preparation of the supporting initiatives for the festival; the collaborative work on the project gradually slowed down, while individual efforts responded to the coming urgent requests.

The planned autumn exhibition in the Kapana quarter was ready on time; the academic results were displayed in the designated public places and on the exhibition premises; an urban game for the visitors to the event was organised by the students; and souvenirs (also with some stylised elements from the students' urban project) were available for purchase in the small shops opened in the quarter. Lectures by famous foreign artists and architects were included in the paid part of the festival programme (which was a bit too expensive for most of the students). In the meantime, the success of Plovdiv's application to the European Capital of Culture 2019 competition was officially announced and celebrated as a deserved *happy ending* of all the people's devoted efforts.

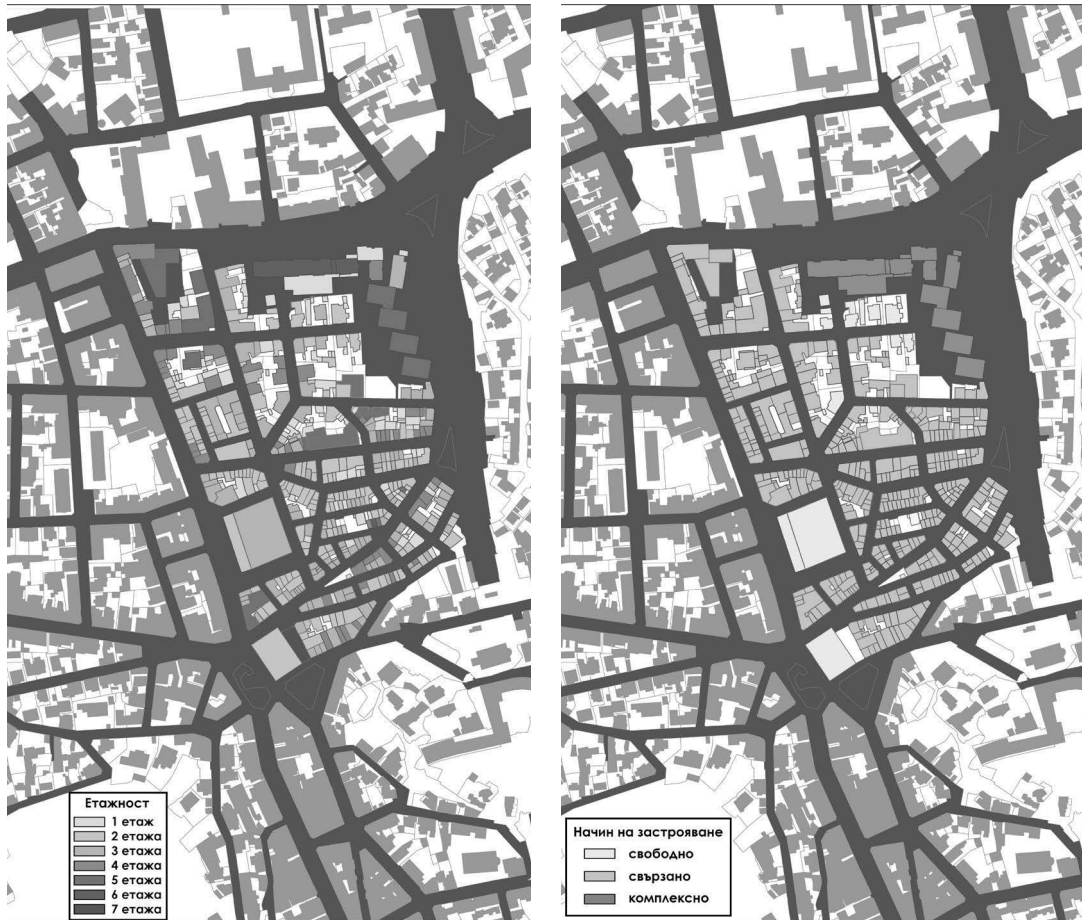


FIGURE II.7.3 Morphological and functional analyses of the area: (a) building heights, and (b) building types. Source: Hristina Kovacheva, urban planning team, UACEG.

Post-Project Steps in the Academic Field

The lack of time within a very tight schedule was the official reason why the results of the academic project were not further discussed with the local organising committee.

The conceptual valorisation of the research results and some self-reflection on the process were, however, important to the academic teams themselves. In October 2014, the Department of Sociology invited all the partner teams to a three-day seminar entitled “A meeting in Kapana” with a discussion question accompanying the invitation: “Why did we enter the Trap (Kapana)?” The planners’ team brought their own questions to the seminar – on *team working*: “[Why] are we needed in the real-life urban process and how [should we] work together, how do we face challenges, what do we expect to achieve?”; on *interdisciplinary dialogue*: “How do we speak and what do we hear, how do we change through dialogue?”; on the *urban process*: “How do we identify a process in the city, how far could we influence it by planning the physical environment, [and] how can we be critical while keeping our hearts open to the urban process?”; on *urban planning concepts in general*: “What should we keep and

what could we demolish in the city; who takes the responsibility for a decision; who knows how to intervene; who estimates the results of the intervention and how?”

Besides expressing a general satisfaction about being involved in an important large-scale urban event, the participants in the seminar tried to conceptualise the achievements, shortcomings and lessons learned through the project. Being in touch with real stakeholders and obtaining the opportunity to discuss their views and expectations about the future of the quarter was estimated as a major strength of the research process. Yet, the participants also shared their disappointment with the lack of clearly articulated feedback on the research results by the people to whom the research was addressed.

Although no effective steps were undertaken either by the local actors, the project coordinators or the academic teams for further contacts after the end of the initiative, the members of the planning team continued working on the Kapana case study in their next educational activities. There was a lot of information already accumulated and helpful contacts established on-site; there were challenges and knowledge gaps identified there that still needed analysis and interpretation. During the next winter semester, a course work with second-year students was started from previous findings and focused on changes needed in the technical infrastructure management of the area. The Kapana quarter was also used as a case study in the BSc diploma work on urban regeneration, developed by one of the active participants in the project (Karamitov, 2015), who outlined priority steps for turning Kapana into a creative district and developed a governance model for the quarter; he also recommended the establishment of a local decision-making body in the quarter including representatives of the city authorities, business actors, citizens' organisations and individual inhabitants. The diploma project identified major types of relevant businesses in the field of creative industries and their peculiar demands on urban locations and space. The establishment of co-working spaces sheltering creative work was considered explicitly supportive; a network of open public places promoting the development of the local community was proposed as a prerequisite for a resilient city. Another participant in the project is currently working on his PhD thesis analysing the historic dynamics of the morphology and skyline of the Kapana quarter as a case study.

The Kapana Quarter: Life After the Project

Periodic information in local and national media about the cultural calendar of Plovdiv indicates that a lot of tourist interest was attracted to the Kapana quarter, which has repeatedly staged successful cultural events and attracted visitors. This, logically, has brought life to the streets and attracted external customers to the local cafes and pubs. It also motivated investment interest and certain upgrades of the built environment (Figure II.7.4).

However, other images of the area – of closed shops on working days and empty streets – rather witness to growing social disparities and contrasts there (Figure II.7.5).

Discussion: Inspirations, Disappointments and Lessons Learned

The planning team's experience throughout the Kapana Possible 2014 project outlined important differences among the actors involved, regarding their motivations for undertaking the research effort, the methodological choices made, and the appreciation of the nature and benefits of the partnership.



FIGURE II.7.4 The Kapana quarter, September 2019. Photo by Vladimir Petrov.

Motivations for the Research Effort

Although the invitation to the project was gladly accepted by the academic staff and the expected benefits were clearly formulated, the initiative was not planned by the university in advance and the additional time-consuming activities had somehow to be integrated within the established educational programme at very short notice. The planners' team tried to be as flexible as possible, yet with insufficient time for preparatory work it proved difficult to follow the methodological requirements of the academic research process. The lack of time and adequate funding also negatively influenced on-site research efforts and direct contacts with the other project partners.

The Research Methodology

Only a general methodological framework was initially agreed upon between the academic teams and the contractor. The flexibility of the methodological approach was the result of a pragmatic decision, which considered the diversity of the teaching programmes and the practical opportunities for action. Each university team felt free to develop their own topics in relevance to the emphases



FIGURE II.7.5 The Kapana quarter, Plovdiv, September 2019: a working day morning. Photo by Vladimir Petrov.

considered important and meaningful. On the one hand, the chance for an expert appraisal of priorities could be considered a factor positively influencing the research process; on the other, there was no time for effective dialogue between the research teams, and opportunities for coordination were largely missed. Regrettably, the rather rigid administrative structures in the universities, the lack of funding and the insufficiency of time were all factors that acted as barriers to interdisciplinarity.

The terminology was never comprehensively discussed among the teams and with the coordinator. Many of the terms used had become broadly popular during the recent decades, some of them being often used as fashionable catchwords in urban initiatives worldwide: urban regeneration, creative industries, mixed use, etc. Therefore, their meaning was considered clear and beyond question; there was no attempt to clarify what exactly the terms would mean in the case of Kapana.

Uneven speeds within the process also became obvious in the different domains – academic, governance and business. It was difficult for the academic research to catch up with the established real-life timeframes. The practitioners had a straightforward pragmatic approach and the efficiency of efforts was explicitly targeted – it was important to use the research product at a particular point of

the process in support of the political decision already taken and the city initiative under realisation. Thus the organisers of the event had to follow a tight schedule. Yet, the urban planners' team required theoretical debate and desk research as a starting point. Before focusing on the local context and developing the project proposal, they were interested in conceptualising the urban process itself. All meetings of the academic teams with the local administration were organised by the foundation in line with the project schedule and requirements; because of this, the opportunity to discuss the potential benefits of a continuous partnership with the municipality was largely missed. These were all shortcomings of a project-based effort with a limited timeframe.

There were also differences concerning the continuity of effort – the academic participants were eager to conceptualise the knowledge generated and to integrate it into their next educational and research efforts in the longer term; the coordinators were in a hurry to advance to another practical step. The academic team relied on desk research, debate and brainstorming; they considered important a dialogue-based field study, including interviews, and searched for opportunities to integrate relevant feedback into the next stages of the project. The coordinators required material results presented in a timely and attractive way to integrate them into a broader political effort, which was to be supported.

The Partnership: Functional and Ethical Dimensions

Functional as well as ethical aspects of the partnership should be considered important factors in the project development and outcome. The contracted research conditions and activities seemed fully acceptable at the outset of the project. Yet, the expectations of research collaboration and utilisation of results were not clearly communicated at the beginning; differences became increasingly visible later and caused disappointment on both sides. An initial major disappointment for the planning team was the fact that the political decision about the future function of the quarter as an area of creative industries had been already taken and the expected benefits of that option could not be questioned; the research results were only expected to confirm and illustrate them.

Different priorities could be also identified with respect to utilising the research results – while the academic participants considered the research and analysis parts very important, the contractors were mainly interested in the timely delivery of the project outcome and visual materials. After the city's application was announced as successful and the European Capital of Culture title was won, neither the project coordinators nor the local stakeholders were interested in discussing the academic teams' research results. These were surely discussed afterwards within the academic community, yet important aspects of the intervention impacts and the ways of interpreting them in terms of environmental justice remained largely neglected in practice. Neither the ongoing urban process in the quarter nor the consequences of the interventions undertaken received adequate monitoring and evaluation. The lack of access to relevant research programming and funding was a crucial factor for the organisation of the academic research activities. The academic teams were probably invited too late to join with their research effort in a process where political decisions had already been taken; students' work was rather considered an attractive addition to other activities in presenting the local authorities' concept to the public and to international bodies. The potential of universities to contribute to effective transdisciplinary research was underestimated from the very beginning.

Conclusion

Despite largely being a missed opportunity for effective long-term transdisciplinary urban research, the Kapana project experience provided valuable insight into the motivations for action, the capacity for dialogue and the ethical choices made by different actors in the urban process in Bulgaria, which influence co-design, co-production and dissemination of urban knowledge.

The academic experience within the lifetime of the Kapana Possible 2014 project confirmed that transdisciplinary research is a time- and resource-consuming process. It is therefore important to communicate participants' views on the further valorisation of results well in advance. Building a common language is important to clarify actors' expectations of the research focus, time horizon, benefits, ownership and usage of the results. It is, however, the building of mutual trust and respect that enables the implementation of a common conceptual model, the exchange and dissemination of the knowledge generated. Contacts and dialogue are still required to convince local authorities that transdisciplinary approaches have the potential to bring far broader benefits in the long term than the ones currently aimed at. Involving students in a transdisciplinary process proved to be an important step because of their enthusiasm in discovering and interpreting real-life situations in a non-traditional way; it was also fruitful from an educational point of view by setting a focus on experts' sensitivity to a variety of stakeholders and interests, and on the capacity and tools needed for influencing a political process.

Four years after the project end and almost a year after Plovdiv met its first guests as a European Capital of Culture in 2019, there is a question still outstanding: *What could have been different if local stakeholders had listened to the academic voices?* Probably, by entering a real dialogue, it would have at least been possible for the academic planning team to learn more about keeping pace with political concerns and requirements. Hopefully, academic considerations about the sustainability of the regeneration activities envisaged – their long-term economic, social and cultural impacts – could have provided useful insights for decision-makers. At a deeper level, acknowledging the societal value of academic participation in transdisciplinary urban research would require a major change in existing urban culture in general – how the urban process is appreciated and respected by the different stakeholders and how the importance of effectively targeting the long-term impacts of urban planning and governance is valued. In countries like Bulgaria where the national planning system is undergoing a major change of devolution and democratisation, that would surely need a continuous – and honest – effort aimed at effective dialogue between urban education, research and practice.

Acknowledgements

The author is grateful to the One Foundation for the invitation to the project and the chance to test urban development concepts and ideas in a real-life urban context; to the students and teachers of the urban planning team for their devoted efforts and to the other three university teams for being our project partners; to the experts involved from Sofia and Plovdiv for their help in gathering the information needed and for their comments on the planning team's work and project results. The author remains fully responsible for any shortcomings of the present manuscript.

Notes

- 1 Plovdiv is the second largest city in Bulgaria, an important administrative, industrial and cultural centre, with a population of 340,000.
- 2 *Kapana* (Bulgarian for “trap”) is a quarter in the city of Plovdiv, listed as a historic site of local importance in 1976 and later the object of several planned (yet never fully implemented) interventions in the late 20th century.
- 3 Successful projects of varying scales and foci have been realised in the quarter: The Zero project (authors: Kuzmanov & Michev, <http://openarts.info/proekt-0/>) focused in 2010 on issues of symbolic images in the city and on the possibilities of building an integral image of the Kapana quarter. The Pavilion for the City project (Open Arts Foundation and Studio 8½, <http://openarts.info/besedka-za-grada-kapana/>) organised a number of discussions on urban space in 2012, including the Kapana quarter. An initiative of local young architects and *Cache Atelier*, developed within the frame of the sixth edition of Sofia Architecture Week in 2013, located 75 cardboard cars in the streets of the quarter one early morning, before the cars of people working in the quarter were parked, thus raising public awareness about the way public space in the quarter was used (<http://podtepeto.com/ailiak/zadrstikha-kapana-s-kartoneni-avtomobili/>).
- 4 The European Capital of Culture (ECoC) initiative was proposed in 1985 as the European City of Culture by Greece’s minister of culture Melina Mercouri, with the idea of raising Europeans’ awareness about the common history and values within the richness and diversity of European cultures. A change in the European Capital of Culture programme rules in 2007 allowed broader access by Eastern European cities to the title.
- 5 After the political changes in the country in 1990, certain governance responsibilities were gradually transferred from the national to the local (municipal) level. Thus, active municipalities were already able to undertake strategic planning, to start implementing urban policies of their own and to compete for funding under European Union-funded national and European programmes.
- 6 The One Foundation for Culture and Arts was established in 2010 with the mission to provide for the continuous development of local culture by delivering rich, innovative and high-quality content that is accessible to all communities, and to enable cultural exchange between local and international artists.
- 7 Department of History and Theory of Architecture and Department of Urban Planning at the Faculty of Architecture, University of Architecture, Civil Engineering and Geodesy (UACEG), Sofia; Department of Sociology at the Faculty of Philosophy, Sofia University “St Kliment of Ohrid”; and Department of Ethnology at the Faculty of Philosophy and History, Plovdiv University “Paisii Hilendarski.”
- 8 The academic teams were guaranteed access to all the information on the project development; they took on the obligation for coordinating their work and reporting intermediate results according to a schedule established by the main project coordinator in line with the municipality decision to develop the quarter as a “creative district.”
- 9 The urban planning team: students from the MSc programme in Urbanism (alphabetically): Dimitar Andonov, Hristina Kovacheva, Kaloyan Karamitov, Vladimir Petrov, Yulia Dukova; teachers: Elena Dimitrova (team leader), Milena Tasheva-Petrova, Angel Burov; and consultants: Magdalena Kircheva and Nurhan Redzheb.

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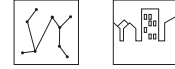
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08



BARRIERS AND POTENTIALS OF INTER-PROFESSIONAL PLANNING

Creating Care Homes for People with Dementia



Introduction

It is a huge challenge to interdisciplinarity that people from different subject fields have to work together and come to the same understanding. On the one hand, growing specialisation results in different subject fields that create valuable in-depth knowledge. On the other, knowledge tends to become separated in silos with different discourses and different perspectives on how to tackle new challenges; differences created during education and reinforced by working experience. In this way, specialisation creates its own barriers to working together. However, complexity in most problems requires knowledge from several knowledge arenas in order to cover the various aspects of the problem – and interdisciplinarity, as well as interprofessionality, becomes a necessity. This chapter gives a meta-analysis of interprofessional cooperation in the field of creating care homes for people with dementia – a process which draws on a number of different specialisations.

Request for Knowledge on Care Homes for People with Dementia

In Western countries, the average age is increasing and, as a consequence, the number of people with dementia is growing too. In Denmark, it is expected that the number will double within the next 25 years, which means that in 2040 about 150,000 persons will suffer from dementia. The group with Alzheimer's, 65% of the cases, will gradually lose their ability to remember, understand, communicate and find their way, and some get very restless. In the late stage of the disease, such people are dependent on help from others, and often have to live in specially designed care homes with professional caregivers. Therefore, the care homes must be well suited for people who are mentally drifting away, but physically still active and mobile (Sigbrand, Bredmose, Kirkeby, Mathiasen, & Jensen, 2015, 2016).

International research indicates that the physical environment has great importance for the well-being of people with dementia (Day, Carreon, & Stump, 2000; Marquardt, Büter, & Motzek, 2014). Smaller units are preferable, architectonic qualities such as light and acoustics are essential for orientation and well-being, and not least a sense of homeliness is important. Research indicates that people with dementia often are very sensitive to atmosphere – an important architectural quality (Sonntag, 2013). Not only is it essential to have agreeable buildings, it is just as important to know which features must be avoided because they might be perceived as unpleasant or scary by people suffering from dementia. Furthermore, a wide range of needs have to be seen from a care perspective to support staff members working professionally with patients. This is important for the quality of the care itself and for economic management. Thus, to create a well-functioning and pleasant care home, a wide range of requirements should be met.

The Danish Building Research Institute (SBI) has several ongoing projects on how to create suitable environments for people with dementia. The research team investigated the relation between the physical environment and people with dementia, and subsequently guidelines and recommendations were published (Sigbrand et al., 2015, 2016). These results are based on research in various fields and targeted at practitioners of different professions who deal with the building of new or renovation of existing care homes.

However, an urgent question makes itself felt: how is this research-based knowledge actually received and brought into use by the practitioners, and how is it combined with other kinds of knowledge the practitioners have from other sources? An answer to this question may help researchers to design research projects better and to produce useful guidelines for interprofessional cooperation. In order to obtain more insight into this question on knowledge transfer, the Danish Building Research Institute conducted an exploratory study on knowledge transfer between different actors. However, the study is to be seen as a first step towards an answer; extended research would be required for a comprehensive answer.

Interprofessional Steering Groups

For a study of interprofessional knowledge transfer, care homes for people with dementia had the advantage that they have a very complex, but at the same time well-defined problem, which definitely requires different and specialised kinds of knowledge. Knowledge from different professions and knowledge arenas (Andersen & Atkinson, 2013) are needed to cover fundamental aspects – and the responsibility to set the interdisciplinary team is very high, since the environment is created for a group of people who are themselves unable to change or rearrange their environment or to withdraw. The case study thus problematises the question of involving the user directly in describing

their needs. Knowledge of user needs had to be obtained in another way – via experience gained by working in care homes and via research-based knowledge of how people with dementia interact with the physical environment. It should be stated that this kind of knowledge may generally cover aspects that users are not necessarily able to formulate themselves.

When you build a care home in Denmark, it is common procedure to appoint a steering group to follow and guide the planning process. The steering group members take part in developing the building programme and have to make sure all considerations are taken concerning various needs and interests; thus, they are approaching the project with different kinds of knowledge and interests. As a method to gain insight into kinds of knowledge use and how knowledge is exchanged between different actors, seven qualitative, semi-structured interviews were held with members of steering groups of care homes for people with dementia. The interviews lasted approximately one hour and were afterwards transcribed, and the following analysis is based on these interviews.

The process of working together in a steering group is often considered inspiring and open-minded; however, in practice it is also frustrating due to simple communicative matters, consumption of time without many results, a sense of missing the aim of the project and so on. A quite important issue is how to define the relevant participants. Those usually involved in building construction tend to consider architects, engineers and builders as key participants; a few may add the future users of the building. Here, the difficulties of inviting future users of a care centre arise simply because the main users suffer from dementia, and this, sadly enough, may lead to simply bypassing this category of users. Furthermore, relatives who engage themselves in the well-being of their family members will often be involved in practicalities, and working conditions and also practical arrangements for employees are important factors for the final outcome. The latter group in particular has a valuable insight into how to fit daily routines to building design.

The criteria for choosing the interviewees were that they had taken part in a steering group concerning care homes for people with dementia within the last five years. The starting point was taken as two building cases near Copenhagen. However, almost all interviewees had considerable experience in the building sector, including care homes, and frequently referred to their general experience from previous work as well as their specific experience from actual steering groups. Taken together, they covered knowledge concerning medical aspects, care aspects, ergonomic aspects for staff working in the care home, economics, social aspects, architecture and construction. Their professional backgrounds were from architecture, engineering, political science and nursing. No relatives were interviewed in this project since they were not represented in the chosen steering groups. However, their experience and knowledge were indirectly present in the process due to the fact that the guidelines on care homes used in the projects draw on research, which includes the experience and knowledge of relatives.

Co-Design and Leadership

The task to plan, design and build care homes for people with dementia can on a general level be described as co-design, with emphasis on joint knowledge production and on leadership and management (see Chapter I.2 in this volume on the different phases). This is co-design in so far as the steering group – including the architects – dealt with the important task of interpreting the design problem and framing the design task during the preparations for the building. But it should be noted that this does not mean that all members design actively with pencil or mouse in hand. The design itself was worked out by the architects between steering group meetings. However, setting a frame

for the actual design is an integral part of the design – to find out what the design problem actually is. Lawson (2004, p. 17) says: “Perhaps it is in the very process of developing the framework that the greatest advance in thinking takes place. In arguing out the frameworks collectively we edge forward to some degree of consensus.”

Interdisciplinarity Means Cooperation

Once the relevant people have been identified, the planning and processing of a successful co-design begins. This is not just a question of getting the opportunity to have a say, but also to listen and learn. However, it is a precondition that all participants recognise the relevance and equal importance of the other participants in the project. The process itself is important since participants are learning by doing, which in turn leads to reflections on practice and “conventional wisdom” hitherto within the field in question. Healey (1997) leans on a long string of works on public engagement and participation within urban planning; since the early 1960s, planning theory has revolved around how technical–rational approaches could be merged with a broad inclusion of the public. Gans (1962) was a pioneer in this respect; his experience from ongoing projects in US cities led him to emphasise local relations, and he formulated a bottom-up perspective on local politics. Davidoff (1965) took the perspective further and argued for open-ended projects, orientation towards the future and for action, i.e. implementation of the preferred options. All citizens affected by specific decisions should be involved. The key issue is to identify exactly who they are and to provide real inclusion. Related to this is, of course, its implementation.

One crucial lesson learned from the urban interventions in existing urban environments was the realisation of social learning (Friedmann, 1987); knowledge is not pre-existing, waiting only to be discovered, but is actively produced through social interaction (Latour, 1987). Social learning is thus a form of co-creation. Healey (1997) is well aware of the critique of this social turn; while social interaction is important, it cannot ignore existing structures and interests. However, not all challenges can be reduced to discourses. Thus, Healey adopts social constructivism and attempts to unfold it, inspired by Giddens and Habermas; the main challenge is the practice of an equal, open-minded and acknowledged exchange of viewpoints, knowledge and interests. Healey points to the need for a post-structuralist understanding of politics when she unfolds an approach to the exchange of views, interests and knowledge. Following Bryson and Crosby’s (1993) three types of settings, she presents *forums, arenas and courts*:

- Forums put the emphasis on creation and communication of meaning.
- Arenas are sites for development and implementation of policies.
- Courts are where remaining, unsettled issues are mediated.

Although this model is developed for urban planning, it can easily be employed in connection with the co-production of a building project. Leadership and management are key functions in securing meaningful progress of a project. Leaders and managers possess the authority to initiate and promote processes and deliver suggestions. This may easily take place in conflict with the ideal of Habermas’ speech: *that any person is allowed to take part in a discourse, is allowed to raise questions about any idea and no one is prevented from expressing their wishes and needs*. Reality is a bit different; yet, only by accepting free expression of ideas without coercion can the joint product deliver better results than traditional knowledge production.

Building and Sharing Knowledge

Interprofessionality, like interdisciplinarity, means cooperation between people from different subject fields. It requires that knowledge is transferred across professional boundaries. To do so, mental barriers against understandings and interpretations embedded in other disciplines or traditions other than one's own must be lowered or removed. This seems obvious and simple; however, practice demonstrates that despite goodwill to appear open-minded, it is a far from easy operation. Generally, cooperation demands some levels of trust and crossing disciplinary boundaries further raises these demands. Even cooperation between agents in the same subject field may cause trouble – there is a possible gap to be bridged between knowledge and the way its parts are understood.

In cooperation through interprofessionality, this gap is in no way smaller. On the contrary, the agents have different backgrounds due to their education, where they became socialised in subject-specific approaches, discourses and ways of solving problems. Although the words may be “understood” by their recipient, it is far from certain that the words are understood in the intended way – the message may be changed, and the discrepancies may be recognised in the situation, or maybe not.

According to Bruno Latour, knowledge can well be transported from one place to another, from one person to another or one subject field to another. But not without the content undergoing change. A mediator arises in between them to carry the information. The mediator can be, for example, a text or a drawing, and many research results can be seen as mediators, communicating the content of the research to others. Still, each time content is translated into another mediator, the content undergoes a change. Latour compares this with the way a metaphor can carry a meaning. He points to the fact that the etymological root of “metaphor” is “movement” and “transport” (Latour, 1986, p. 25).

In this chapter, the “flexibility” of knowledge is held to be an important quality. It will appear to be a contradiction in terms to launch a concept of flexible knowledge. Knowledge is, for most people, an absolute phenomenon; like truth, a phenomenon that cannot be discussed but only accepted as correct or incorrect. Such an understanding or perception of knowledge unlocks the creation of new knowledge, for our own perspectives as well as those of the group.

At this point, it is important to distinguish between context-independent knowledge – for example, facts and rules – on the one hand, and context-dependent knowledge – for example, phronesis, experience and examples (Flyvbjerg, 1991) – on the other. Context-independent knowledge is probably easier to transport with only minor changes in content, whereas context-dependent knowledge requires more interpretation and personal acquisition. This certainly is a major advantage of context-independent knowledge – although here also, several transformations have taken place from, for example, research object to research result (Latour, 1986). For this reason, context-independent knowledge is considered an ideal in several research fields.

Context-dependent knowledge plays an important role in design and planning projects (Kirkeby, 2009, 2010, 2011). According to Kristian Kreiner (interview in Kirkeby, 2010), the importance of context-dependent knowledge can be explained by the fact that planning and building problems are loosely structured problems, or perhaps better contested issues: there is usually no complete agreement on what the problem is, why it has appeared or what should be done. Thus, a merely analytical solution is not possible, but the frame and the solution are developed in parallel. To solve a planning or building problem, it is necessary to choose a perspective, an Archimedean point, from which the problem can be tackled (Kreiner: interview in Kirkeby, 2010). When deciding between different possible perspectives, context-dependent knowledge is superior to context-independent knowledge,

because context-dependent knowledge contains a normative dimension – a position – that may support decision-making (Flyvbjerg, 1991, p. 72ff; Ruderman, 1997). Planning and building projects are prescriptive; that is, dealing with such issues cannot be based on experience, since the future has not yet put its mark on the present. The planner or architect often has to involve stakeholders, users, other professionals and various decision-makers to develop a joint understanding of both challenges and possible solutions and negotiate various demands and wishes to create a coherent proposal/plan. This mediating role is exactly what was referred to when one of the interviewees talked about being “orchestra conductor”: managing to include all relevant stakeholders, users, decision-makers, etc. and creating an arena where all are able to raise their voices in a constructive way. Although many scientists would refuse to call such efforts scientific, it is nevertheless an important part of bringing together disciplinary knowledge in work.

Aristotle calls this practical, action-orientated knowledge, which makes people able to make decisions “good for man,” for *phronesis*. *Phronesis* is context dependent, often embedded in good examples or personal experience. The importance of practical context-dependent knowledge is emphasised by Donald Schön. In his ground-breaking book *The Reflective Practitioner: How Professionals Think in Action* (1983), he asks, “What is the kind of knowing in which competent practitioners engage? How is professionals knowing like and unlike the kinds of knowledge presented in academic textbooks, scientific papers, and learned journals?” (Schön, 1983, p. viii) – and by this he opens a wider perspective on knowledge as integrated in action and not only as “technical rationality” (ibid, p. 21ff.).

Consequently, “flexible knowledge” does not indicate that “everything goes,” but underscores that knowledge as context-based knowledge is not independent of place or circumstances. It has to be related to a specific situation. Mezirow (1997, p. 5) focuses on transformation from a learning perspective: “Adults have acquired a coherent body of experience – associations, concepts, values, feelings, conditioned responses – frames of reference that define their life world [...] They set our ‘line of action’. Once set, we automatically move from one specific activity (mental or behavioural) to another. We have a strong tendency to reject ideas that fail to fit our preconceptions.” Experience, and perhaps first of all academic training within a specific discipline, produces a discursive horizon, which in turn is internalised in the individual agent/actor.

Thus, when we meet other and different frames of reference, we may adjust our own ideas – and transformative learning occurs. This seems an important quality in interprofessional cooperation, where trench warfare would lead nowhere, but the necessity to come to one, and only one, answer requires consensus. Mezirow refers to Habermas, who argues that it is inherent in our nature to look for consensus and that we would, in fact, not take part in a discussion without implicitly accepting that consensus should be possible. However, he is at the same time aware of the fact that this is a high ideal and not necessarily reached (Mezirow, 1990, pp. 165, 211).

Enablers and Barriers in Interprofessionality

When the interviewees were asked: “which kinds of knowledge did you use?” they first of all mentioned context-dependent knowledge such as their own experience gained from previous projects. Only secondly did they mention research-based knowledge and context-independent knowledge. The interviewees further made a distinction between “generalist knowledge” and “specialist knowledge.” In particular, actors with a broad experience within the building sector saw themselves as generalists without necessarily having in-depth knowledge of all aspects. Instead they



FIGURE II.8.2 Vigs Ängar, Sweden. Photo by Nanet Mathiasen.

would ask questions, for example, about how people with dementia react to their surroundings, and subsequently consult caregivers with experience from working in the field. It was notable that in this context the caregivers from practice were named as “the real specialists.” It became clear that context-dependent knowledge and exchange of context-dependent knowledge is extremely important in a planning and design process that involves different professions.

In a number of cases, the steering group had started the process by visiting some existing care homes and the interviewees stressed the importance of studying good examples – again a matter of context-dependent knowledge, where you draw inspiration from one example to reuse in another. On the study trips the group members got to know each other better; they initiated their discussion of the subject, and the talk about the project triggered a knowledge transfer between group members while the discussion sharpened their understanding of the subject. In this way there was an exchange of knowledge on a horizontal level among the group members.

However, the interviewees also reused experience from previous projects in developing their own views about suitable solutions for the care home they were preparing. This means that there was also a vertical knowledge transfer from some finished projects – and indirectly from the people behind them. This secures continuity over time in the care home sector, and it leads us to another important lesson learned from the interviews: it is an important enabler for the team to experience other already finished examples.

Cooperation is crucial for building up knowledge and working towards consensus on the building programme, especially due to the fact that different perspectives may ideally lead to extended knowledge exchange between the actors, to reflection and to developing new ideas suited for the specific building task to build the best possible care home. “In fact we all want the same,” an interviewee said, “we want to build the best possible care home.”

Repeatedly, it was stressed that the process had been good, that there had been a will to listen to other steering group members’ points of view and that strong efforts had been made to reach a consensus. However, although consensus is an attractive goal in theory, the practice may be tiresome. On one occasion there was a clash between the architects and the contractor. In that case, the team leader chose to hire an external coach to settle the disagreement. In another example, a group managed to move from disagreement to agreement. The core of the discussion was “homeliness” and the group strongly disagreed on how to create homeliness in practice. But by the means of questioning their ideas, the team leader managed to get beyond their opinions, and through an intensive discussion they found out that they actually shared the same ideas on a more abstract level; thus, the discussion established a new insight into their possibilities. But, this may need somebody who has the strength to get behind people’s defences in order to find out where consensus lies.

This interest in consensus is not to be underrated – which may easily happen when the discussion gets heated. However, when different perspectives meet, this may trigger learning. Secondly, it is an underlying interest in consensus that makes a discussion worthwhile. The interviewees’ awareness of the importance of consensus was high, and a shared wish for consensus can be an important enabler in interprofessionality.

Also, the leadership in the group was of major importance. In an interview, the leader’s role was compared to the role of the conductor of an orchestra – it was not necessary that he/she should be able to play all the different instruments, but the conductor had the responsibility to judge which instrument was to take the lead and when. Another interviewee, a structural engineer, stressed the importance of listening and letting each other take the lead. In the balance between architect and engineer, he said, the architect should take the lead at the beginning of the project and the engineer’s

role was to back up the architect with his specific knowledge. Later in the project, the roles were reversed and the engineer would take over, while the architect would take on the supportive role. Although leadership is important, you should not try to force a solution through: “then you wouldn’t survive this job,” a group leader said. To survive, you had to use your knowledge to find the best way, he said, and “if that is insufficient, then you withdraw a little and let others bring forward their knowledge.” If good leadership is established, it serves as an important enabler for cooperation across different professions.

On the other hand, in such projects you also find a number of barriers. Lack of money may be one barrier. It is such a well-known fact that we might easily overlook it and just take it for granted. However, we have to realise that limited resources make it necessary to choose between different wishes and ideas. All wishes cannot just be added together in the final project; it becomes necessary to give some wishes priority and leave out others. Different wishes, represented by different actors, may in turn clash. Experienced actors may have an advantage, and they prepare themselves beforehand; an architect gave as an example that to obtain an attractive architectural feature – a bay window in some flats in a care home – it had been necessary to stress its importance right from the very beginning.

In particular, the risk of conflicts between different actors may cause a barrier in interdisciplinary projects. An engineer expressed his experience in these words: “the building sector is traditionally one of the most conflict-filled areas of all because there are opposite wishes the whole time.” Also, the different approaches between different professions such as architects and engineers may cause problems, and he urged both parties to be open to finding ways to cooperate. As previously mentioned, an engineer pointed out a possibility – that at the beginning of a project the architect took the lead and the engineer took a supportive role, whereas in the next phase the roles were reversed.

Yet, enablers and barriers may be two sides of the same coin – a good cooperative atmosphere in the group may be an enabler, whereas a poor atmosphere would rather be a barrier. On the one hand, different points of view may block progression of a project, or on the other, new learning may emerge.

Reflections on Lessons Learned

Finally, the project gives rise to a few critical reflections, linked in the following to lessons learned. The first lesson learned from the interview-based study was that context-dependent knowledge such as experience from previous projects and “good examples” were mentioned before research-based knowledge as important in the planning process. The critical question is whether experience is considered such an important driver that new knowledge only comes into the process with difficulty. On the one hand, continuity, where we make use of previous experience with the option to refine it, seems attractive. On the other, we may lean so heavily on previous ways of operating that we fail to see the possibilities of improvements, although there might be new, research-based knowledge that ought to be taken into consideration!

A second lesson is that willingness to listen to other actors’ perspectives is required in order to move towards consensus, and in, for example, planning or building projects this is necessary in order to come to an agreement on the building programme. Clearly, the different perspectives represented by members of the interprofessional group are important assets of crossing professional boundaries. The confrontation between different views based on experience and subject-specific knowledge

may hold an important potential for developing new understanding or new knowledge – transitional learning. At the same time, it may lead to conflicts.

The third lesson learned from the interviews was that group members were eager to develop a good process and to be obliging and willing to listen. However, a critical question has to be put: can the wish for consensus lead to the situation where some disagreements are avoided in order to maintain a good atmosphere and avoid conflicts? But, in any case, an agreement on one, and only one, solution is required. This raises another urgent question: is interprofessional collaboration in itself so demanding that too much focus moves from the end product to the process? In the end it is the built product that counts. And one has to ask: has the quality of the final building, the result itself, achieved a higher quality due to interprofessionality, or might the result have been better if, for example, the architects had had the final say in all decisions? The interviews did not give an answer to this question – the interviewees took it for granted that cooperation between different professions was necessary for the best possible result. The answers from the interviewees mainly illustrated the process, not surprisingly, since the interview plan focused on their exchange of knowledge and did not question the quality of the final project, the care home. Theoretically, consensus might be reached “the easy way” if difficult questions are simply neglected. However, the interviews revealed no examples of this kind of procedure; quite the contrary, examples were given that demonstrated determination and energy to go “behind fences” to find common solutions. Nevertheless, serious attention should be given to the fact that a “good” process is insufficient in itself to establish the optimal result. However, in interprofessional projects, cooperation is built in, and a good result, in our case care homes for the elderly with dementia, might well depend on the process leading to it, where the actors, in our case the steering group members, respect and trust the validity of other professionals’ statements. New research projects could explore these unanswered questions.

Interprofessionality does not arise by itself; it is born out of necessity, that is, the necessity of more knowledge than one profession can possess and of co-thinking to optimise the use of limited resources (i.e. the result of tight budgets). But its success cannot be taken for granted. It requires openness and willingness to listen and find solutions. Cooperation with other professions is just as difficult as cooperating with people in one’s own profession. In the process towards consensus, the group leader plays an important role. Using a metaphor from the interviews, the role of the leader is to be compared to the conductor of an orchestra, who has the responsibility of bringing together the necessary instruments, making them play in harmony and making sure that the right instrument takes the lead at the right moment.

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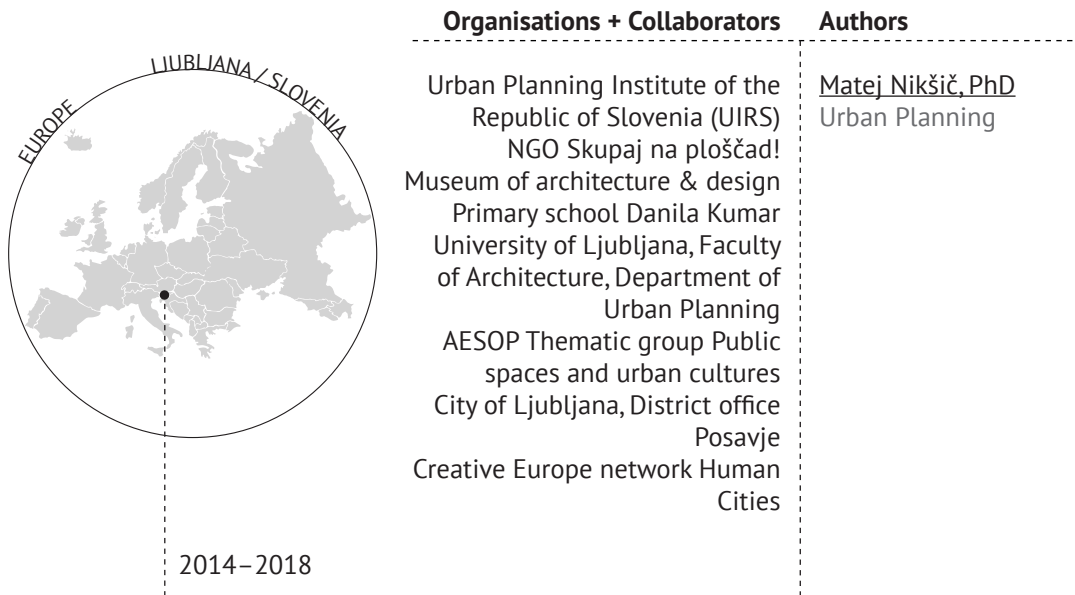


09



TOGETHER ON THE PLATFORM

Common Action and Reviving the Central Open Public Space in Ruski Car (Russian Tsar) in Ljubljana



Introduction

Human Cities is a European project. It was set up in 2008 as Human Cities 1 under the European Commission's Creative Europe 2007–2013 programme and has had transdisciplinarity embedded in its core from the very beginning (www.humancities.eu). It addresses issues of urban public space and promotes creative interventions and collaborations between architects, urban planners, sociologists, artists, designers, writers, philosophers and landscape architects, as well as citizens and people who use public space that do not have any professional affiliation to the project (Coirier, Goličnik Marušič, & Nikšič, 2010). Its main aim is to shed light on new, innovative approaches to urban public open space design and to challenge established practices within the so-called “spatial professions,” such as architecture and urban planning.

Human Cities provides 50% of financial funds for all activities, while the rest must be provided by partners' contributions. Initially, it had been running in four European cities: Brussels, Glasgow,

FIGURE II.9.1 The kick-off meeting between the residents and the professionals in a form of a residents-led walk was organised to start the cooperation. Photo by Blaž Jamšek / UIRS photo archive Human Cities Ljubljana.

Ljubljana and Milan. It was then prolonged for two more periods to Human Cities 2, which ran from 2010 to 2012, and Human Cities 3, which ran from 2014 to 2018 with a broadened European network including partners from Belgrade, Bilbao, Brussels, Cieszyn, Graz, Helsinki, Ljubljana, London, Milan, St. Etienne and Tallinn.

The project raises awareness for the need for a dynamic, inclusive and systematic approach to the less obvious components of public spaces, such as social networks, behavioural patterns and perceptual dimensions, as part of an endeavour to provide better and more inclusive urban public spaces.

There was a clear understanding from the very beginning of the project that such endeavours could only be successful if cooperation between institutions and professionals from different backgrounds, on the one hand, and the citizens, on the other, were to be established. The initial international team was therefore set up by institutions of different backgrounds in order to provide pluralistic insights into the issue from the very start of the project, and has grown throughout the development of the project from Human Cities 1 to Human Cities 3.

The second round of the project (Human Cities 2) sought to address the gap between urban practice and theory (Houlstan-Hasaerts, Tominc, Nikšič, & Goličnik Marušič, 2012) and therefore for the first time started to cooperate with other associations on a global scale also. One of them was the Association of European Schools of Planning (AESOP) and its thematic group Public Spaces and Urban Cultures, which tackles issues of urban public spaces via a transdisciplinary approach through scientific, artistic and educational aspects in order to make the gap between theory and practice smaller (<http://www.aesop-planning.eu/>).

The new theoretical insights from Human Cities 2 helped to frame the agenda of the third round of the project (Human Cities 3), which ran from 2014 to 2018. It is important to note that ever since 2008, which was the official starting point of Human Cities activities, the network grew considerably and new partners with additional critical expertise joined.

Each of the project partners from the collaborating cities had an opportunity to extend its local team and expertise considerably by inviting additional local partners in every city in accordance to their needs and concrete local goals. This flexibility in setting up and continuing to develop the local project teams while also benefiting from the support of the international network proved to be one of the crucial enabling factors for the success of the project.

It is important to highlight that the pan-European framework of the Human Cities project served only as a basic model and common language for the activities across Europe. There was a high level of independence in setting up the local agenda of each of the partnering cities, as long as they were following the basic principles and frame of Human Cities. Each partner had the right and responsibility to set up its local agenda in a co-creation process with any number of relevant local stakeholders. These are discussed later; this was one of the main strengths of the project.

Human Cities 3: Professionals and Residents Working Together for Better Public Space

To address the question of co-design of public space and to estimate the value of interdisciplinary support to urban civil initiatives, the framework of Human Cities 3 is most relevant. Human Cities 3 defined a set of three main goals to be reached by the international partnership:

1. To review state-of-the-art civil initiatives throughout Europe that are reclaiming public spaces in cities. The review had three main steps: it mapped, analysed and synthesised the gathered data. An international interdisciplinary team of sociologists, architects, designers and urban

planners worked on the topic and valuable insights emerged out of the research – such as who the most common initiators of bottom-up initiatives for public space improvements were and their socio-economic characteristics. Also, what were the triggers and motivations of their activities, and what are the characteristics of people who support or actively join such initiatives? How do initiatives organise themselves and how do they run their activities, etc.? (Nikšič, 2018)

2. To choose concrete existing initiatives related to public space improvements in the locations of the partnering cities and experiment with new approaches to the participatory design of public spaces in cooperation with them. The aim was to offer a stage for new innovative ideas to be developed and tested in cooperation and dialogue, but also to critically confront the different positions between the professionals with different kinds of expertise on one side and citizens on the other. Each city defined its own approach to address the most pressing issues in the local environment.
3. To communicate and disseminate the findings of both state-of-the-art and experimentation phases to various publics (general, professional, academic, decision-makers); to incorporate the knowledge produced in learning processes within the universities in the form of masterclasses and possibly inform policymaking in the form of briefings.

To reach these goals, the experimentation phase demanded a high level of cooperation between disciplines as well as across different stakeholders, which had to cooperate in different phases of the process. The case study of each partnering city is a story in itself and provides important lessons learnt in the fields of interdisciplinarity and transdisciplinarity (Franc, Peyricot, Ermacora, & van Hasselt, 2018). However, the detailed descriptions of them would exceed the length of this chapter; thus, it analyses the activities that took place in one of the partnering cities only. It focuses on the composition and competencies of the local partnership needed to successfully implement the project activities in Ljubljana.

The Case of Ljubljana: Participatory Urban Regeneration of Large-Scale Housing Areas

Ljubljana is the capital city of the Republic of Slovenia, which has a total population of about 2 million. The city has about 283,000 inhabitants (City of Ljubljana, 2014) and is the largest city in the country. Historically, the city used to be much smaller; the official census from 1921 recorded only 53,294 inhabitants. The rapid urban growth that started after World War II endeavoured to rebuild war-torn territories and to implement the industrialisation programme of the then existing socialist Yugoslavia (Mihelič, 2016; Rebernik, 1999). Between 1950 and 1970, the city grew quickly, with new industrial facilities and accompanying large socialist modernist housing estates. In this process, the once greenfield surroundings of the historic city were built up and the villages surrounding the historic city were swallowed up in the urbanisation process and extended through the new urban developments. In contrast to the historic urban fabric, these new developments, popularly called socialist neighbourhoods, were mainly built upon the mid- to high-density urban typologies (Čepič et al., 1997), which caused not only a huge disparity in terms of the scale between traditional and newly built structures but also some tensions between the original rural residents (who were then becoming a minority) and the newly settled more urban population. These tensions have never been completely resolved.

The main current issue of these socialist-constructed suburban areas is that they have aged but have not yet been subjected to a comprehensive regeneration programme. The built structure is in

need of physical renewal; moreover, the social, economic and not least, the environmental issues in these ageing areas are just as burning (Sendi, 2004; Nikšič, Goršič, Mihelič, Mujkić, & Tominc, 2013).

Due to a long period of economic downturn in Slovenia starting in 2009, the public budgets for comprehensive urban regeneration decreased considerably (Stražisar & Strnad, 2016). This forced the local governments and their planning departments to start considering new approaches to urban regeneration. If the pre-established practice had been very much top-down, compartmentalised and run by neo-liberal ideologies where public budgets were strongly aligned to the initiatives of private developers (Ehrlich, 2012; Ferk & Ferk, 2008; Nikšič, 2017), the economic downturn brought the awareness of a need to combine a top-down approach with bottom-up approaches involving local communities and their own resources also (Bugarič, Pličanič, & Pirnat, 2016). This challenged the city's urban planning department to start coordinating their activities more with other departments to achieve the desired results while having fewer resources at their disposal. The decreased financial capability of the local governments and developers seemingly made participatory approaches promising, even within the neo-liberal profit-oriented model. The skills, abilities and voluntary work of the local population have been recognised as a possible source for urban redevelopment. Even if such approaches have been much criticised in some scholarly and popular discussions (Cerar, 2014; Bugarič, 2018), because they help to sustain the system on account of the voluntary work of communities, at least in the Slovenian context they helped to promote community-based urban planning, which includes the local population in the visioning and implementation of urban development. To a limited extent, they have also raised awareness of entirely new concepts of cooperation between the authorities and the citizens, created outside developer-driven agendas (Patti & Polyak, 2017).

It was the socio-economic context described above that the Human Cities Ljubljana project had to inhabit when starting its activities. The urban territory and its public spaces seemed to be an ideal laboratory to experiment with more participatory urbanism; firstly, as Ljubljana has a strong legacy of self-management practices from the previous socialist system (Kavčič, 1997); secondly, because it is the largest city in the country with the most complex urban issues that need to be addressed and could serve as a model to any other smaller Slovenian city or town with less complex issues if successful; thirdly, as the City of Ljubljana invested a lot of public money into the improvements of its city-centre public spaces in a top-down manner while neglecting suburban ones, thus accelerating critiques about the (un)just use of public money (Nikšič, 2014; Nikšič & Sezer, 2017); and not least because the public space is a common space where the interests of many stakeholders meet. The main mission of Human Cities Ljubljana thus became the development of experimental approaches to participatory urban regeneration in the suburban areas of the city through the community-based redesign of public spaces in the large socialist housing blocks.

Setting Up and Managing Local Experimental Activities

The local Human Cities team in Ljubljana is based at the Urban Planning Institute of the Republic of Slovenia (UIRS), a key national research institution in the field of urban planning (www.uirs.si). The Human Cities core group at the Urban Planning Institute of the Republic of Slovenia consisted of professionals from different professional backgrounds such as architecture, geography, landscape architecture, information technology engineering and pedagogy, and had full autonomy in setting up the concrete agenda of the local project in Ljubljana.

Being in such a position, the Urban Planning Institute of the Republic of Slovenia proposed a twofold strategy: firstly, to develop and test new participatory tools in the case study of a suburban public space; and secondly, to set up a stage for a systematic change to introduce more participatory procedures in urban (re)development practice.

Through a comprehensive review of the existing literature, daily press, internet and other sources (Nikšič, Goršič, & Tominc, 2018), the Urban Planning Institute of the Republic of Slovenia mapped the existing civil initiatives in Ljubljana and over a wider area. The mapping was focused on the initiatives that worked either in the processes of getting the citizens involved in decision-making, or those that were making some concrete interventions in public open spaces in a participatory manner. Two aspects have been researched in detail: the ability and readiness of the mapped initiatives to try to work across different interest groups, as well as their potential to scale up their activities in the longer term (Nikšič, 2018). The final goal of this initial mapping was to invite one civil initiative to co-design and co-produce the Human Cities Ljubljana experiment in the 2014–2018 period.

The selected initiative was *Skupaj na ploščad!* (Skupaj na ploščad, 2016), which literally translates as “Together on the platform!” It was set up in 2013 by a group of architects and landscape architects living in one of Ljubljana’s most densely populated areas in the neighbourhood of Ruski car (“Russian Tsar”) on the northern outskirts of the city. This is a distinctive urban environment – one of the largest comprehensively planned socialist housing estates in Slovenia built in the 1970s to provide nearly 2,700 flats for the working class of the time (Čelik et al., 2016; Jamšek, 2016). Its core part consists of two parallel rows of blocks of flats that run east–west and connect the main public bus stop at one end with the railway station at the other end. Due to their height (15 floors), length (approx. 470 metres) and well-thought-out colour scheme, they have the appearance of a distinctive urban structure. The space between them is a lengthy street-like central open space called Bratovševa ploščad (Bratovš platform), which hosts the most basic amenities of the estate such as a local shop, a bank, a pharmacy and a community centre. It is one of the largest paved open areas in suburban Ljubljana and serves as the roof of the underground parking at the same time. A parallel linear green area is provided to the south and hosts sports and recreational facilities as well as a kindergarten and a school, while to the north two more streets run perpendicular to it and form a large park in between. Given this comprehensively planned layout and distinctive architectural outlook, the neighbourhood quickly became a popular living environment as well as a setting for the Slovenian film industry (Kučan, 2016).

Since the 1990s, when Slovenia started its transition from a planned economy to an open market economy, socio-economic changes have been ongoing, and the large socialist estates have been facing the new realities. To some extent, they have lost their attractiveness in the eyes of the citizens and entered the path of spatial and social degradation (Mihelič et al., 2005). Privatisation of the housing stock was one of the biggest issues and had many consequences, one of them being the ambiguous rights and responsibilities to use and take care of the common spaces.

Within this context, the main objective of the civil initiative *Skupaj na ploščad!* is to address the issues of spatial degradation of the Ruski car neighbourhood in cooperation with other residents. The main aim of the group is to help to organise the locals into a common campaign to revive the central open public space of the neighbourhood and thus strengthen social ties among residents (Bastin, 2018). The initiators were aware of the connection between the physical degradation and the social issues of the neighbourhood from the beginning. They also had insight into who the active residents were who voluntarily invested time, knowledge or other personal resources into the community.

To reinforce the sense of community that had been lost over the decades, *Skupaj na ploščad* organised some events in the central open space of the neighbourhood, such as an open-air film night, a communal herbal garden, community beehives, workshops with children, a market for fresh vegetables from the farms in the nearby villages, etc. (Bastin, 2018). The variety of their activities and of the publics they had managed to involve indicated the liveliness of *Skupaj na ploščad*; therefore, the Urban Planning Institute of the Republic of Slovenia chose it and the Ruski car neighbourhood as the experimentation case study of Human Cities Ljubljana.

One of the initial goals was to use this neighbourhood as a showcase for participatory changes in other neighbourhoods also. The Urban Planning Institute of the Republic of Slovenia invited city officials to take part in the activities from the very beginning of the experiment, so that they could have full insight into the process and thus be able to develop some relevant supportive policies alongside the process. Improving the community's financial and management capacity through supportive city policies was an important goal of the experiment. However, attempts to get the central city administration involved were unsuccessful despite much effort by the Urban Planning Institute of the Republic of Slovenia, mainly due to the well-established top-down approach to urban development (Bastin, 2018). Nevertheless, the neighbourhood-level officials from the district office (heading one of 17 territorial units as a form of the city's territorial sub-administration) responded and joined. Even though this level of city authority has no decision-making or budgetary powers, its support was important – it provided an additional communication channel with the residents, as well as making its premises available for public meetings and events.

Putting the Actors into the Action

Enabling the wider community to get involved was important to the wider experimentation goals of the project. Even if the *Skupaj na ploščad* networks were initially helpful to identify the active citizens, using these already established networks following *Skupaj na ploščad's* business-as-usual method proved to be insufficient to attract new local players. The experiment crucially needed more active residents to take the role of local experts, especially in mapping the local needs, on the one hand, and bottom-up resources to support the development of appropriate responses to these needs, on the other. Communication, leadership and management questions to successfully kick off the experiment arose all at once. At that point, good cooperation between an institution (the Urban Planning Institute of the Republic of Slovenia) with good theoretical insights into the prerequisites for a successful participatory process and a locally existing civil initiative (*Skupaj na ploščad*) with established contacts within the neighbourhood was key for success. While the role of the Urban Planning Institute of the Republic of Slovenia was mainly methodological, *Skupaj na ploščad's* contribution was in promoting the events through locally established channels to attract as many residents as possible. Their cooperation succeeded in bringing relevant local actors to the same table in a meaningful way.

The Urban Planning Institute of the Republic of Slovenia and *Skupaj na ploščad* developed a set of events where residents could express their opinions on how participatory processes should be set up and undertaken. The first event took place in spring 2016, when a so-called neighbours' walk was organised (Figure II.9.1 and Figure II.9.2). The idea was to invite the residents to take the role as the guides of the walk and thus reveal the assets and issues of the neighbourhood through their own eyes. Some residents joined and pointed out many crucial issues to be tackled in the regeneration efforts. However, it turned out that few people would attend such an event, even if it was announced in the



FIGURE II.9.2 Ruski car neighbourhood is one of the most densely built-up areas in Ljubljana, it was constructed in the 1970s and needs a comprehensive regeneration. Photo by Blaž Jamšek/UIRS photo archive Human Cities Ljubljana.

manner that *Skupaj na ploščad* would normally use. The same kind of low attendance happened at the next event, a round table discussion, which took place under the moderation of the Urban Planning Institute of the Republic of Slovenia in the city's district office. More or less the same residents took part and once more mainly talked about the problems that seemed to be ongoing for a long time and could not be resolved by their own activities.

The focused discussion offered further insights into the problems and potentials of the neighbourhood. The problems were mainly related to bad maintenance of common spaces, ageing infrastructure such as leaking gas and water pipes and, above all, the clear absence of interest of the central city authority to address the issues together with the residents. At the same time, the residents were not able to list that many potentials. It also became clear that they expected that the Urban Planning Institute of the Republic of Slovenia, as a national urban planning institution, could help things move further. This was an important input for the Urban Planning Institute of the Republic of Slovenia



FIGURE II.9.3 The public picnic was a participatory experiment – along with the sociable activities various empirical data on the place were gathered based on a transdisciplinary approach. Photo by Blaž Jamšek / UIRS photo archive Human Cities Ljubljana.

as a main facilitator of the experimentation process, as it showed a gap between the inhabitants' expectations and the institution's abilities and powers in decision-making. Unfortunately, the Urban Planning Institute of the Republic of Slovenia was not in a position to solve concrete problems that were in the jurisdiction of the city's central authority; even less so as it did not manage to establish cooperation with this authority.

When the reasons for the low levels of attendance by residents were analysed after the first two public events (the neighbours' walk and the round table discussion), it became clear that the presence of the Urban Planning Institute of the Republic of Slovenia, which on the one hand was a trigger for the residents already active to attend, while putting many people's hopes on the institution's assumed influence in the city's decision-making, was at the same time a discouragement for the rest of the residents due to the Urban Planning Institute of the Republic of Slovenia's reputation as just one more institution alienated from real life. Therefore, new approaches had to be developed to invite new residents to join. As a result, the action plan was reworked. Instead of following a rather profes-

sionally driven agenda, the new approach focused on socialisation activities while still including the professional agendas in the background. A big public picnic was organised in early summer 2016 in the central public space of the neighbourhood (Figure II.9.3). It was mainly advertised through the *Skupaj na ploščad* social media, posters in public spaces and on the information boards of the blocks of flats, as well as through the district office’s communication channels.

This social event was organised around local food, socialising and street games. Local food producers from the villages bordering the neighbourhood were invited to prepare the food to get them involved in the process of rethinking the neighbourhood’s and district’s future and to diminish the gap between the urban and rural inhabitants. *Skupaj na ploščad*, in cooperation with the Urban Planning Institute of the Republic of Slovenia, organised some street games on the same day, and the team from the Urban Planning Institute of the Republic of Slovenia brought some research tools also: a large model on which residents pinned their ideas was established, and wish-trees with write-on-me leaves were planted to collect residents’ visions of the future neighbourhood. Short video interviews were taped among the participants with the same aim of collecting ideas. Around 150 residents attended the event, a big relief for the organisers who were keen to make contact with a new group of residents outside the already established group of active residents. The event also revealed the importance of including different enablers in the planning of public events – it was the cooperation with locally based actors (*Skupaj na ploščad*, local producers of food, the district office, etc.) that enabled the Urban Planning Institute of the Republic of Slovenia, as the main manager of the Human Cities experiment, to succeed in addressing a wider group of residents.

Many ideas were collected by the residents through different side activities that took place alongside the event. They helped *Skupaj na ploščad* to understand the desires of residents better. These insights later informed the urban design concept for the redesign of the central public space. However, the Urban Planning Institute of the Republic of Slovenia, in its endeavour to develop and test new participatory tools, was not ready to finish these activities just yet. The data gathered during the picnic showed that mainly families with children were attracted to the picnic. On the other hand, the event revealed that some residents would not come out of their flats due to their lifestyles, characterised by spending their spare time inside their flats rather than in socialising in the open spaces of the neighbourhood. Through the interviews, the organisers learnt that one of the main reasons for people staying indoors was their attachment to the TV and computer screens. This observation presented a new challenge to the Human Cities Ljubljana experiment.

Addressing the Focus Groups Through a Tailored Approach Developed by an Interdisciplinary Team of Experts

The interdisciplinarity of the Urban Planning Institute of the Republic of Slovenia’s own team proved to be crucial to be able to address two specific groups (information technology-oriented residents and youngsters) further. Having an information technology engineering expert in the team enabled the Urban Planning Institute of the Republic of Slovenia to realistically plan the development of an online application that would enable residents who did not wish to or did not have the courage to attend public meetings to express their points of view about the neighbourhood. The Human Cities Ljubljana core group prepared a brief stating the main problem (the lack of participation of the “digitalised” part of the local population) and the possible solution (development of a new information technology-based tool). The information technology engineer, with a lot of working experience in urban planning, proposed sensible technical options to address the issue; thus,

communication with other experts in the core group proceeded quite quickly and smoothly. Within a short period of time, a new digital tool called “A Photostory of Our Neighbourhood” (PON) was set up. It was an online application that invited residents to look at their living environments through photography (Nikšič, Tominc, & Goršič, 2018). By submitting photos and their captions, residents were expressing their notions on different aspects of living in the densely populated living environments. Once again, similarly to the neighbours’ walk, the residents were put in the role of local experts. To keep the Photostory of Our Neighbourhood structured along the lines of urban planning objectives, it was structured into five different categories: most pleasant place in my neighbourhood; professions in my neighbourhood; my neighbour; boundaries of my neighbourhood; shared values in my neighbourhood. Over 170 entries were received by the call for photos, which was open for 45 days and mainly advertised through social media. The collection of the photos was advertised as a proper photography competition with prizes for the best entries, while the broader aim within the Human Cities experiment was clearly explained. Organising the event as a photography competition also demanded a professional jury. Thanks to the European scale of Human Cities, the Urban Planning Institute of the Republic of Slovenia was able to set up such a jury at international level, which raised the relevance of the competition in the eyes of residents considerably. International jury members affiliated to the fields of photography and design were named in cooperation with other European Human Cities partners, and they greatly improved the local visibility of the project.

Another focus group identified at the Ruski car picnic were the children. The picnic showed that extended families (including parents, grandparents and other relatives) would more likely join the participatory activities if children were involved. Getting children involved in the participatory processes thus became an important goal. However, developing a tool to address the young population as active citizens proved to be a demanding issue. Even if the Urban Planning Institute of the Republic of Slovenia had a pedagogic expert within its core team, practical experiences of working with children would be needed more than excellence in theoretical and research approaches. Therefore, the Urban Planning Institute of the Republic of Slovenia decided to bring into collaboration another institution that had a long record of workshops implemented with schoolchildren. The cooperation between the experts of the Urban Planning Institute of the Republic of Slovenia who gave guidelines in terms of the contents to be communicated to the children, and the Museum of Architecture and Design, who gave advice about the appropriate educational tools to be used, resulted in a new seven-session learning programme for pupils. It was well adjusted to the needs of the concrete community at Ruski car, as *Skupaj na ploščad* took part in the development of the tool also. It was built around the skills of active citizenship, empowering children to become active citizens and enabling them to contribute to a betterment of their living environments through their own activities. The sessions were a combination of lectures, analytical walks around the neighbourhood and hands-on sessions. The contents of each of the sessions was developed in detail and sometimes required that further professionals become involved (Figure II.9.4). For example, in the session addressing photography as a research method, the children got in contact with a professional photographer who explained the basics of analytical photography and joined in the hands-on session with the children. Similarly, an architect joined in when the children were discovering the art of making street furniture from recycled materials. All the cooperating professionals coordinated their activities into a coherent whole through the Urban Planning Institute of the Republic of Slovenia as the main facilitator of the process. On the other hand, *Skupaj na ploščad* played a crucial role in accommodating children’s Human Cities activities with their regular obligations in school, as they had pre-established strong relations with the teachers of the local school.



FIGURE II.9.4 Professionals of different backgrounds and school teachers joined their forces to set up the educational module on active citizenship. Photo by Blaž Jamšek / UIRS photo archive Human Cities Ljubljana.

Some of the children's tasks had to be done at home in the form of a piece of homework with the whole family. This gradually increased the number of interested people in the neighbourhood. When, in summer 2017, another public event was organised in the neighbourhood in cooperation with the Department of urban planning of the Faculty of architecture in Ljubljana and in the presence of international Human Cities partners, the attendance rate of the residents was considerably higher. In organisational terms it demanded the cooperation of many partners again as many activities were going on as a part of the programme, such as participatory street furniture making (Figure II.9.5), urban gardening workshops, photography and sketching sessions, street exhibitions, etc. The hands-on workshop activities were an excellent opportunity for direct exchanges between local inhabitants and the international team of experts for common benefits.



FIGURE II.9.5 Some residents may not be technically skilled enough to produce street furniture but can learn the skills during the hands-on exchanges with the experts. Photo by Tomaž Zupan / UIRS photo archive Human Cities Ljubljana.

The Importance of a Strong Leadership Moving Towards a Common Goal

Human Cities activities in Ljubljana are an example of an experimental approach to urban regeneration processes based on participatory principles, while strongly supported by the institutional framework. They show how important cooperation between different institutions, and professionals with different types of expertise are for the setting up of participatory urban design practice in a context that traditionally lacked such approaches. They also show how interinstitutional cooperation between local and international institutions can develop new approaches that are innovative while tailored to the specific needs of a concrete socio-spatial context.

Such cooperation needs strong leadership – an institution or organisation that can invite appropriate partners into the process and coordinate their activities towards the common goals. One of the requirements for the success of such an approach is the ability of the lead partner to indicate appropriate additional partners and listen to the suggestions coming from each of them. The lead partner thus

does not act as a client that orders the required services from different suppliers, but is in the role of an agent setting up a network of partners that will jointly seek the best solutions to the given issues. The lead partner's ability to work on the basis of the equality of the partners while having a strong strategy as well as the operational tools to successfully coordinate activities proved to be an important element for success. In doing so, the lead partner cannot always tackle all the issues itself and also needs the skill to pass its authority to other partners within the commonly agreed strategies (as in the example of *Skupaj na ploščad*'s full coordination with the teaching staff of the primary school). This ability of a lead partner becomes even more crucial with the increase in size and complexity of a project and partnership.

In the case of the Urban Planning Institute of the Republic of Slovenia acting as the main facilitator of the process, there were several fortunate advantages. Firstly, its own interdisciplinary structure made it able to act in a cross-disciplinary way and thus understand the value of different professions working together. Secondly, its position as an independent national research and advisory body allowed it to act as a decision-maker of the project, which was fully independent from the interests of daily politics and the agendas of any groups with interests (e.g. capital-driven investors). Thirdly, its embeddedness in the international professional community (while not having strict and detailed international guidance imposed, but rather given the freedom to set up its own locally embedded guidance) enabled it to involve independent experts from abroad with specific knowledge when needed and thus enlarge its operational capacity. Additionally, its relative financial independence (50% of the project activities were provided by the European Union Creative Europe programme) gave it more of a manoeuvring space compared with situations when it had to finance all the activities by itself.

The resources that were available to the Urban Planning Institute of the Republic of Slovenia outside the core team were crucial in developing its capacity to develop an innovative approach, as it could not cover all tasks as well as costs by itself. This also explains the failures in the process – due to the lack of contact with the central city authorities, the activities have not developed into something more than a mere experiment to date. This means that the final goal has not been achieved yet: the change to the previously established urban planning practices towards more participatory ones has not yet started, and making them part of the urban planning system remains an ongoing endeavour. This shows how peculiar the results of the otherwise well-thought-out processes can be, if only small (however important) steps in the processes do not go according to plan and no alternative solutions are sought or available. In the case of Human Cities Ljubljana, this has largely remained a lost opportunity. Or, if we put it differently, a lesson learnt that inevitably demands further action regarding the institution's capacity building.

The presented case also shows the appropriateness of the experiment as a tool to test the ability of partners (in Ljubljana's case, these also importantly include residents) to act together. Experimentation is open ended and allows failures, which encourages actors to join more easily. At the same time, the open-endedness demands more flexibility of all the actors. As Human Cities Ljubljana showed, this issue can at least in part be solved by the inclusion of various experts throughout the process. Human Cities Ljubljana was privileged in these terms, as it had professional capacity at both local and international levels at its disposal, as well as some financial resources to afford it. These are the conditions to be ensured when experimentation in a multi- and transdisciplinary manner is chosen as the core approach to the initiation of structural changes within already established practices.

Any experimentation process is open ended by definition, which demands that many experts take part in the process to fill in the gaps in a flexible manner. This makes interdisciplinary and trans-

disciplinary approaches so crucial for the success of such a project. Nevertheless, in order to make the whole process fruitful, perhaps the most important element is strong leadership combined with vision and operational strategy to drive the project towards worthwhile and sustained successes. In the case of Ruski car, these include strengthened ties among local residents, empowered local civil initiative *Skupaj na ploščad* and new street furniture and open space arrangements, which serve as new gathering places for the local community. The Human Cities activities are continuing in 2020–2024 period and can be followed at www.humancities.eu.

Acknowledgements

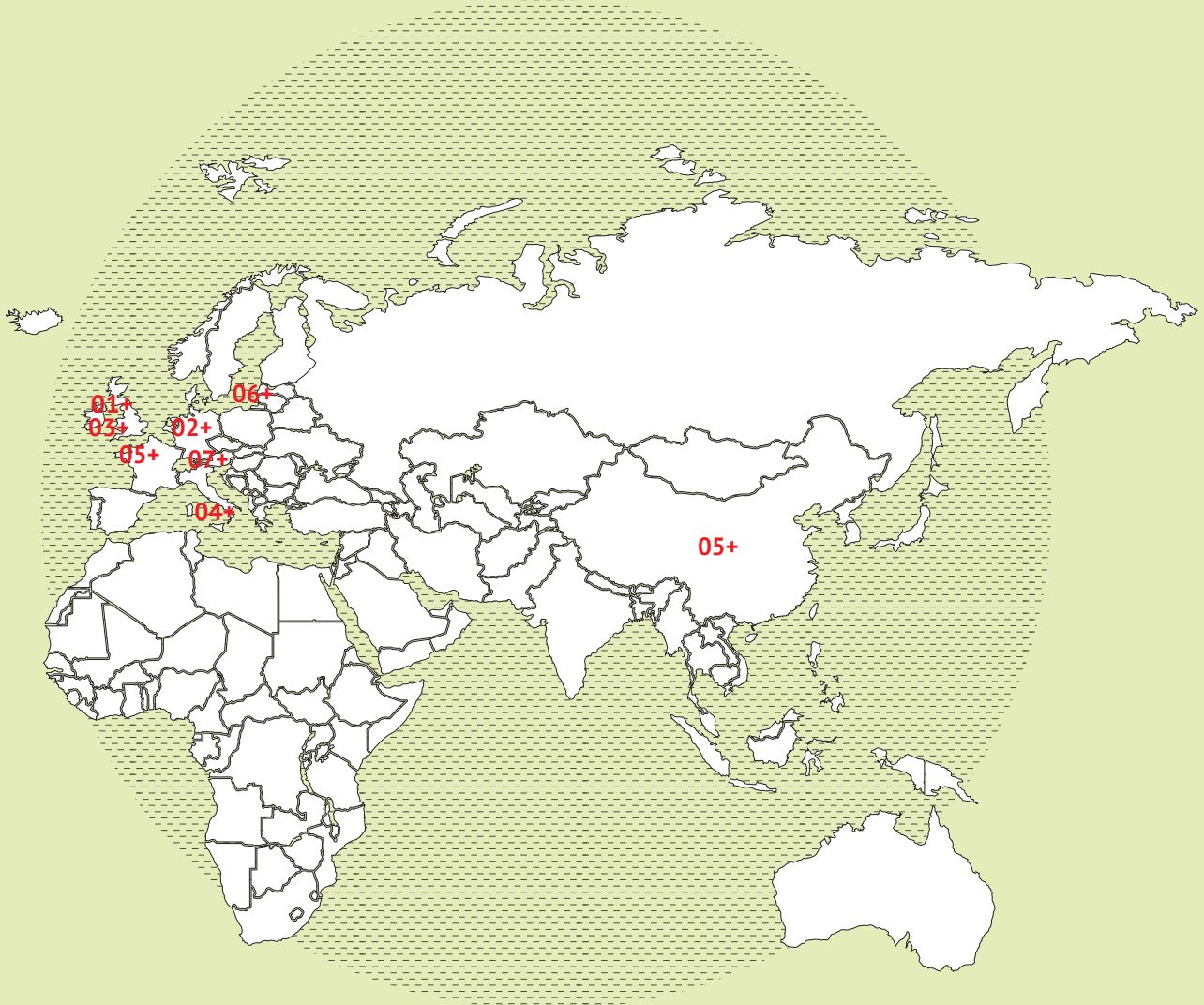
The author acknowledges financial support from the Slovenian Research Agency (research core funding No. P5-0100) and the European Union's Creative Europe/Culture programme.

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PROJECT LOCATIONS



- 01 Newcastle / United Kingdom
- 02 Berlin / Germany
- 03 Sheffield / United Kingdom
- 04 Gagliato / Italy
- 05 Paris / France and Guizhou / China
- 06 Tallinn / Estonia
- 07 Ljubljana / Slovenia

FIGURE III.0.1 Short stories from practice. Source: Editors.

PART III

Short Stories from Practice



Building



Street



Public Space



City



Housing



Neighbourhood/ Community



Network

Introduction

In Part III we introduce seven Practice Stories located in European cities and towns where the INTREPID network met during a four-year period, and some reflect upon projects that were visited during these meetings. This collection is composed of writings by diverse urban practitioners, academics who are also involved in practice and interviews with professionals. Three of the seven Practice Stories refer to projects examined in depth in Part II: Gagliato, Ljubljana and in Tallinn.

As in Part II, a set of graphics accompany the first page of each of the following practice stories, providing information on their geographic locations, the collaborators, partners, and disciplines involved. The small icons at the upper right corner illustrate the specific focus of each story, together with the scales and/or the nature of spatially situated cases discussed and analysed from the perspective of interdisciplinary and transdisciplinary processes in each essay.



01



PROTOHOME – NEWCASTLE

An Experimental Self-Build Housing Installation



Introduction

Protohome was a self-build housing installation, built over four months and temporarily sited in the Ouseburn area of Newcastle upon Tyne, occupying a site owned by a local development trust and open to the public from May to August 2016. It was a collaboration between Crisis, the national charity for single homelessness, and their members (individuals who are homeless, have been homeless in the last two years or are at risk of homelessness), xsite architecture (a local architecture firm), TILT Workshop (an art and joinery organisation) and myself, as artist and project initiator.¹ Whilst Protohome was open, it exhibited the documentation of the project and hosted a range of events, workshops, exhibitions, performances, artist residencies and talks examining issues of homelessness, the politics of land and development and participatory housing alternatives. Following the events programme, Protohome was deconstructed and reconstructed at a local community farm to be used as a classroom/workshop. A publication and a website (www.protohome.org.uk) were

FIGURE III.1.1 Protohome open to the public. Photo by John Hipkin.

created to extend the reach of the project and to continue conversations on these issues into the future. Protohome is not a “complete” housing model; instead, it is a test, a prototype, a “shell” of a building at 5 m × 10 m in size, without insulation or services, yet it is a model which does show potential to be extended into “working” housing in the future.

Protohome was embedded within the current context of austerity and rising homelessness. In England, rough sleeping increased by 165% between 2010 and 2019, whilst placements in temporary accommodation have increased by 71% since 2011 (Fitzpatrick et al., 2019). Within a context of prolonged austerity, through Protohome, we wanted to tentatively evaluate the added social and educational value that co-produced building processes may offer. The importance of transdisciplinary skills of all participants involved in the project cannot be overstated. In successful collaboration the processes and methods for participating as well as the quality and degree of the participation result in in-depth contributions from both practice and research (Polk, 2015).

The Process

The project was launched to Crisis members in February 2016. Overall, 14 members of Crisis contributed to the project, whilst nine stayed with the project throughout. Three of these members were women and all had very different experiences of homelessness – some were “at risk” of homelessness, living in crowded or unsuitable accommodation, some were street homeless, whilst others were “sofa surfing,” sleeping on friends’ or relatives’ sofas, or living in hostels. Following the launch, joiners from TILT Workshop and I worked with members of Crisis on two half-days per week for three months to train them in woodwork and design skills and to build the “house” in sections in Crisis’s wood workshop.

Most members did not have any previous experience of woodwork, so we began by learning how to use basic tools such as chisels and saws, learning different jointing techniques and using these activities to build the furniture for Protohome. Developing technical understanding through making, many members learnt more effectively through tacit, hands-on methods instead of through linguistic techniques, and as workshop facilitators, we attempted to get group members to use both the expressive qualities of the body and the imaginative qualities of the mind. The method of timber frame building that we used – the Segal method – is specifically designed for untrained self-builders, being built on a dimensional frame using only dry jointing techniques and simple hand tools. The use of simple plans and techniques meant that group members could more easily understand the process of building, as well as undertake a gradual process of learning. As the joiner said, “The whole point of this project is that with very limited tools we can build something quite substantial [...] and that’s how they’ve done it for thousands of years. So it’s more interesting because you’re actually getting skilled up”; whilst a group member, reflecting on the use of hand tools instead of power tools, noted, “if you keep practising with the hand tool then you’ve learnt how to make it properly by yourself instead of relying on a machine.”

During the first few weeks, we also focused on building knowledge about design, undertaking two sessions with the architect whereby members designed their own homes using a design template for Protohome. These designs were exhibited in the finished building to show the flexibility of the design system. Knowledge about the design, planning and building process emerged through instances of seeing and hearing, including a site visit, whereby members discussed how the building might respond to its immediate environment, and a visit to a self-built Segal house in Northumberland where we met the two architects who had built it. The use of a precedent like this was an important



FIGURE III.1.2 Learning jointing techniques in the Protohome workshop. Photo by Julia Heslop.



FIGURE III.1.3 The dimensional grid of Protohome. Photo by John Hipkin.

tool to inspire and motivate members. Whilst much of the structure of the building was completed on-site, each week in the workshop members learnt a new skill – for example, learning how to construct window frames or doors – and during this period members acquired qualifications, distributed by Crisis, including working with hand tools, health and safety, and lifting and handling. Yet, beyond building individual and collective knowledge, our time in the Crisis workshop was vital in building group trust, confidence and a sense of collective purpose.

After three months in the Crisis workshop, we went on-site for two weeks to construct the building, using the elements built in the workshop, whilst the frame, flooring, walls and roof were completed on-site. During this period, Crisis members had an active involvement in all processes of building, including cutting timber, lifting and securing materials into place, and painting and installing the exhibition of project documentation; and so, during this time, the learning did not stop.

Collaboration

As with any participatory process, Protohome was not without hierarchy, whether this emerged from professionals or from the group/community itself. In designing/building processes there is always a danger that the process will be co-opted by expertise or that professionals, such as architects and builders, will hold onto their knowledge, meaning that no “devolution of knowledge” (Fals-Borda, 1987, p. 344) to groups/communities takes place. During Protohome, we tried to challenge the dichotomy between the “expert” and the “amateur” through the cyclic process of planning, action and reflection, as well as through building a sense of trust, respect and reciprocity between the joiners, myself and members. Here, the tutor took on the role of the “interpreter and co-ordinator rather than dictatorial designer” (Fowles, 2000, p. 62). The role of “interpreter” was particularly important. Part of the role of the joiner and myself was to break language barriers down, not through “dumbing down” terminology, but through careful explanation, grounded in real-life examples. In line with the Participatory Action Research’s imperative to build critical capacity, Dean, the lead joiner, attempted to expand the analytical skills of the group by asking members, “What shall we do next? What’s working? What’s not working?” prompting them to assess and change the course of the process and to problem solve. So, instead of leading members directly, he led them indirectly. He also taught through trial and error whereby members learnt by trying and sometimes failing – such as the creation of complex joints, which one member, Daz, had particular trouble with, stating, “It looks like I’ve done it with a chainsaw!” Yet, the success of this methodology was realised when members started teaching each other. Furthermore, Dean and myself wanted to remove the workshops from an atmosphere of “schooling,” whereby the teacher tells and the student listens. When asked about the “teacher–learner” relationship during Protohome, one member, Nyree, stated, “Nobody in the whole time in the Crisis woodshop or in Protohome, nobody once said to me ever... ‘You’re doing it wrong,’ or ‘You’re not doing it right.’” We thus wanted to use the project to actively create opportunities for challenging, questioning and dissension and for interrogation into our own professional working practices.

Collective working practices were central to Protohome. An “ethic of care” between people was particularly important as the lives of group members brought with them certain sensitivities and complexities, as people moved on and off the streets and had health and money troubles. Members wrote a Group Contract, which outlined the ethics of the project, including having respect and care for each other, the importance of listening, and looking out for each other’s well-being in the workshop and on-site. As Nyree said, “sharing responsibility ... for each other, for the equipment,



FIGURE III.1.4 Collaboratively lifting the roof panels into place. Photo by John Hipkin.



FIGURE III.1.5 A public event inside Protohome. Photo by Julia Heslop.

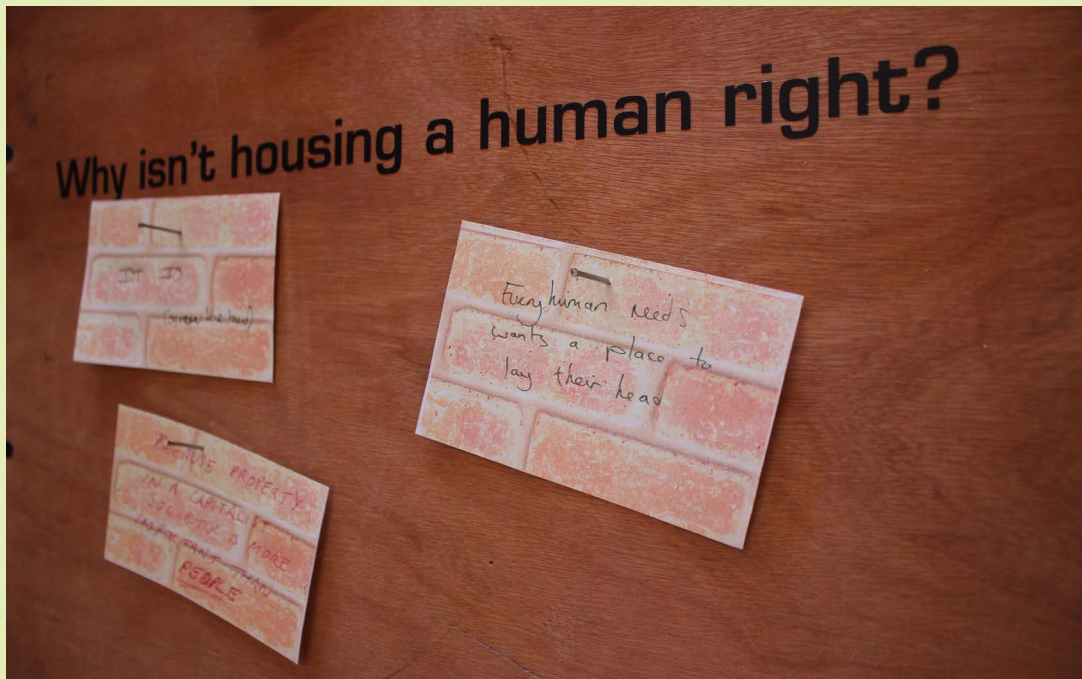


FIGURE III.1.6 Using Protohome to have challenging discussions on the issues of housing, homelessness and participation in building. Photo by Julia Heslop.

for the wood, for the whole build and for the project itself” was vital. Dean described how we needed to be “an extension of each other”: if someone “put[s] their hand out, I’ll put the right tool in their hand and vice versa.” These practices were of great importance because, as Dean said, in large-scale builds, “if one thing stops functioning then the job wouldn’t get done,” but in the worst case, if we failed to work together then someone could get physically hurt. And so, the initial process of group formation was key, as this conversation between two group members highlights:

Sarah: “... to me it was like learning to work with other people. You know people that you haven’t really met and known as long, so you kind of get the ... gist of the ups and downs of people never mind just yersel, it’s how other people ... work around yer and how [you] would work with other people.”

Tony: “Cause we all stuck together and acted like a proper team, looked after each other, instead of arguing and squabbling on.”

Furthermore, working collaboratively with an organisation like Crisis was vital. They provided pastoral support and advice on training, skills, employment and housing for group members, as well as resources for the project as a whole by providing a space to work in, organising trips and refreshments.

Concluding Comments

Through Protohome, we began to understand how practices of designing and making can be a tool for widening access to skills and qualifications, as well as generating opportunities for processes of personal transformation and the creation of new social networks. Some members have now entered stable housing or employment, but for others the project was too fleeting or the depth of personal issues they faced too severe. For members, a growth in confidence allowed them to take control over their situations. As one member stated: “For me now it’s about taking the reins back ... I think you lose it when you get into the system.” For some, it was a learning process through which self-worth emerged: “It’s showing me that I can do what other people are saying I can” – instead of feeling like a burden on society, as one who is homeless, living on benefits or having health troubles, as another member stated: “Yesterday I went home and I was knackered and exhausted but I felt this new sense of ‘I love myself, I value myself.’” Members supported each other both inside and outside the workshop, creating lasting friendships. So, the creation of social ties – what members termed “bonding” – was particularly important, especially for those that were physically or socially isolated. Furthermore, when Protohome was open to the public, members presented the project, as well as speaking about their experience of homelessness, to people in positions of political power, such as local authorities, Homes England and the Deputy Head of Housing for the Greater London Authority. As a result, the project created a route to “speak truth to power” in a public manner. Whilst this was tentative, it did go a small way to question unequal power relations in processes of housing.

There are many ways that the collaborative and participatory process can be improved. There is a need to critically evaluate whose voices are being heard and whose are being left out, and whether people are really being empowered, by undertaking an ongoing, cyclical process of reflection. Slow-burning projects may also have more transformative potential, as opposed to fleeting projects like Protohome, where transformation might be difficult to sustain. People might fall back into old routines when the project ends, or when the resources (whether these be people, skills or tools) are

no longer available or present. Furthermore, when working on building projects and with people that may require extra support or advice, it is important that there is a professional support network involved, yet this is not without its risks – partners may have different guiding assumptions, practices and subjectivities to those of the group. Lastly, there is also a danger that temporary projects become piecemeal, one-off interventions that have little impact on cycles of homelessness and displacement. As a result, it is vital that participatory build projects retain a sense of the political by publicly questioning how, where and by whom knowledge in housebuilding is nurtured, as well as aiming to bring forth the voices of those that have been the victims of housing precarity.

Notes

- 1 This project has been published and was also part of a Participatory Action Research (PAR) project. Instead of an extractive process of research, this project is about working with people through the co-production of new knowledge, not on them, and offers potential to create embedded and equitable processes of learning, particularly for individuals who may be socially and/or spatially isolated or excluded from networks of political or economic power. Throughout the project, an open and reflexive methodology was used, using a cyclic process of planning, action and reflection (Kesby, Kindon, & Pain, 2007). It involved gathering knowledge on building techniques and processes, planning a task and then actioning it, and finally reflecting on what worked and what could be improved in order to begin the cyclic process again. Reflection was particularly important as it established a sense of self and collective criticality and allowed members to assess the knowledge gained. This methodology meant that members could be involved in decision-making processes and enabled the parameters of the project and the activities to adjust to changing conditions and challenges.

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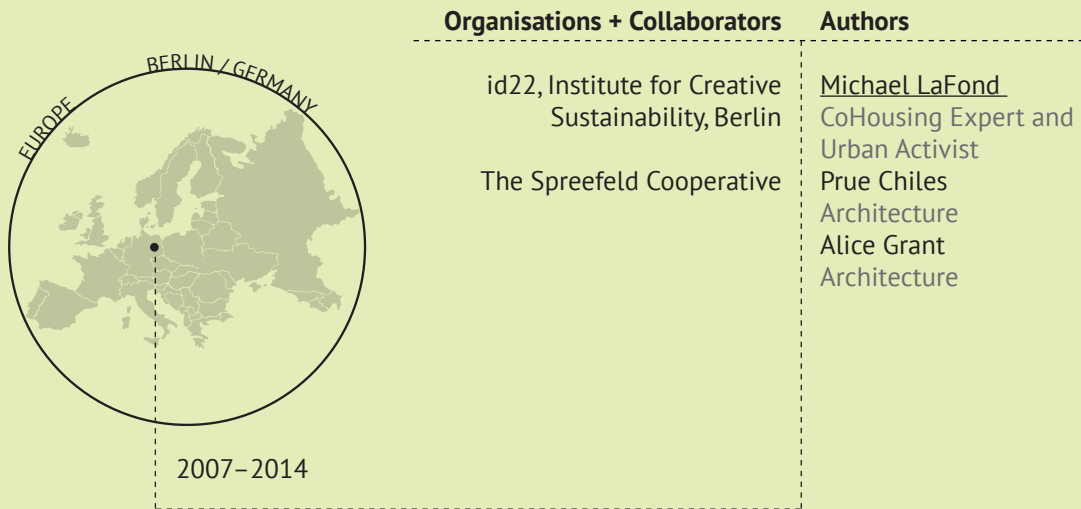


02



SPREEFELD CO-HOUSING – BERLIN

An Island of Common Good Thinking



Introduction

Berlin has had a reputation for radical co-housing projects, and this large cooperative project is one of the most interesting. Spreefeld is a residential and mixed-use cooperative development, consisting of community spaces, mixed residential units, and office and workshop spaces as well as a daycare and extensive gardens. The cooperative idea is not a new one: Robert Owen and his plans for New Lanark¹ aimed to give people a better life. Spreefeld draws on these core values of the cooperative and places it firmly in the future with a commitment to promoting inclusion, diversity, ecology and a wide mixed-use ethos. The project was conceived in 2007 and construction was pretty much complete by 2014. The site is 4,000 m² in area and the final project has 64 flats in three main blocks with other community facilities. However, it is an ongoing project, which, by its cooperative nature, will never be finished, demanding constant and continuing collaboration and the ability to work with many different disciplines and agendas, creating a different mode of thinking.

FIGURE III.2.1 View from the roof looking over towards the Spree. Photo by Prue Chiles.

In Berlin over the last 30 years, there have been many similar projects made possible by the economic and social conditions specific to this city. It is almost impossible to think this could be built today, on this prominent riverbank site on the Spree in Mitte. Land in East Berlin is now highly sought after, well connected and subject to overseas commercial development. However, in the first decade of the 21st century, this kind of project was possible. It was part of the no-man's land next to the militarised border. After the Berlin Wall was opened, these riverbanks first attracted squatters and music clubs.

This was a self-organised project without any external funding, and with a huge amount of engagement from all involved parties, the land was bought from the federal government by the cooperative. It is a project that could be seen as the antithesis of the capitalist development of the contemporary urban landscape in Berlin, as it insists solely on different groups of people having a desire for the common good.

Who Is Involved

The players, participants, clients and their priorities and aspirations, and the trans/interdisciplinary nature of the project due to this. Who are the stakeholders and participants in this project and what are their roles? Who is leading the project and why? Are you consciously working as an interdisciplinary team, understanding that people have different priorities? How have you overcome conflicting viewpoints and priorities of different groups? How are you enabling the team to work together?

We revisited the project in September 2019, after staying and working there for a few days in 2017, to talk to Michael LaFond, one of the key founding members and activists developing Spreefeld. Taking an interdisciplinary approach to urban planning, Michael works and lives in Spreefeld, running id22 – the institute for creative sustainability that is based at Spreefeld, using it as a test bed for sustainable urban community development. The group works especially with future perspectives for civil society-initiated projects that are dealing with housing for the common good.²

The project is as much about social architecture and orchestration as it is about the fabric of the buildings. Three architecture firms³ collaborated with the clients, the cooperative and residents on the project. There was a shared agenda that the project would be socially sustainable and ecologically driven. It seems that this project did, and will always, rely on a core set of values and principles between all parties to create a real sense of collective endeavour and respect. The co-housing principles are expressed in the range of common spaces and in activities such as gardening.

From the very beginning, the cooperative structure has been critical to its success – from planning, construction and the project's initial management. The whole story of Spreefeld is about how people are able to work together, compromise and discuss – the self-organised structure allows for this. In Berlin, co-housing initiatives have become mainstream over the last 30 years; because of this, people are much more educated and less apprehensive about such initiatives, and they are in very high demand, and so finding a group of residents, collaborators and core members was not difficult.

The group is diverse and multi-cultural, and about 85 residents are members of the cooperative. The members are invited to the monthly meetings: about half of them attend. Then, twice a year, the general assembly meeting means that 95% of the people are represented. It has been essential for this group to communicate effectively and moderate any conflict in a constructive way. This allows for decisions to be made and issues to be resolved in the interest of the whole community.

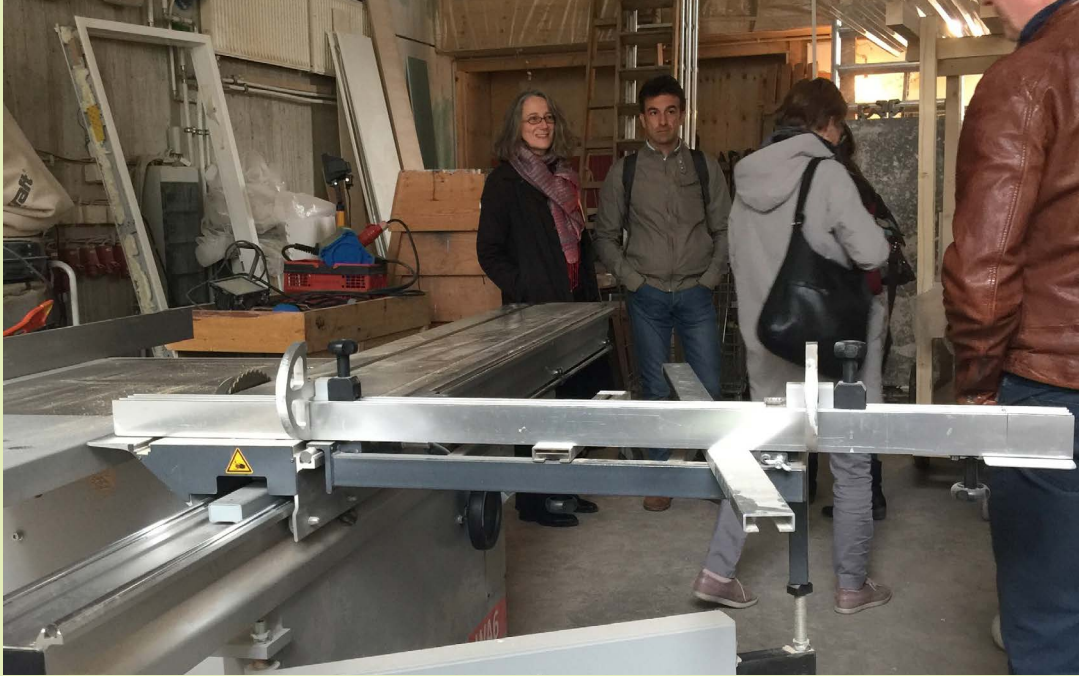


FIGURE III.2.2 The communal workshop. Photo by Prue Chiles.

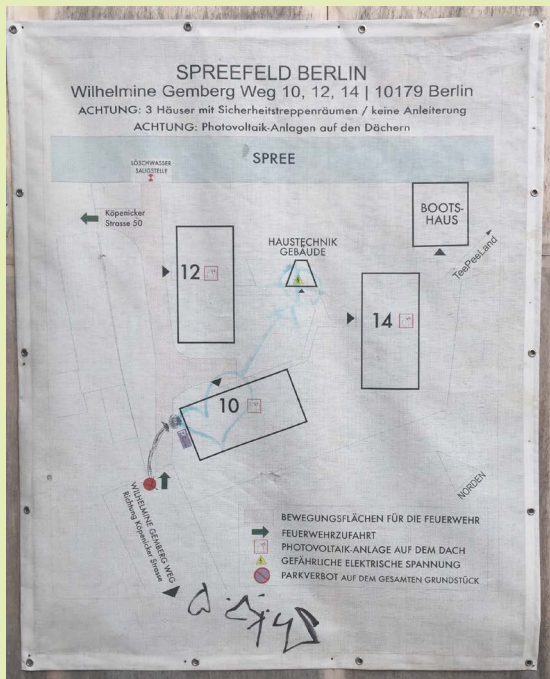


FIGURE III.2.3 Fire map showing all the blocks of the complex. Photo by Prue Chiles.

A Narrative Description of the Project and the Outcomes

Prioritising the stages and scope of the project, mentioning how the trans/interdisciplinary nature of the project enabled or created barriers to the progress of the project. What were the most important stages of the project? Was there a stage in the project in which an interdisciplinary team was really important? Was there a part of the project where an interdisciplinary team made it difficult to progress?

Twelve years after its conception and five years since construction was finished, the project is still an ongoing test bed for collaboration in a community setting. It is a beautifully conceived project, well detailed with a mature landscape and three well-functioning community hubs, the workshop, the dance and venue space, and the community kitchen. It has also developed collective productive gardens and terraces and a beach-like river frontage with pond and central power building, guest rooms and two apartments made available to refugees. A boathouse which was used by the East Berlin water police is now used for parties.

This is testament to the huge team of people, the architects, the cooperative, the businesses, the residents and the neighbouring communities. The project has still not settled down; it is a process of orientation and flexibility. The project has to allow things to evolve. It is seen as a lifelong project with long-term adaptability for the greater good. One of the residents, Claudia, who is one the Spreeacker board of directors – says:

“Acting convivially calls for a deeper consciousness as to what implementation can look like. As part of this transformation, the Spreeacker can make its contribution together with a range of self-organised projects.”

Before the Spreefeld cooperative started to build, the Spreeacker (SpreeAcres) was initiated to activate the land around the construction site. The local population was also invited to engage with the site and develop a variety of garden, cultural and educational projects. Michael cites five to 15 people as the ideal size of the core working group in order to ensure productivity while creating a space for a range of views.

The housing consists of a wide range of different types of units, including private residential flats and communal clusters which allow people private and communal living space. This combination recognises that people do live differently and want different things from a co-housing project. As life circumstances change and households both shrink and grow, there is space for those needs to be addressed: people are able to move to different units within Spreefeld. Although balancing the cyclical needs of residents is an ongoing challenge and will never be simple, the scale of the housing allows for this movement and is key to its social sustainability. One of its key successes is also its biggest challenge, the need for lifelong flexibility and diversity in scale that it offers.

Some of the residents are in the process of buying their units. This provides them with a perceived level of security, and the ability to do this is seen by many as a realistic response to the external pressures that people face in a complex time of economic uncertainty.

The office spaces, community space, nursery and workshop spaces create relationships outside the cooperative group. These connections have become crucial in sustaining and developing the project. The commercial users pay rent to the cooperative – this helps financially of course, but also socially; the cooperative seeks to be outward-looking and integrated to benefit the wider community. The wood workshop, for example, which was well used during the early stages of the project by residents, now demands a wider group of users and external management. This allows residents to still have access to the facilities while the internal demand is unable to sustain the workshop alone. The needs



FIGURE III.2.4 Roof terrace at Spreefeld. Photo by Prue Chiles.

of the community have changed and structures have had to adapt to ensure the project remains sustainable.

The community and commercial spaces are not subsidised by the cooperative, ensuring they are an asset rather than a burden to the residents.

Conclusions and Final Comments

What the project achieved, successes and failures of the project and its potential wider significance.

What were the main challenges you faced? Was working in an interdisciplinary team crucial to the outcome?

Were there any surprises in the project? What is the most significant/successful outcome?

Berlin, like London, is on its way to being a city where investment and buying property, from overseas investors especially, is driving the city's development. The political system only allows for the building of apartments purely for investment. Berlin is also now a city "with no vacancies." The Spreefeld project could not happen in this way now and not on this site. It was born from a radical do-it-yourself time, and when we look at the context today, people are in much more need but the possibilities for operating differently are fewer.

The cooperative now invites the public in more and more, to support and sustain the Spreefeld community, making more connections with the city and the river front. They collaborate with a number of neighbours, the Holzmarkt Cultural Centre, the German Architectural Centre and the Teepee Land next door – an informal settlement and early coloniser of the space.

The sustainability of this scheme demands more networking to develop connections at a civic level and address the global pressures our cities and neighbourhoods are facing. This project did not need any higher governance; now the cities are more out of control, there is a greater need for people to put an emphasis on the common good and cooperation. The mutually beneficial relationships that have been created with examples at Spreefeld must now be recognised within a larger power structure in order to be a viable alternative to conventional housing developments.

Schemes like Spreefeld are “schools for urban democracy” where people are able to learn how to participate and understand how a better life can be achieved together. It relies on core collaboration from many different parties, from central government to new immigrant neighbours. It does not rely on competition between different groups, but recognises when external political and economic pressures must be understood and responded to. This democracy happens at many levels, and it is the negotiating skills and joint thinking coming from different directions that allow for mutual thinking. Spreefeld have a clear agenda: they have learned through experience how to communicate and negotiate well and have developed social skills necessary in different situations.

“This kind of urban mix is best developed and managed by a cooperative. It is democratic and stable for the long term. We want to remain agile and open.... it has to do with quality of housing and of life.”

Christian and Angelika – residents and facilitators

Notes

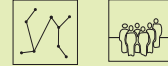
- 1 Robert Owen, social philosopher and leader of early British socialism. He was also, at least until 1827, a practical man of business, closely involved in the direction of some of the largest and most advanced industrial undertakings of his time.
- 2 The project is written about by Michael in “Spreefeld, Berlin: Cohousing, CoWorking and CoGardening” in ID22: Institute for Creative Sustainability, Co-housing inclusive: Self-organised, community-led housing for all, 2017.
- 3 Carpaneto Architekten, Fatkoehl Architekten and BARarchitekten.

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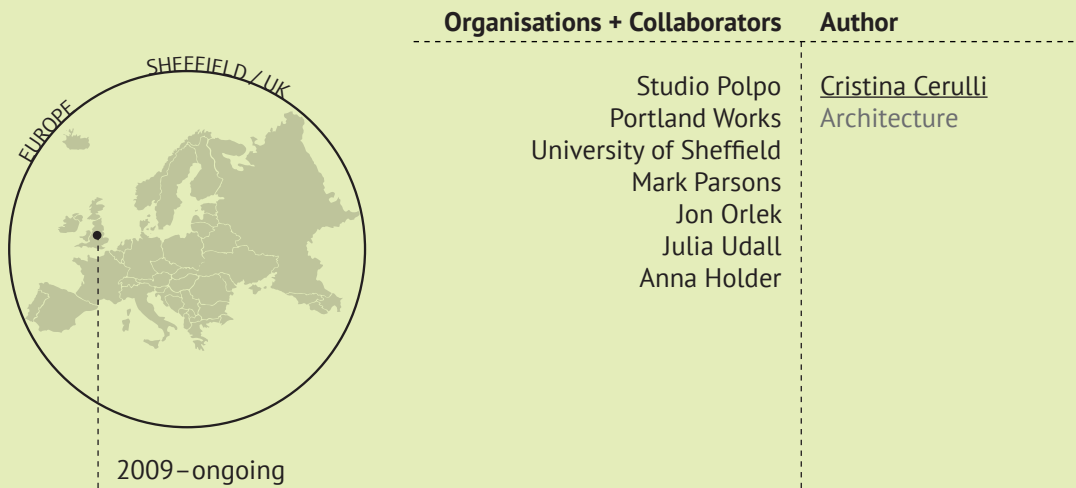


03



PORTLAND WORKS – SHEFFIELD

A Framework for Co-Production and Community Ownership



Introducing Portland Works

Portland Works is a building whose importance was recognised with Grade II* listing by Historic England, a mechanism to protect by law “particularly important buildings of more than special interest” (Historic England, n.d.). Built in the 1870s, Portland Works is an integrated cutlery factory listed as a rare complete example of large integrated cutlery works, with a layout that optimises the use of power in the cutlery manufacturing process, and for retaining both hand forges and steam grinding rooms (Historic England n.d.). Its cultural significance also lies in the fact that, over a hundred years ago, in 1914, it was the birthplace of stainless steel cutlery manufacturing, which is now a key part of Sheffield’s identity. Despite its recognised significance and the fact that the building was home to a diverse community of thriving small businesses, including metalworkers, engravers, artists, wood workers and musicians, Portland Works came under threat in 2009, when its then owner lodged for “Change of Use” to convert the Works into bedsit flats. This sudden threat to both the

FIGURE III.3.1 Community shares issue launch event at Portland Works. Photo by Mark Parsons.

building and its wider historic and cultural significance, as well as to the livelihoods of those using the building at the time, spurred a campaign to save it.

Whilst this campaign initially focussed on opposing the immediate threat – the redevelopment of the building – it quickly shifted towards being a propositional endeavour, with tenants, activists, local residents, practitioners and academics working together to propose viable alternatives, rather than simply opposing the change of use (Cerulli and Udall 2011).

A Knowledge Transfer (KT) grant from the University of Sheffield facilitated a process to explore what sustainable alternatives might be available, through participatory events and research into precedents. A key moment within the KT project was a significant stakeholder workshop – attended by tenants, local residents, councillors and the local MP as well as conservation and community development experts – during which key elements of heritage value were discussed and prioritised. It is during this workshop that the milestone decision to buy the building and to manage it as a community asset was made. The governance and financial mechanisms through which this was achieved were the setting up of an Industrial Provident Society for the Benefit of the Community – essentially a cooperative, with a commitment to the wider community, rather than just its members – and raising capital through community shares, which served as a deposit for a standard commercial mortgage.

In 2013 Portland works was bought by nearly five hundred people, through Sheffield's first community share issues. This recent chapter of the history of the building is a story of how communities with an interest in the Works self-organised to gain control through ownership and cooperative governance, strengthening the building as a renewed centre for small manufacturing, independent artists and craftspeople.

This story was made by many people. Hundreds of hours were volunteered by many to contribute to the multiple strands of the project, from exhibitions to media interviews, case studies of relevant precedents, student projects, business planning, stakeholder engagement and building repairs. The successful outcome of the project is in part due to the convergence of multiple interests, but also to the fact that processes were designed to allow multiple voices, even minor, to be heard, striving to keep the project open to inputs.

As an academic, practitioner and citizen I have been involved in the project in different roles, capacities and intensities.

I was initially approached by campaigners for support with exploring viable and sustainable alternatives for the building. Through the KT grant from the University of Sheffield, where I was then employed, I was able to run a project that culminated with the decision to purchase the building and manage it as a cooperative for the benefit of the community. In the same period I was also involved, on a volunteer basis, for countless hours in the lead up to the community share issue, which involved, amongst other things, the development of a detailed business plan.

The KT grant (£10K) provided support to the Portland Works project through enabling me to employ researcher Julia Udall (a former student of mine and now colleague, who had brought the Portland Works campaign to my attention); commission case studies of relevant precedents, a website and graphic identity for the project and fund participatory events and publicity. The KT project was an “intense” and “punctual” research activity, which enabled the development of an ongoing relationship between the newly formed Portland Works cooperative and the University of Sheffield, creating an informal “framework for co-production” (Udall, Forrest, and Stewart 2015, 4). Part of this loose framework were a number of student projects designed to produce work that somehow assisted Portland Works in achieving some of its objectives, ranging from a building survey to archival



FIGURE III.3.2 Excerpt from Retrofit Strategy for Portland Works. Photo by Studio Polpo.



FIGURE III.3.3 Portland Works – Internal Courtyard. Photo by Mark Parsons.

research to a physical model of the building, strategic documents and event support. These student projects, largely orchestrated by Julia Udall, were in collaboration with Sheffield School of Architecture, the School of English, the Department of History and the then Department of Town and Regional Planning (now Urban Studies and Planning) and ranged in ambition and duration, to suit respective programmes.

Since the building is in community ownership (2013) and no longer under threat, my personal involvement has drastically reduced, but the social enterprise architecture practice I co-founded and am director of, Studio Polpo, has been involved in various ways, notably by securing funds for and advising on self-build upgrade of the building.

With Studio Polpo's support, Portland Works secured a £10K grant from the Architectural Heritage Fund Cold Spots programme to allow Studio Polpo to explore collective and co-operative approaches to facilities management and renovation of the Works. The key outcome of the Cold Spot project was a report making information about the building's fabric, tenants, and heritage visible to steering groups and decision-making bodies. The report also suggested how Portland Works might develop to maintain its character as a lively, creative and innovative space for small scale making. It included a range of fully costed retrofit strategies with suggestions about how and where these could be implemented, with reference to the conservation management study developed by consultants Wessex Archaeology. Tenant issues (including use patterns and rental costs) have also been mapped onto future aspirations for the continuing use of the works as a place of making and innovation (Studio Polpo 2014).

Within the Portland Works project, heritage was framed broadly to include the building alongside its material, technological and social histories. The campaign to save the building gained support from a large number of different constituencies, each with their set of values and priorities: from building tenants, local residents and professionals to stainless steel enthusiasts. Multiple understandings of heritage value appealing to different audiences, created a media friendly set of narratives that helped in promoting the project and encouraging people to support it financially through buying community shares or donations.

The university played an informal but significant role. Elsewhere (Cerulli, 2017) I have explored the political economies of university projects with external partners, framing them as complex ecologies, which, in the context of increasingly neoliberal universities, have the potential to be pockets of resistance, but can also become instruments for validating and reinforcing the status quo. In the Portland Works project the University of Sheffield played the role of the civic university as enabler by offering a grant for the KT project and providing the context for numerous student projects, all of which were instrumental in developing a sustainable strategy for the future of the Works and building the capacity to implement it. The nimble, flexible, strategy for Portland Works to host student projects was a mutually beneficial arrangement which benefitted the university by providing a live context for learning experiences and Portland Works by providing small, targeted, pieces of work at no cost.

The facilitated process of exploring viable and sustainable alternatives to the speculative redevelopment that would have obliterated much of the heritage value of the Works led to the collective decision to acquire the building through community ownership. This required intense work around developing a robust business plan to support a community share issue, through which the capital required for the purchase was raised. The purchase itself, however, was a relatively straightforward process: since the building was privately owned, it could be easily bought with a private transaction. As the Save Portland Works campaign gained substantial momentum and reach,



FIGURE III.3.4 Portland Works entrance sign before refurbishment. Photo by Mark Parsons.

it seemed increasingly unlikely that the planning application for change of use of such a significant place of manufacturing and creative enterprise was going to be granted. This created the ideal conditions for negotiating the purchase of the building: with the planning gain resulting from the speculative planning application less likely, the building's owner was amenable to dispose of it, given that due to its relatively poor state of repair and its heritage listing status, Portland Works was likely to become a liability. The purchase of the building was, therefore, a simple transaction, negotiated only in terms of price, without a need to look at the broader value of the building, or to align values between stakeholder groups and owner.

The issue of heritage value was central throughout the process of exploring, promoting, acquiring and managing community ownership at Portland Works. Underpinning these processes was a commitment to openness and inclusivity, which resulted in wide support and broad but also nuanced and diverse understanding of the heritage value of the building and its associated ecosystem of users, community owners and stakeholders.

The Save Portland Works campaign was effective in shifting the perception of the heritage value of the building from a remarkable yet crumbling edifice to be preserved, to a thriving hub of manufacturing and creativity pulsating from this remarkable building.

The planning application for change of use portrayed Portland Works as crumbling, unloved and unused and framed the proposed redevelopment as something that would save this fading piece of heritage.

A measure of the impact that the campaign had in reframing the perceived heritage value of the building is the u-turn in the position of English Heritage (EH), the then statutory body – now a char-

ity – tasked with stewarding the historic environment in England. EH initially supported the planning application to convert Portland Works into studio flats, on the grounds that this redevelopment would ensure that the fabric of the building was preserved; later on, however, EH changed its position to support the Save Portland Works campaign, once it became evident that the rich heritage of use within the building and the thriving community of users were as key to the building's heritage value as its layout and fabric.

As part of the drive to raise capital through community shares, a wide-ranging campaign explored multiple notions of heritage value, appealing to a range of audiences (local and global). The approach adopted by Portland Works was not to seek a consensus on what is of value, but to strive for a broad, open framing to allow for a range of views and inviting support from constituencies with different agendas and priorities (e.g. stainless steel enthusiasts, local businesses, artists, customers of Portland Works tenant businesses etc.).

Overall the multiple stories of the Portland Works project and its remarkably positive outcome of community ownership are a testament of what is possible when multiple interests, values and desires converge and when the energy and capacity of each participant are harnessed towards shared goals and objectives. It needs to be acknowledged, however, that such processes are very resource intensive, and require significant commitment from a large number of people. Once the immediate threat is removed, such commitment is harder to sustain and a transition towards less intensive, hence more inclusive, processes is essential.

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04



URBAN CHANGE – GAGLIATO

The Future Story of a Calabrian Hill Town

Organisations + Collaborators	Authors
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Introduction

This Story from Practice begins at the end of the chapter in this book “A Creative ‘NanoTown’: Framing Sustainable Development Scenarios with Local People in Calabria, Italy” (Chapter II.2). The successful outcome of this international event created momentum to continue the project with more defined physical development and regeneration proposals for the town. The first “catalytic” week-long workshop in Gagliato, in the summer of 2017, combined with the NanoGagliato festival involved a large team of regeneration and development professionals, academics, master’s students in architecture, urban design, planning, local development, sociology and economics and local people in the town.¹ The next phase of the project, described in this story builds on the outcomes and policy recommendations of the first workshop; understanding that the complex issues, the time needed, the scope and the messiness of sustainable development processes need to cut across disciplinary and professional boundaries with practical and academic knowledges to be in any way effective or initiate change.

The Town

The small-town settlement of Gagliato is at an altitude of 450 metres with a population of just 500 inhabitants. The town and surrounding area have seen a steady population decline particularly since the 1950s, suffering in part due to the global phenomenon of rural–urban migration and emigration, mainly to Canada. The town’s remoteness is heightened by the beautiful rugged mountainous terrain.

Like hundreds of other small towns throughout the South of Italy, Gagliato has struggled economically for many hundreds of years. With both Greek and Roman remains and a mediaeval core (Figure III.4.1), Gagliato is situated in the province of Catanzaro, ten kilometres from the Ionian coast in the region of Calabria. Henry Swinborne in his travels in the two Sicilies in 1777 said – “*matters are not yet in so desperate a situation, as to preclude all possibility of restoring these provinces to a state of opulence and populousness.*”² This could still be an aspiration today, but for the pervasiveness of organised crime, namely the Ndrangheta’ and many other national Italian political factors that continue to thwart prosperity in Calabria generally. This first lesson on Calabrian history was told to us in a taxi coming from the airport on our first visit.

The Project and the Players

Co-ordinating and preparing the work, and authors of this story, are a team from Newcastle University, architects who attended the first workshop. We embarked on a year-long “live” research and design project culminating in a *framework document for future growth* with proposals and visualisations for the town to use in their funding bid to initiate a regeneration project in the town. A number of people were central to the project, firstly Giovanni Sinopoli, a surveyor/geometer, is the font of all knowledge on Gagliato, especially on the physical buildings and structures in the town. Giovanni works closely with the town, the mayor and the US scientists and philanthropists, led by Paola and Mauro Ferrari, who all jointly founded in 2008 the academy of Gagliato and the highly successful annual nano–technology conference NanoGagliato.³ It was Giovanni who put together the bid to the regional government. Paola organises and inspires many of the projects that take place in the town for one week in July, including the educational non–governmental organisation NanoPiccola, which aims to raise interest in science and technology subjects in schools in the area and in turn create more scientists, and the townspeople and their local expert knowledge themselves, are full of ideas and highly proactive in shaping their future.⁴ Giulio Verdini of Westminster University has also continued to participate and contribute to the project as well as diverse enabling partners, the residents of Gagliato.

Coming from conversations and feedback with the residents, the brief for this next part of the project was to build on the themes from the first workshop with more tangible proposals.

Five interdisciplinary groups in the initial workshop had explored themes of children and education, skills and creativity, science (a town of nano–technology) and art and well-being, through dialogue and participatory sessions, with both adults and children of the town.

The five groups then presented their ideas to the whole town at the town hall, and then to the Calabrian regional government at the huge new regional government building outside Catanzaro, the capital of the Calabrian region.

Our second visit, at the end of November 2017, found a very different place; quiet and chilly. At this point, we had worked on the project Gagliato for nine months,⁵ researching the region, cultural history, politics, industry and demographics to build on the themes from the summer workshop.

However, much of the research was carried out from the UK, thus being in Gagliato again was paramount to really understand its context and atmosphere. We agreed with all the partners that a series of short, mid- and long-term projects for the town was a useful way forward. Paola Ferrari of NanoGagliato joined us and was an invaluable translator and facilitator for us. Language could be an issue with the residents on a day-to-day basis but, through perseverance, visual props and being teased from time to time we built a comfortable relationship with the townsfolk.

The most significant aspect of this visit was a meeting with the whole community of Gagliato, including the mayor, in which the discussion was passionate, involved and helpful. The local people were keen throughout to highlight the things that would create the most impact for them, although the mayor at that time was often a little difficult to read, raising doubts over whether the town hall was really behind the project. Nonetheless, the proposals which followed were based on the aspirations of Gagliato's inhabitants, as well as aligning with the values of NanoGagliato. We departed a few days later after a number of planned sessions, discussions and anecdotal chats with a clearer idea of the projects that seemed popular and feasible, but perhaps more confused as to how we should prioritise them.

The most pressing purpose of the work now was to provide visual material and urban and architectural outline ideas, proposals and visions for the application to the regional government for funding. So the study developed into a fully illustrated feasibility study, splitting the proposals into three sections. Some of the short-term proposals could be implemented immediately, and others will take more planning, legal permission and substantial funding. The short-term ideas prioritised potential art and design competitions for decorative balconies and public staircases.⁶ “Colouring the town” captured many comments and suggestions, prioritising painting and rendering buildings in specific colours and how this might affect the appearance and image of the town. Although not contributing to the key challenges of depopulation and lack of opportunity in the town, it was acknowledged by all that the physical appearance and possibility of more tourism were key “quick wins.”

There was an emphasis on looking at longer-term strategies, including various new tourism and education projects as well as new micro-industries centred around local produce and agriculture, inspired or tested through the NanoGagliato initiatives. Tackling the abandonment of the lower town – *the borgo* – and its renovation became the most vital and critical project in the mid- to longer term (Figure III.4.2). These proposals included ideas for opening up the public realm around the Church.

The third visit, in late July 2018, at the end of the NanoGagliato 2018 week, was quite an awakening. Emma, James and Rob, now qualified and taking time out of their “day jobs” in the UK presented their work, and their report at another town meeting at the end of the festival, organised again by Paola and Giovanni and Giulio Verdini as well. The event was well attended by local residents, NanoGagliato participant scientists and other interested parties, including a representative from UNESCO. Comments came thick and fast from passionate members of the community – a teacher and deputy mayor's wife, who always contributed with great ideas was excited about just getting on with it. Others talked about various things they either liked or were not sure of. Mauro Ferrari reminded us that the very core of NanoGagliato and the future of the town was the encouragement of science, which was paramount, and that it was becoming eroded by more “cosmetic” improvements. Many of us felt, however, that it is through the implementation of short-term practical proposals that ownership within the town will increase, and so this was hard to hear.

A long-term ambitious plan the NanoGagliato team have been working on, the Accademia di Gagliato headquarters, is based in the lower part of the town in the mediaeval *borgo*, in a partially



FIGURE III.4.2 Collage showing ideas for opening up the public realm around the church. Authors: Rob Wills, Emma Kingman, James Anderson.



FIGURE III.4.3 The new Frantoio Building, a new headquarters for NanoGagliato. Authors: Rob Wills, Emma Kingman, James Anderson.



FIGURE III.4.4 The existing entrance to medieval Borgo. Photo by Rob Wills, Emma Kingman, James Anderson.



FIGURE III.4.5 The proposed entrance to medieval Borgo. Authors: Rob Wills, Emma Kingman, James Anderson.

built Frantoio building (Figure III.4.3). This has a dramatic expressed concrete roof, designed by an artist. When finished this building will form part of a “Learning Campus” for the Town. This will oversee the planning of the annual NanoGagliato events, as well as forming a separate non-profit organisation called NanoPiccola, which intends to implement and disseminate science and technology learning amongst children in the area. Here also, newly regenerated homes in the borgo will share space with new local economic ventures and services to meet the demands of Gagliato’s expanding role as “Town of the NanoSciences.” This would also support and generate ideas for local and regional agriculture and locally grown produce, where green spaces around the town could be utilised to grow crops – oregano being a central component in these research and experimental plans. Our proposals were asked to consider these in a wider plan for the *borgo* and how this might form public space (Figure III.4.4 and Figure III.4.5).

Over three visits, we were just beginning to understand how interdependent Gagliato is, and should be, within the region. It must be part of a system or network of towns, using regional assets and publicising this; not competing but collaborating and celebrating similarities and diversity. When we visited neighbouring towns we witnessed and heard of exciting initiatives and new enterprises. The value of culture was beautifully illustrated in Cosenza, for example, where the remarkably intact city centre, is supported to retain historic cafes and artisanal shops, such as violin and lace makers. Art, as in classical times, abounds in the city. Around the Duomo, a UNESCO World Heritage Site, an extraordinary figure of a woman tells of the under-represented role of women in the city. The notable buildings all have information boards outside with plans and sections of the buildings – suggesting an architectural literacy with which most people are comfortable, both local and visitor. Badolato, a small picturesque hill town, half an hour away from Gagliato, has an inspirational mayor who was one of the first to give empty properties to immigrant residents who want to renovate a property to encourage them to stay in the area.

We also looked for examples of good ideas for regeneration from different countries, and these have been included in the final feasibility study as the next participatory tool with which to work with the community. We learned almost everything from local knowledge wherever we were, whether walking around the town, visiting a church or at a town meeting. We met local people and families visiting family from Canada. We learned from other disciplines, particularly about invisible things. One woman doctor, part of the nanoscience community, who now owns a house in the town, treated some women who needed medical attention and this opened a tinderbox about the number of women carers in the town, who were not able to get out much and were invisible.

Challenges of the Project

For us, this was a transdisciplinary project at all stages, as the complex issues and challenges were thought about from the different perspectives of the many partners in a collaborative and participatory and sometimes conflicting way. Thinking about the successes of the project, it was clear that the differences between all the partners, as well as the similarities, affected the success of the discussion of the best directions for the development of the town.

The aspects of the project that were most successful surrounded the relationships built with the people of the town and the momentum and the growing “buy-in” of the townspeople and our partners. The embedded actions and long-term presence of the NanoGagliato initiative have empowered the town and made our work easier. The townspeople are open to change. The best way of working with the town was by being present; working with local people, being helpful and



FIGURE III.4.6 Gagliato, Experimental town. Authors: Emily Charlton and Toghrul Mammadov.

collaborative. We used the “process of design” and the power of the visual image to discuss and to challenge. We brought an aesthetic vision into the everyday, by prioritising the history, culture and art practice of the place. An aesthetic sensibility involved, for us, attributing meanings to form, and we found that this did not pertain to any “social class.” Art is perceived as a “means of distinction”⁷ and everyone can buy into that.

Our aim was to participate, to ask the right questions and keep everyone inside; acting as curators, researchers and collators of ideas. Only then could we generate proposals. Our methods needed to be congruent with the lived experience of the townsfolk and be part of the narrative of everyday lives, for proposals to be relevant enough to create change in the future. It was the design images that became one part of the bid to the regional government for “seedcorn” regeneration funding for the Lower town Borgo. “Before and after” photomontages, were the most popular drawings, they allowed everyone a glimpse into the future, to see a view, albeit altered, that they recognise. For example, on one proposal we made, the town liked it, but to alter a disused part of the church externally, we were gently reminded that we would need permission from the Vatican, which might take some time, and maybe that should not be a priority. The three visits allowed us to make mistakes, to do things more than once and tolerate different readings from different disciplines and directions. However, it is still difficult to get people to be critical and to comment. The important thing we felt was to keep the report open and useable and not fixed or finished. When a document is finished and looks “polished” it is difficult to comment. However, the importance of visualisations, of drawings and collages cannot be over-estimated.

The challenge of working with artists or scientists with completely different ways of working and cultural backgrounds is a challenge and needs a careful disentangling of power structures. We were, however, all looking at the future development of Gagliato by looking at the past context and the possibilities this gave us, or at new production from future possibilities of science and technology and art. The two can make a powerful cooperation.

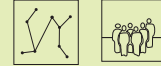
The next stage of the project which started in February 2020 is working on a more concrete proposal to develop Gagliato as an “experimental town,” with an aspiration in the future of creating an architectural “demonstration project” looking at different ways to restore or repair or rebuild empty and abandoned properties.

Notes

- 1 Chapter II.2 of this book, written by Giulio Verdini et al., describes in greater detail the relationships and issues encountered in Gagliato.
- 2 From *Calabria, the Other Italy* by Karen Haid, p. 140. Calabria is described as the other Sicily.
- 3 NanoGagliato (www.nanogagliato.com).
- 4 Multiple funding sources for the project came from the Gagliato Town Council, the NanoGagliato non-governmental organisation, Intrepid – a European Union COST grant looking at interdisciplinary working – and Newcastle University.
- 5 This started as a “linked research” final year (5th/6th year) architecture project at Newcastle University School of Architecture, Planning and Landscape that ran alongside their thesis projects and is a design research project in which a member of staff is involved. These are popular, as they are live projects in communities that require agency and application to real-world issues and solutions. This is borne out by the fact that the students carried on after they had finished university as newly qualified architects.
- 6 For example, one of our collaborators in the first workshop, the School of Architecture at the University of Calabria, helped the town put on a competition to paint one of the characteristic flights of steps, and students and residents from the town actually painted the winning design in summer 2018.
- 7 Bourdieu in *Distinction*, 1984 – in the *Modes of Appropriation* chapter p.264.



05



SINO – FRENCH COOPERATION

Cultural Heritage and Rural Area Development In Guizhou Province

	Organisations + Collaborators	Authors
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Introduction

Building on a long-standing relationship between urban planners at the Tongji University in Shanghai and professionals from different public sectors selected by the Observatoire de l'architecture de la Chine contemporaine¹ in France, a cooperation on the role of culture in developing rural villages in Guizhou province in China was kicked off in 2008 by the invitation of the Guizhou Province Bureau of Culture. Thereby, the aim was to develop a holistic approach to enhance the protection of natural and cultural landscape, including social and economic issues. Our common aim was to promote a sustainable development, while considering that the tourism industry could not be the main support.

Indeed, the province of Guizhou, with its 40 million inhabitants, is largely rural, due to its mountainous land, and has therefore avoided our contemporary way of life for a long time. The mountains of this province have provided a refuge for many ethnic groups (Dong, Miao, Buyi, Yao, etc.), who

FIGURE III.5.1 Dimen village, view from the river. Granary in the foreground, houses on the hill. Photo by Françoise Ged.

have all developed a rich natural, cultural and intangible heritage. These villages were relatively autonomous until the beginning of the 21st century, up to the arrival of highways, railways and airports, which led to the fact that most of the villages could then be reached from large Chinese cities within a few hours, rather than days. Each village's exceptionally rich culture is now experiencing growing domestic tourism, which creates jobs and economic growth, but also threatens to upset the balance of these traditionally circular and environmentally friendly economies. How to find a balance between economic development and the proper enhancement of the exceptionally rich culture and way of life?

From the beginning, an incremental approach was developed, which seems appropriate to the rapid economic and social changes in China and to variations of the possibility of financing actions in China or organising professional training to France. Between 2010 and 2013, an integrative approach combining arts and humanities was developed and practised. For example, a programme with photographers was organised, aiming at providing their personal insights about natural and cultural heritage in Guizhou province, paying special attention to giving respect and dignity to places and people in their daily life and know-how. With the support of the program Archives on Recent Past, two photographers, one Chinese and the other living in France, were asked to reveal their perception of heritage in rural places. The results were shown in an exhibition and disseminated in publications.

Another example is the Sino–French seminar, which was organised in summer 2013 in Guizhou. It gathered experts from built heritage, architecture, ethno-musicology, textiles, agronomy, writers, museology and administration in order to exchange information about best practices. A short documentary was realised, presenting the advantage of interdisciplinary work, upstream of the project to be carried out.²

This approach aimed to facilitate mutual learning and revealed to the participants the importance of combining disciplinary perspectives. Mutual learning and understanding across cultures and language divides was further enhanced by horizontal exchanges offering the opportunity to pursue the dialogue in each of these fields, through different workshops. Then, a final meeting in France provided the opportunity of sharing information with a broader audience about cultural and natural heritage protection, urban tools and urban development processes among decision-makers and local authorities from both China and France.

In fact, the rapid development of the last two decades has severed the link between nature and culture, changing conditions of life with a richness of culture disappearing quickly. What are the best tools, for example, to support the disappearing knowledge in the local language about songs, embroidery, dyeing, medicinal plants and health care, etc. which are not important in primary school education? How does one maintain the memory of this very holistic way of life?

In France, we established an institutional blog on the French National Scientific Research Centre (CNRS)³ portal, on the basis of photographs and meta-data, where we could organise the materials collected through seminars, study visits, music recordings and photography, in order to gather appropriate information and comment on all we have produced.

The Actors

The Chinese and French parties already have 20 years' experience of common engaged practice. On the Chinese side, the team is composed of urban planners from Tongji University who are both practitioners and academics. They have access to national or international research action



FIGURE III.5.2 Kongbai village, old women and French ethnomusicologists sharing songs. Photo by Emilie Rousseau



FIGURE III.5.3 Drawing of a French student, participant of the joint workshop between Tongji university and École de Chaillot in Zenchong village. Photo by Françoise Ged



FIGURE III.5.4 Zenchong village, students and professors of the joint workshop between Tongji university and École de Chaillot. Photo by Françoise Ged



FIGURE III.5.5 Residency of French musicians and researchers in Dimen village. Photo by Fabien Da Costa

projects, as in Guizhou province, by working with national policy makers, regional directors and local authorities. Our main partners, Prof. Zhou Jian, Prof. Shao Yong and Prof. Ruan Yisan have contributed to establish the World Heritage Institute for Training and Research – Asia Pacific⁴ (WHITRAP), created under the auspices of the United Nations Educational, Scientific and Cultural Organization in 2006. In addition, various actions have been organised in Guizhou province and in France with the Culture Bureau of Guizhou province, with the academic fields, with Dimen Eco-museum which is an interesting structure partly financed by the Culture Bureau of Guizhou, as well as with cultural associations and other experts on the French side.

The Challenges of the Project

Several challenges were encountered during the duration of the cooperation. The first is the different institutional logics and standards in the two countries. The starting point of the Sino–French cooperation is based on urban heritage protection and regulations. On the Chinese side, urban heritage protection policy in cities and now in rural areas was then mainly under the supervision of the Ministry of Housing, Urban and Rural Development (MOHURD), previously the Ministry of Construction, which had a mutual agreement with its French counterpart, but not with the French Ministry of Culture. But, in France, the protection of built heritage in cities and protected areas is conducted by the State Architects and Urban Planners, who are experts under the auspices of the Ministry of Culture. Because of this difference of status in the two countries, we have to face the difficulty of competition between the ministries rather than building bridges according to the common topics of protection and urban planning. On an individual level, however, the Chinese and French experts involved had the competences and disposition to overcome this barrier and to continue the programme. A second challenge is that interdisciplinary research is not so common in the Chinese context and requires a lot of work from our Chinese partners. Our cooperation, however, led to an increased understanding of the connection between rural and urban development by both partners, and thus offered enthusiastic aspiration for an interdisciplinary approach by the different people involved in the process.

So, are we ready to shift paradigm? The comprehensive approach of the questions we encounter in Guizhou province require us to avoid the predominance of a specific discipline and to take more time to listen to the different experts, the practitioners, the local population and the local government. This approach requires that all participants share the same objective, the same vision. It is, however, difficult to reach a common objective, if you do not see it or you are not able to share it. How to overcome this barrier? Only by encouraging long-term processes, with the support of education and mutual learning through experimentation, can this barrier be conquered. A long-term process requires funding and institutional support, which leads to the third challenge we want to raise awareness about: limited access to funding. During the 20 years of cooperation, we have tried to seek financial resources according to opportunities and national policies. Currently, the Chinese side provides the fees for accommodation and transport in China and we do the same on the French side. Because of the Chinese economic growth, their needs and the funding required are different: during the first ten years, the French side gave support for scholarships and internships for young researchers for six months or one year for inviting the Chinese experts and the local authorities' representatives. Gradually, the Chinese side need more experts to go to China, and take responsibility for more fees, including international transport and accommodation. On the French side, after a period with good support from the French embassy, we are trying to implement regional-level cooperation with China, as decentralised cooperation between cities begins to be more important. After investigations

in France, we identified different structures that could have suitable experts who could share their knowledge with our Chinese partners. However, the barrier is in establishing a link between institutions and structures, to create transdisciplinary processes between institutions, associations and professional structures from different places.

What Have We All Learnt Together?

One important result was a half-day meeting of the Guizhou project, with all the disciplines involved gathering in Paris, including Chinese and French speakers, who have discovered that they could interest numerous and varied publics.

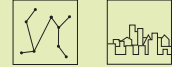
First of all, we learnt on both the Chinese and French sides the importance of mutual confidence and the length of time required in the cooperation process. We could pursue experimentation through different phases, in Guizhou province as well as in different rural areas in China, where similar questions are hot topics. Then, by organising field seminars and workshops, with students from China and France, with local inhabitants and with the support of regional authorities, we will take steps for the following generations, trying to create links between different disciplines and universities. We are giving opportunities for the exchange of information on best practices and for the sharing of new viewpoints, methodologies and analyses.

Notes

- 1 At “Cité de l’architecture et du patrimoine” – a cultural public institution under the auspices of the French Ministry of Culture.
- 2 https://www.youtube.com/watch?time_continue=6&v=WWf8gwETbbY&feature=emb_title
- 3 2019: <https://didomena.ehess.fr/collections/bv73c054d?locale=fr>
- 4 <http://www.whitr-ap.org/>

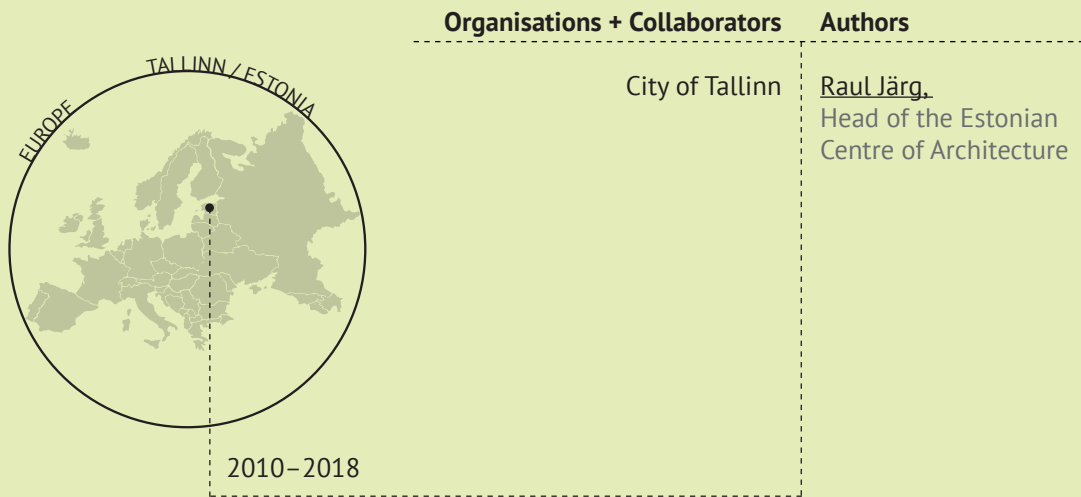


06



CITY FORUMS – TALLINN

Changing the Way We Think

**Introduction**

Today, public and participatory urban planning seems self-evident, but considering how long the history of human settlements is, the phenomenon is nevertheless a very recent one. In Estonia, the layers of public urban planning are even thinner, since we only escaped a totalitarian regime less than 30 years ago. Replacing a tradition of planning by a small group of specialists with public and participatory planning can be recognised as the kind of paradigmatic shift that began in the second half of the last century and slowly gained ground in Estonia only in the late 1990s. A hundred years ago, the question of what kind of city we want and need, and the best spatial solution, was answered primarily by architects and city planners, not by geographers, sociologists, psychologists, doctors or lawyers, and even less by the public.

Public and participatory urban planning is rather a complex model of thinking and acting that can be illustrated by a DIKW pyramid, where Data, Information, Knowledge and Wisdom are

FIGURE III.6.1 Intrepid group at the Tallinn Creative Hub – converted Power Station and today’s base for City Forums. Photo by Prue Chiles.

located on lower levels and decision-making at the very top. The journey from data to competent decisions needs an intertwined view from various fields, which also means involving a wide group of experts – inter- and transdisciplinary collaboration, which, in turn, needs continuous development and analysis. In the city, different desires, interests and understandings cross, intertwine and collide; it is truly the Tower of Babel. There is no single answer to the question of what the city that we want and need is, as each one of us has a slightly different vision in mind and each city has its own historic context.

Urban planning is thoroughly regulated by law, both as a process and a phenomenon. In addition to formal urban planning, urban changes can be influenced also through informal discussions, activities and communication with the public. One example of such an activity is the series of Estonian City Forums, initiated by the Estonian Centre for Architecture – two-day workshops where architects, urban planners from Estonia and abroad, and experts from various related fields and representatives of interest groups and stakeholders are invited to participate. City Forums have focused on specific issues concerning urban space and have been open to everyone, and the results have been publicly presented. Since the results of the discussions are well documented, the forums captured the development and history of urban planning in Estonia.

It was crucial to approach the formal planning system with a view from outside by engaging key target groups and their representative organisations into public discussions, to inspire the participants with well-prepared argumentation and gain their support; however, at the end, experts with extensive knowledge in their field still played the most significant role. When considering solutions and alternatives in any substantial sense, it is the expert knowledge thorough research that truly matters. As the organisers of City Forums, we felt the need to move beyond the usual and ask questions such as, “How can we demand that the designed and built environment includes positive or a richness of emotions? How can we establish spatial requirements to enhance physical and mental well-being? Are these questions even relevant?”

Intuitively, the answer would be yes; however, if we really delve into it, we must admit that there are no universal answers and that, therefore, formal planning has to develop unconventional approaches. This is where a wider circle of experts can give a hand to the architects and urban planners, since they all have a unique point of view and are thus able to present supplemental arguments. When we started with City Forums, we probably did not fully understand the importance of involving a wider circle of experts and various perspectives right away. Having had the experience of bringing people together, we can now claim with confidence that discussions like those that developed during our forums are the best way to intertwine and synthesise different arguments. Today, the City Forums include architects and landscape architects, representatives of various departments of the Tallinn municipality, academics from universities, experts from research institutions, business companies and cultural organisations, and representatives of neighbourhood organisations; also, the forums are open to individual citizens.

The Narrative

The Centre for Architecture began organising City Forums in 2010, since we understood the necessity to change our mental space – the way we think in order to implement change in urban planning in Estonia. Through City Forums, public discussions could be initiated, involve a wide circle of experts and interested parties, and inspire citizens. Hubs of public space and changes that

have an impact on a large number of people are essentially often conflict zones. The community is concerned and wants to get involved; at the same time, designing public space, mobility and city planning requires extremely specific knowledge that the public does not possess. With a combination such as this, there is a danger that meaningful discussion gives way to emotions and slogan-like appeals. We witnessed that in order to avoid confrontation and prevent underdeveloped ideas from being implemented, the discussion must start as early as possible and include a diverse set of interest groups, and the most relevant ideas have to be identified through coordinated conversations.

City Forums have been conducted following a specific format. The forums are always two-day events, similar to 48-hour hackathons. The discussion always focuses on a specific issue or space and it always has a set goal that the discussions need to achieve. City Forums consist of two public sessions (at the beginning and at the end of the event) and two sessions with invited participants. During the initial discussion, the theme is opened from various perspectives. Afterwards, work continues in groups with invited experts participating. Each group has a moderator and a slightly different task. In addition to a moderator the groups are provided with help by professionals whose task is to prepare the presentations with illustrations, diagrams, images and plans to be presented at the public session concluding the City Forum.

Ideas presented at public discussions have already been often highlighted in one way or another. The task of the forums is essentially to generate completely new ideas but to rediscover previous conversations and interpret these in relevant language and form. Urban changes may take a long time, and what is being planned today may be realised after decades. Consistency is the key. For example, one of the fundamental pillars of current urban planning in Tallinn, opening the city to the sea, was first drawn on city plans after World War II, more than five decades ago. Today, this old topic is still hot. The 2010 City Forum focused on the seaside and connecting it to the city centre. Forums with a similar theme were held in 2016 (“Sea by the Main Street”), 2017 (“Open Seaside City Forum: Old City Harbour”; “Wishing for the Heart of the City”) and 2018 (“New Old City Harbour – Good Public Space”) and hopefully there are more to come.

Architect Tiit Sild, the coordinator of several City Forums and preparatory activities of the Tallinn Main Street project, wrote in 2018 in the magazine *Maja*:

“I have participated in around 10 City Forums and also been part of the preparation team, and in a way it feels as if in all cases we keep talking about a human scale, visually organised, functional and pleasant space with balanced traffic. These priorities may seem boringly similar, but the reality is that during the last 15 years we have seen a continuous but quiet, yet consistent development, involving expertise and ideas of wider interest groups, and I think we are on the cusp of shifting to a new paradigm.”

Today, we are witnessing the postponement of the construction of the Tallinn Main Street. Despite this political decision, which prevented the project from being a revolutionary step, we acknowledge its evolutionary value in future city planning.

Concluding the first City Forum in 2010, architect Tõnu Laigu admitted:

“... on private properties public interest is often cast aside; when it comes to the city’s or state’s properties, public interest is not clearly defined. People’s and/or non-profits’ initiatives are slow to take root. Space is defined by multiple thematic and zoning plans and with specific developments and constructions.”



FIGURE III.6.2 Walk through Tallinn. Photo by Prue Chiles.

Although the first City Forum took place almost a decade ago, we are faced with the fact that this conclusion would fit well in City Forum 2020 also. Still, the time and energy invested so far is not meaningless. If we compare discussions and conclusions, over time they have become considerably more detailed. In addition to repeating and rephrasing the previous statements, every new discussion has provided new knowledge and helped to circulate it.

Lessons Learned

Recently, a young colleague asked me if the pencil is still, in fact, being held by the architect/ city planner. My colleague was not sure if specialist opinions matter and if political power, money and other incomprehensible factors have perhaps not decreased the value of the expert. That this issue is still very much relevant was confirmed by a respected radio journalist in summer 2019, probably a driving enthusiast, who called for the disregarding of experts and praised the Tallinn municipality's decision to stop the Tallinn Main Street planning scheme. The journalist went on to criticise experts who saw the stopping of the project as a backwards move away from contemporary approaches to city planning.

Indeed, city planning, spatial design and the role of architects in it have changed a lot and will probably keep changing in the future as well. There is no escaping until society becomes more complex and empty space is filled and depleted. It is human nature to organise our surroundings; it is what we all want. Controlling our environment is one of our basic needs. In a shared complex space, in the city, the only way we can be successful at this is to work together. Different experts all play a

role here. The role of architects is to ask and listen to experts from related fields and then draw up a plan or design according to the best of their knowledge; although, in the end, it is still politicians who make decisions and are responsible.



07



VODNIKOVA ROAD – LJUBLJANA

More Than a Road to the City



Introduction

This story tells of a ground-breaking local initiative and proposals for a pedestrian and cyclist-friendly renovation of Vodnikova Road in Ljubljana in Slovenia.¹ This is particularly interesting as it is usually difficult or impossible to influence any changes in roads or highways. In 2016, a local lobbying group was assembled called the “Renovate Vodnikova Road Initiative” (Iniciativa Uredimo Vodnikovo), the group described the existing car-oriented character and construction of the road as contrary to city government plans for transforming Ljubljana into a modern and sustainable European city.² They contacted the Municipality of Ljubljana together with the Šiška District Authority (Četrtna skupnost Šiška), who then co-operated in events and activities to help transform Vodnikova Road into a modern city road. Over the next two years, the Šiška District Authority collaborated with various professional organisations and other local stakeholders including the “Vodnikova domačija” *cultural house*, who hosted and organised several events. Vodnikova Road was originally designed and built in the 1960s and then enlarged in the 1990s prioritising the car – a wide profiled street with tarmac lanes and either a narrow

FIGURE III.7.1 Reimagined Vodnikova Road. Illustration by Manca Krošelj.

or no pavement. The street edge or kerb was not at all well-defined. The Vodnikova road area, now a suburb of Ljubljana, was a small centuries old village facing in the direction of Austria. Before WW2 it was a separate municipality and afterwards it was integrated into the city as a suburb with an interesting diverse character and historic development visible from various periods. Ljubljana has been transforming over the past decade; today it is an increasingly sustainable, world city. However, as in many cities it is aware that thinking and action is concentrated on the city centre with the wider city boundary and suburban neighbourhoods now needing to be prioritised; so this initiative is timely, acknowledging that the transformation of Ljubljana has not yet reached the outskirts. The Vodnikova Road Initiative aims to raise awareness of the urban planning issues in the area too and ultimately to come up with robust solutions through public debate and participation, involving the local community, residents and other actors along the road. So far, visible results of the initiative's collaborative activities include four *Jane's Walk* urban walks,³ two street festivals, a garage sale, public debates, a workshop with residents and a collaboration with the Faculty of Architecture In Ljubljana.

The following conversation between Marko Peterlin, a key member of the initiative, and Matej Nikšič expands on the project, the processes and outcomes:

Matej: *Who are the main players involved in the project, one can imagine there are many, with different agendas and roles?*

Marko: Yes, definitely, there are many players with different priorities and roles, in fact, overlapping roles. For example, I am both a resident and director of IPoP and we are involved in urban regeneration and development. By working in a transdisciplinary way that connects the initiatives with the local residents, supported by different professional organizations with formal local and city government on the one hand and by open action and strengthening the local community on the other. The residents of Ljubljana mainly live outside the centre, so it is critically important to do something to show more care and interest about where we live. One of the starting points was to make Vodnikova Road more walkable. Also, services should be nearby, as the city is transforming it should not be only transforming the famous tourist centre of the historic city.

The idea for the Vodnikova road project actually came from a neighbour of mine Matevž Frančič who had also just moved to the area. He is perhaps one of the most important characters in the project. He said *“we have to do something with this street. To make it a proper street, to make the character of the road, less traffic and more street.”* This neighbour particularly thought more trees would create this boundary and would ameliorate the noise making the street more friendly and helping with the micro-climate. Simply to remodel the street to make it more friendly for the residents and for the passers-by. I was also a new resident to the area – but grew up close by like my neighbour. Knowing the area and understanding its village culture is important. We were newcomers even though locals and both from the Šiška area. It is like a village. We knew we had to “go public” to involve the residents to make this work. The neighbourhood and residents include many different people with skills and knowledge in different jobs and roles. For example, one of the neighbours is part of the fire brigade – these people took part in all of the events and really helped.

Early on the Municipality were very supportive and the Vice Mayor responsible for local matters came to events, in fact one of Jane's walks. It was important to have this connection, so we were never acting on our own. We had good moral support when organising public events. I don't think we could have done street festivals alone and the municipality helping with events made us feel we had credible solutions. The Jane's walks were particularly good as a tool to talk about the area with the municipality and the community. The walks aimed to raise awareness about the importance of walking on daily errands and the role of the citizen in spatial planning as well as to promote local community building. The discussions during the walks resulted in tangible recommendations for spatial improvements.



FIGURE III.7.2 Vodnikova Road before transformation. Photo by IPoP.



FIGURE III.7.3 Vodnikova Road reimaged. Illustration by Manca Krošelj.

We talked about good and bad and the history of the area, this really activated the most involved members and slowly we got a regular public. Later, when we were developing project-level proposals, we also involved Traffic Engineers and Landscape Architects and many “subcontractors” and other experts crucial to knowing the tools you can use and the processes of enabling the resolution of the project. Asking for help – when you gain momentum is important. This was mostly voluntary – however, sometimes we compensated for people’s time, partly from our own pockets, partly with the help from IPoP.

Matej: *Could you talk about the next events after the walks, the street festivals and the debates*

Marko: We also organised debates, as second step, after the walks, with the aim to open the debate about the goals, about where do we want to go, before we would develop solutions and projects. A local cultural institution offered space for free and had a discussion event. We formulated goals of what we wanted to achieve publically and invited journalists all the time, to every event. Again, it was important in order to be as public as possible and we were very successful here. This formulation of goals was important for our credibility and therefore important for everyone. There were 30 people at one discussion which for Ljubljana this was a very good number. We now had a baseline to build upon.

We organised two street festivals to encourage the district to support the idea. The District Authority arranged for the street to be closed twice during a car free day in September. “Pop-up” things like this are possible but have to be taken seriously with a lot of organisation. When the street was closed for cars many people were disturbed by this and complained but many too saw that it could be used in a different way, understanding what could happen, changing people’s ideas of what the street could become. It was about changing people’s perception of their space. Most people who could visualise the preliminary proposals we had on display were then very supportive of the idea.

Matej: *What were the key issues emerging?*

Marko: One of the most difficult things was to find **time** to proceed as we were doing this in our free time. However, after a year we realised we had to come up with a concrete proposal, something very tangible for everyone including the municipality to react to and this was important. The municipality publicly supported the Vodnikova road project and set aside funds for the neighbourhood. This was an important moment for us because the Municipality did not have to be involved with us. Now we needed a more tangible and detailed proposals. In 2018, we then involved other professionals – traffic analysis experts, who helped us do the basic analysis, like counting traffic numbers, parking places. We also invited landscape architects to help us with the project and the visualisations. Basic analytical data was needed we felt of the traffic issues, although we later heard this was not always done; this was a back-up for us and important to let everyone know exactly what we were dealing with and what we wanted to achieve. Large scale prints were made and discussed at a well-attended Jane’s Walk event. Forty people made comments, particularly about the bike lane, which most thought sensible and crossings for pedestrians and other minor remarks. Journalists published the proposals and we were invited to meetings, including a regular weekly meeting the Mayor holds with various departments regarding on-going investment projects. The transparency of the communication meant that there was a very quick reaction to the project.

Matej: *Why were the visualisations important?*

Marko: We needed comments on the concrete proposals and the visualisations helped non-experts understanding them in a very immediate and real way and to respond to them.

Going back to the issues, a very important moment came when we presented the proposals at the Jane’s Walk event, where a vice-mayor was present as well and a number of journalists. After that we were invited to present the vision and plans to the Municipality. At the meeting with the Mayor they

then told us they had already commissioned a scheme for the road with their Traffic Engineers – they said they were not very far along and so they would connect us to the Engineers and ask them to include as many of your proposals as they can.

Matej: *At what point did you stop leading the project?*

Marko: Matevž and I led the project until the implementation process started, then it was taken over by the Municipality and their traffic engineers. It is two very separate processes, we triggered it but the Municipality has its own procedures, related to funding etc. We overlapped a bit, but they have their own leader, their project is their own. Our process is still going, there is a lot of work to do with the people who live in the local community, they are the most important. We want to continue and update the community and be involved in the new things coming from the municipality and their team. Greenery for example is a very local issue.

Matej: *Were there different goals between different stakeholders? How do you deal with these differences?*

Marko: Well first of all you have to acknowledge them. It was clear the Municipality has their own agenda. The local Cultural institution also has their own programme to take care of. You have to acknowledge different interests and that our project is not their core interest. It is important we are not in conflict with their legitimate interests. I forgot to say one of most important elements was the involvement of the Media. They have their own interests too, they like a story based on conflict – which we wanted to avoid; you need to tell them a good story if you want it printed. We had a journalist involved who was interested in a story of one participant who was in conflict with others and it was this story that was taken up. We then had to play this down.

Matej: *How did you lead or moderate the project and how important was communication?*

Marko: You have to be a bit of a visionary and have a “project leader personality,” but mainly you have to listen and as I said above respect different views and interests; all are legitimate – well not all! Very particular interests of individuals may not be in the interest of others. You also have to confront people sometimes too and challenge them by pointing out that this may be your interest but is it others? Communication skills are paramount – with residents, you need more informal communication – like going for a beer, offering food – neighbourhood style. You need different skills with the media. One “communicator” volunteer who joined us, she was a resident too and was very important to the communication with different stakeholders, she was a professional communicator.

Matej: *What were the key successes and failures as you see it for your part of the project?*

Marko: Yes, it was a success, in that it was a unique case of a “bottom-up” initiative connecting to the municipality and in a way the municipality then took as theirs. It also sped up the process and maybe in the end makes it a far better project, owned by the neighbourhood. Now I enjoy taking part in the street – the pavement and bike lane are wide enough to be protected against the traffic and to make you feel safe. In the places that are regenerated – activity pops up. The greenery is going to be less than we wanted and it is not there yet, but already after partial restoration it is better. It is nice there are concrete conclusions, if left to us, as a group we would have lost momentum, something it is very difficult to maintain. Lack of time was one of the main challenges – it was all in our spare time. It was also nice meeting neighbours, this was both enjoyable and satisfying. You need to enjoy it otherwise you lose momentum, so you have to have interest from the city side. It is a lot of work but satisfying – you need to enjoy it at least a little and you have to have a response. Other initiatives in the city gave up when they did not get support from the municipality. The Renovate Vodnikova Road initiative is a process that could be useful for other initiatives in the city and beyond; an exemplar we felt that could be repeated across Slovenia and Europe.

Matej: *When was interdisciplinarity most important to the process?*

Marko: Interdisciplinarity was most important in second and third stages in how to proceed with the process with expert and professional help, then formulating the process. We really needed the experts and the community together, in a transdisciplinary process.

Matej: *Finally, what were the positive and negative surprises in the process?*

Marko: A negative surprise was how critical the press were, taking one person's view only and publicising this, but also it was a positive surprise what we learnt from the press and the newspapers, including what the Municipality were up to. Even though there were two parallel processes, a process has many stages but is never finished. It may just fade out. We need time to understand how the public have responded to the Municipality taking over the project. We are waiting for it to be finished. It was not presented to us by the Municipality so we do not know the finer details of their scheme – so there may be some negative surprises, but we hope they will be positive. We do not want to critique the process too early. We need to go back to residents to get their view on the outcome. I personally cannot really comment on the project's physical successes yet, because it is on-going. This is the first time this has happened in Ljubljana. It is recorded so we have a record of how it was done, we sent this to all parties but have not a response. You have to actively promote your processes and projects and we need to set up a process and create momentum so others can be inspired to set up initiatives like this. We hope it can set a precedent for other bottom up initiatives in the city. It is hard to reach people if you don't know them, making it even more important that many different disciplines and types of activists and workers and residents of the city get involved.

Marko: As IPoP we now, building also on the experiences of the Vodnikova road project, have another project we are working on in Ljubljana, together with prostoRož association. “Zunaj” is an initiative in which the city is trying to support small local interventions by residents to improve their immediate neighbourhood and implement them quickly. Residents are installing benches and other micro-scale installations, improvised playgrounds, sometimes just painting benches, or taking up some parking spaces. We wanted to raise awareness in neighbourhoods about what we can and cannot do. We have selected 10 projects, out of 60 proposed, costing 500 Euros each. A similar project was very successful in Vienna. Year by year we can reach new audiences – the municipality has to see the benefit to give funding for small public spaces. Ljubljana is a developing city and these small projects are part of this development. We need to keep watching it.

Notes

- 1 See Institute for Spatial Policies (IPoP) “More than a Road to a City” (Vekot cesta do mesta), supported by the Municipality of Ljubljana. October 2018, and facebook: Inicijativa uredimo Vodnikovo.
- 2 Ljubljana has been involved in a number of EU funded projects and is also involved in CIVITAS ELAN for cleaner and better transport: <https://civitas.eu/city/ljubljana> accessed December 12th 2019.
- 3 Jane's Walk is a movement of free, citizen-led walking tours inspired by Jane Jacobs. The walks get people to share stories about their lives and communities, explore their cities together with their neighbours. Together with local organisers, IPoP so far managed to initiate 176 walks in different towns and cities across Slovenia, engaged at least 3,600 interested walkers and made important contribution towards acknowledgement of the benefits of everyday utility walking.
- 4 This practice story originates from an interview in October 2019 between Marko Peterlin, an architect and Urban planner, and Matej Nikšič, a member of INTREPID and contributor to this book; they are both residents in Ljubljana. It was transcribed and edited by Prue Chiles.



FIGURE III.7.4 Working with local residents and stakeholders. Photo by IPoP.



FIGURE III.7.5 Walking Vodnikova Road. Photo by IPoP.



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PART IV

Lessons Learned – Beyond Context



01

TRANSDISCIPLINARITY REVISITED: TRANSFORMATIVE POTENTIAL OF LESSONS WE MIGHT LEARN

Christoph Woiwode and Olivia Bina

Introduction

The title, “Enabling the City – inter- and transdisciplinary encounters and challenges in research and practice” emphasises the enabling environment and conditions that facilitate inter- and transdisciplinary processes. In order to enrich this discussion, it is helpful to explore the relationship between multi-, inter- and transdisciplinarity from additional perspectives compared with those introduced in Part I, offering alternative interpretative layers to the definitions offered in Chapter I.3. In particular, we wish to explore both a critique of these approaches to knowledge production, and the possibility of a transformative potential, also discussed in Chapter IV.3.

Does Transdisciplinarity “Change Everything”?

As noted by the editors, the literature on inter- and more recently transdisciplinarity has increased rapidly in the past 10 to 15 years. With the latter term going back to the early 1970s when focusing on a more philosophical notion of synthesising and unifying disciplinary knowledge with research, science and technology within and for higher education institutions, “the notion of transdisciplinarity introduced at the beginning of the 1970s remained undeveloped and almost uncited until the early 1990s” (Bernstein, 2015, p.3).

With respect to the planning professions and urban development planning, we do acknowledge that these are widely considered interdisciplinary fields of practice that take into account such diverse fields as economic, legal, historical, social, ecological, design, technical, engineering and political dimensions, among others. It is at least a field of multidisciplinary engagement and interaction. Multidisciplinarity brings together the work of multiple disciplines operating in a relatively self-

FIGURE IV.1.1 Exposure visit at Lokhalle Freiburg during the Second Indo-German Dialogue on Green Urban Practices about “Education, learning, training and awareness for sustainable development,” in Freiburg, November 2018. Photo by C. Woiwode.

contained and independent manner with the integration across disciplines being limited to the summation of findings (Riedy, 2007). Its aim is mainly the juxtaposition of theoretical models belonging to different disciplines. Disciplines are considered as being complementary in the process of understanding phenomena. The point is not to take into account the entire model, but only part of each model; which can be the object of bilateral consensus, in order to maintain coherence. The advantage of this approach is that it highlights the different dimensions of the studied object and respects the plurality of points of view (Ramadier, 2004).

In contrast, interdisciplinary research goes further, seeking to integrate disciplinary perspectives on a particular problem to provide a systemic outcome – for example, through a strategic spatial urban development plan – but disciplinary boundaries are not transgressed (Riedy, 2007). Interdisciplinarity differs from multidisciplinary in that it constructs a common model for the disciplines involved, based on a process of dialogue between disciplines. For this reason, interdisciplinarity is often implemented within the same disciplinary field and its purpose is to create synthesis. However, the second important aspect of interdisciplinarity lies in the practice of transfers, either of models or of tools (such as mathematics or statistics), from one discipline to others. In terms of its limitations, interdisciplinarity, like multidisciplinary, avoids paradoxes and having to solve them. As a result, both interdisciplinarity and multidisciplinary approaches are fragmented. As Ramadier (2004, p.433) argues, multidisciplinary and interdisciplinarity do not break with disciplinary thinking.

Disciplinarity remains, indeed, a pillar of how knowledge is produced, even when projects are designed with an inter- and transdisciplinary approach. Partly, as also confirmed in many gatherings promoted by INTREPID (see Chapter I.2 in this volume), there remains a core belief that to go beyond disciplines you first need to have a solid basis in one of them. The definitions and interpretations of transdisciplinary work may help here, but they do vary significantly depending on the worldview that underpins them. It is within this arena that we believe a key can be found towards greater transformation and therefore propose to explore transdisciplinarity in greater detail by drawing on the work of Basarab Nicolescu (2002), President of the International Centre for Transdisciplinary Research, who offers one of the most comprehensive views on transdisciplinarity; one that is transcultural, transhistorical, transpolitical. It seeks to integrate (and acknowledge) knowledge diachronically throughout history and synchronically from “East” and “West,” perennial philosophies and the sciences (Woiwode, 2013). By conceiving of knowledge being produced between, across and beyond disciplines, Nicolescu (2002) reveals the transformative potential of transdisciplinarity.

Three Perspectives

According to Nicolescu, the term “transdisciplinarity” can assume and be used in three different ways. Firstly, as a philosophy (a stance, placing it in the larger context of our existence); secondly, an epistemology (relating to the integration and unity of knowledge, i.e. non-dualism); and thirdly, a methodology (resolving practical issues in problem-oriented scientific research, particularly environmental studies) (Woiwode, 2013, p.386).

The philosophical and epistemic dimensions are closely linked. He elaborates further on the transgressive character of the concept: “As the prefix *trans* indicates, transdisciplinarity concerns that which is at once between the disciplines, across the different disciplines, and beyond all discipline. Its goal is the understanding of the present world, of which one of the imperatives is the unity of knowledge” (Nicolescu, 2002, p.44). From this point of view, transdisciplinarity would essentially

transgress the duality of opposing binary pairs such as subject/object, subjectivity/objectivity, matter/consciousness, nature/divine, simplicity/complexity, reductionism/holism, diversity/unity (Nicolescu, 2002). As a result, transdisciplinarity seeks to break down and overcome – i.e. transgress – traditional disciplinary boundaries and organise “knowledge around complex heterogeneous domains” (Riedy, 2007, p.26). In moving beyond disciplines, transdisciplinary research attempts to generate synergies and provides opportunities to generate new types of knowledge with the goal of recreating integrated knowledge (Sommerville and Rapport, 2000). As an approach to research and practice, it is a particularly suitable response to complex wicked problems such as climate change that cannot be treated by the application of fragmented disciplinary knowledge (Hoffmann-Riem et al., 2008) but need to be seen from a systems perspective. In our view, this aspect permits a bridge to other bodies of literature concerned with (w)holism but which is normally not linked to debates of transdisciplinarity (e.g. Capra and Luisi, 2014).

Moving on to Nicolescu’s third point, we find transdisciplinarity as a methodology: a focused but relatively narrow notion that happens to be the one mostly referred to and applied by academics and practitioners. A high-profile example of such a focused view of transdisciplinarity can be found in the influential Flagship Report by the German Advisory Council on Global Change (WBGU, 2011), which explores transformative and transformational research towards sustainable societies in detail. It appears that in this publication it is mostly viewed and discussed as a methodology, placing less focus (or awareness) on the underpinning philosophical dimensions outlined earlier and how they may affect multi-agent, multi-stakeholder and pluralistic knowledge arenas. Its authors focus mainly on the aspect of including and involving social actors and stakeholders in identifying the research questions and conducting research: “Transdisciplinarity encompasses a range of different aspects. Firstly, it means increasing the social relevance of research questions through the involvement of stakeholders in setting research goals. Secondly, it also applies to the involvement of stakeholders in the actual research process, i.e., the combination of scientific and practical knowledge (for example local, traditional or indigenous knowledge)” (WBGU, 2011, p.323). With this twofold notion of transdisciplinarity, the link to social transformation is established. According to the WBGU’s approach, for transdisciplinarity to be relevant in terms of inducing social transformation, the research needs to become part of and be linked to society – it must be socially relevant – and simultaneously incorporate, acknowledge and honour local and indigenous ways of knowing.

In practical terms, this somewhat lengthy elaboration on transdisciplinarity is useful, with reference to how knowledge is being created in terms of power relationships of knowledge co-production, and the role of Western science as a predominant way of knowing, as Amartya Sen (2000) pointed out aptly in his analysis on the social acceptance of types of knowledge in specific social-cultural contexts. Beyond this, the transdisciplinary paradigm also poses a critique of the colonial legacies and therefore challenges the current postcolonial condition and knowledge imperialism that has long dominated the relationship of the Western world with the rest of the world. From this viewpoint, transdisciplinarity includes critical issues of empowerment, particularly with respect to equality of diverse modes of knowing, hence going far beyond just addressing to resolve complex (environmental) issues of the world. Therefore, “TD [transdisciplinarity] became aligned with imperatives of cultural critique, socio-political movements, and conceptions of post-normal science and wicked problems that break free of reductionist and mechanistic approaches” (Klein, 2015, p.10).

Transformative Potential: Additional Perspectives

Having argued that transdisciplinary knowledge holds the promise of disciplinary transgression and – through the process of knowledge creation itself – of social transformation, it is useful to link to existing theories and perspectives that have increasingly informed debates on knowledge for (sustainable) transition and transformation. These tend to depart from the idea of a “social milieu” as a concept that describes an existing environment in somewhat passive terms, and instead explore the emergence of social innovations or “alternative milieus” where inter- and transdisciplinarity may emerge and facilitate change, turning the social milieu into a “fertile ground.” A key area of research and theory is that of sustainability transitions (Murphy, 2015; Loorbach et al., 2017), which seeks to understand the emergence of social innovations or “alternative milieus,” in particular socio-spatial configurations and the promotion of these by way of “protective niches” (Longhurst, 2015). Many of the case studies and practice stories in Parts II and III of this volume take this proactive perspective, and through a combination of inter- and transdisciplinarity, seek to open alternative spaces of thinking and knowing the city and the urban projects at their different scales. The framework’s four phases of an inter- and transdisciplinary process, combined with its four process enablers introduced in Part I (Chapter I.2) can be viewed as framing the phases and qualities that allow for the emergence of alternative milieus.

This link to transition theory and research calls for another connection. The premise of transdisciplinarity is, of course, also closely related to action research and planning. Reason and Bradbury (2001), for instance, point out the participatory dimension of action research in co-creating knowledge mutually between the researchers and the people to generate “practical knowing” through action and reflection, theory and practice. Action research as a worldview thus encompasses a significant element to change or transform existing social realities. Indeed, it is rooted in the same recognition of an emergent worldview which “has been described as systemic, holistic, relational, feminine, experiential [...]” (Reason and Bradbury, 2001, p.6). A core dimension of an action-oriented approach to transdisciplinarity asks the question: who are the active change agents, the stakeholders involved? From such an action-oriented perspective, transdisciplinarity suggests that we are broadly talking about academic and non-academic actors. In Parts I and II (of this volume), transdisciplinarity is conceived as quintessentially collaborative, including co-creative, given the emphasis on co-design and co-production, but also on dissemination and outreach, as well as continuation (i.e. the four phases of the Framework developed in Chapter I.2); all of which require high levels of collaboration and related competences and dispositions.

This in turn allows a link to those action-oriented approaches such as living and real-world labs and transformative change (Engels and Walz, 2018; Schöpke et al., 2018), the subject of the Stuttgart case study (Chapter II.5, this volume) where the German government funded a project that “showcases the enabling conditions for the production of joint knowledge through experimental design projects related to the urban environment” highlighting the special role played by “change agents” who are spearheading and pioneering new, innovative solutions. Considered a relevant methodology in transdisciplinary projects, the concept and format of real-world labs (RWLs) has recently thrived in urban-related research and practice, mainly thanks to the inclusion of experimentation and prototyping, testing as practised in urban living labs (see Puerari et al., 2018). The term “real-world lab” is a catch-all phrase for a diverse set of methods, as outlined by Schöpke et al. (2018, p.85): “New forms of real-world experimentation, such as (sustainability) living labs (SLLs) (e.g., Liedtke et al. 2015), urban transition labs (UTLs) (e.g., Nevens et al. 2013), transformation labs (T-Labs) (e.g., Olsson 2016), and real-world laboratories (RwLs) (e.g., Wagner and Grunwald 2015), attempt to merge the strengths of laboratory settings with the advantages of conducting research in the real world (Caniglia et al. 2017).”

Another area of particular relevance in the context of urban development opened up by transdisciplinarity is public engagement. Innovative interactions to create tangible outputs in critical areas such as urban climate change adaptation and mitigation between science/academia and the public through the arts, especially performing arts such as dance, theatre, film or embodiment art, or even literature, are part of a relatively new academic field of the environmental humanities (e.g. Bergthaller et al., 2014; Dieleman, 2015). One such intricate case exemplifying an integrative approach across the arts and humanities combining participatory action research to collaboratively produce outputs relating to urban water is the Hydrocitizenship project, which was carried out across several cities in the UK (<https://www.hydrocitizenship.com>).¹ These disciplinary interfaces are becoming more popular and recognised, but overall remain largely uncharted territory in most urban development processes, as shown also by their minor role within the scope of this book.

Thus, the transformative potential of transdisciplinarity, and thus of the authors' proposed Framework, can be understood from the perspectives of Nicolescu, but also through the links with sustainability transition research, action-oriented research, the broad notion of public engagement, and finally through the lens of environmental humanities and their integration of the arts.

Enabling Conditions and Their Potential

Parts II and III of this book contain 16 stories and empirical evidence of inter- and transdisciplinary research and practice, providing a fascinating set of on-the-ground experiences that explore the diverse and highly creative, experimental character of transdisciplinary project designs and ways of implementation. A good illustration of this, which will catch the eye of any social anthropologist, can be found in Chapter II.1, "The Place and Space of Power: Mess, Uncertainty and Change over Time."

This tells the story of how ethnographers may be key contributors to the success of a project: "the experience of an ethnographer embedded in the project and how this encouraged and enabled team members to be reflexive about the transdisciplinary research process throughout the life of the project, and kept interdisciplinarity at the core of reflection. Understanding and approaching interdisciplinarity in this way has foregrounded the importance of the experiential knowledge of and 'spillover' effects such working creates."

Taken together, a number of noteworthy thematic areas that support an enabling environment emerge from the various case studies and practice stories presented in this volume. They echo the main phases and enabling conditions of the framework proposed in Part I, but they also connect to ideas of social transformation and to inter- and transdisciplinary urban research as a means to serve emergent alternative worldviews and solutions. By combining these different insights, we seek to extract five lessons to be learnt by the wider community of civil society, including researchers and practitioners, involved in the complex processes of urbanisation.

Firstly, having sought to highlight the transformative potential of inter- and transdisciplinary processes, we start with a reflection on the term **transformation**, also as a confirmation that "words" indeed "matter," as emphasised by Mennes (Chapter I.3), and will suggest that there are three sides to this: transformation of the built environment, of relationships and of the self. Transformation or transformational are at the centre of the notion of (urban) development and they mostly refer to the built environment (see Parts II and III: the swimming pool, the main street, mobility, housing/building, the whole place); however, it has been made abundantly clear in this volume that as much transformation, if not more, is entailed in terms of the relationships between the multiple actors involved, and that such change is itself predicated on the disposition and capacity for self-reflection

and learning. Hence, the emphasis on learning in the framework presented by Bina et al. in Chapter I.2, which links to the idea of “transformative learning,” potentially introduces an entirely different, and yet related, theoretical body of literature on this topic dating as far back as the 1990s and early 2000s (e.g. Brookfield, 2000; Illeris, 2013; Mezirow, 1991; Taylor, 2007).

Secondly, there is a clear link between the issue of what is being transformed (or attempted), and the dimension of “Enabling the City” that sees the **involvement** of multiple actors and stakeholders, and the enabling collaborative processes of knowledge production, as key. WBGU’s flagship report (2011) distinguishes between involving actors from outside academia to set research goals and involving them in the actual research process. This distinction, and its challenging implications, are captured in the four, closely overlapping, phases of the Framework developed in Chapter I.2: by noting the need of involvement in design, production, dissemination and continuation, the framework emphasises, among other things, the need for time and resources, as well as commitment. The 16 stories explored in Parts II and III show how difficult this is in practice, and how even successful outcomes may be potentially fragile, notably because of the rare commitment to “continuation.”

Thirdly, if the immediate aim of the urban project may at times be frustrated (see for example, Chapter II.7 in this volume), nonetheless, the notion of “**outcomes**” is necessarily diverse, and here one of the emphases is precisely capturing the less tangible but perhaps critical dimension of long-term change. The potential for **social relevance and social transformation** is indeed highlighted in transition research, and viewed as a process that inter- and transdisciplinarity (especially from the perspective of Nicolescu, 2002) can contribute to. Regarding this, we have argued earlier that the processes of urban knowledge production need to incorporate, acknowledge and honour different ways of knowing (WBGU, 2011) throughout all four phases of the framework discussed here. To achieve this, the framework’s four enabling conditions become essential: the need to develop the necessary *competences* and *dispositions* to conceive and manage the process of engagement and collaboration, the sensibility towards the *contexts* of the actors and stakeholders whose diverse ways of knowing need to matter, the attention towards *words* and thus language in all its diverse meanings, and finally the need for *time* to cover all this ground and to *learn* throughout the process. **Social learning** is an inherent dimension of knowledge co-production, self-reflection and collaboration with multiple and diverse actors and perspectives (but also needs/demands/expectations); it depends on the capacity to **build trust and relationships**, a capacity identified in most cases discussed in Part II and Part III, suggesting that this is a key element to the success of inter- and transdisciplinary projects.

Fourthly, the emphasis on four, closely overlapping, phases of inter- and transdisciplinary processes in the framework is also a way of highlighting precisely the **uncertainty** of urban processes that depend on the success and failures (courageously acknowledged in this volume) of collaboration. In essence, while these processes are conceived and designed precisely to address the rising levels of uncertainty in urban development, they may (or even will) also contribute to it. This **evolving character of practice** (we would call it “emergence”), which seems intrinsic to transdisciplinary processes (see also Chapter I.1 in this volume) challenges at its roots the modernist, twentieth-century, established, traditional, objectives-driven and instrumental urban planning and project management approaches. This leaves us with a single question at the core: how do planners, policymakers and other stakeholders who are seeking to achieve a definite degree of certainty to predict future developments in order to steer the direction of development deal with the open-ended nature of emergence in transdisciplinary processes? Parts II and III are an attempt to answer this, revealing inevitably complex, at times messy, but almost always enriching and partly transformative journeys.

Fifthly, there may be a need to integrate the four **enabling conditions** of the framework proposed by INTRÉPID’s community, with a stronger awareness of a defining aspect of Nicolescu’s approach: the **philosophical and epistemic** drivers of the need for more and better inter- and transdisciplinary processes. Most of the urban-related themes discussed in Parts II and III are typically complex (at times wicked) and always in need of a systemic approach: this demands transgression of disciplinary knowledge and heterogeneity in ways of knowing, as well as awareness of one’s own biases and beliefs. Instead, a significant amount of resources and time must be dedicated to dissolve persistent dualities and narrow disciplinary framings. The enabling condition of “competences and dispositions” may hold the key to a greater awareness of this need for awareness and transgression; however, this will require far-reaching changes in mainstream higher education institutions.

On a final note, this volume, with its rich examples of practice, vividly illustrates the often **critical ambiguity** of the processes of transdisciplinarity in terms of its benefits and shortcomings. Thus, Andersen and Kirkeby (in Chapter II.8 of this volume) recognise the fine line that exists between barriers and potentials that may arise from diverse and plural perspectives. They point out that on the one hand, people often would not comprehend each other due to their varying social and other conditioning, the framing of cognitive mindsets; whereas, on the other hand, it is exactly due to these varying perspectives and plurality that there is an inherent opportunity in transdisciplinary processes to generate new knowledge. Consequently, as two inherently interdependent sides of the same coin, barriers and potentials must be addressed and seized in transdisciplinary projects in order to lead them to success.

Concluding Remarks

The three-dimensional Framework developed by the authors seeks to support researchers and practitioners in their planning and implementation of invariably complex and often unpredictable inter- and transdisciplinary journeys. As the need for interdisciplinarity and transdisciplinarity continues to expand, both in academic and practice circles, not least thanks to the UN Agenda for Sustainable Development Goals (SDGs) and the New Urban Agenda (NUA) discussed in the introduction and in the final Chapter of this book we offer some concluding observations that depart from this volume and will require further discussion and consideration.

Firstly, the **geographical scope**: clearly, this volume focuses on Europe, but we may ask how and to what extent this approach and the related underpinning debates are applicable in non-European contexts? A challenge is how to drive and achieve global transitions towards sustainability. Cultural, political and civil society contexts are extremely diverse, posing tremendous challenges for all stakeholders involved, especially placing the issues of multiple and diverse ways of knowing centre stage (Nikulina et al., 2019). Can these frameworks fit in other contexts – say, the Brazilian or Indian or Indonesian? A significant contribution towards answering some of these questions is offered by the work of the Mistra Urban Futures network², which carried out comparative work between European and African cities on transdisciplinary co-production practices, revealing many points of common learning (Patel et al., 2017; Perry et al., 2018; Simon, 2016). No doubt this approach to urban research and practice poses a formidable task, similar to breaking down the NUA or SDGs in a meaningful and contextually sensitive manner: a cross-cultural engagement of this sort needs regional and local expertise.

Secondly, **whose voice is being heard?** In compiling this volume, the editors made a conscious effort to explore experience of inter- and transdisciplinary processes through the lens of academia and practice. Thus, case studies in Part II and practice stories in Part III seek to give voice to diverse

expertise, yet the experience showed clear limitations regarding the current ethos of much academic publishing: firstly, the language and “scientific” style of writing remains a constraint for those outside academia (a typical obstacle is the need to cross-reference to existing academic literature). Secondly, the very different writing styles, even within “scientific writing,” arising from disciplinary traditions, mean that an edited book that is both inter- and transdisciplinary becomes a double challenge (Durose et al., 2018). The understandable expectation that a volume presents a coherent style leads to difficult impositions, and the need to sacrifice distinct style and visual language. Thirdly, academic publications, even when they attempt to accommodate some of the differences, as this volume has sought to do, entail time and resources that non-academic agents will often find difficult to justify and prioritise. The issue of resources and time links back to the Framework’s (Chapter I.2) emphasis on the four phases of inter- and transdisciplinary processes and the need to plan, and fund, co-design and co-production as well as a continuation phase, which is almost never considered.

Thirdly, **ethical implications:** inevitably, as research opens to the co-design and co-production of knowledge to a complex and diverse context of multiple agents, it becomes more challenging to ascertain what the ethical issues of collaborative work are (such as confidentiality, consent, anonymity, data protection and usage, publication, ownership, etc.). The “importance of setting a clear ethical framework in developing a methodological approach” for inter- and transdisciplinary projects, as noted by Dimitrova (Chapter II.7 in this volume) becomes pressing, and is partly linked to our earlier point regarding time, commitment and funding for participating and publishing.

We have sought to explore further the transformative potential of inter- and transdisciplinary practices of *knowing*, and of *learning*, as emphasised in the structure of the Framework developed by the authors. These practices are certainly fundamental to help create the knowledge that can shape more socially and ecologically sustainable futures, but they remain open to practical and epistemological obstacles, which require, at the very least, significant additional effort from all involved. For now, the transformative potential is clearly identifiable in the experience of these processes and the learning that comes with them.

Notes

- 1 The Hydrocitizenship project ran from 2014 to 2017. It was an AHRC-funded project which investigated and contributed to ways in which communities live with each other and their environment in relation to water in a range of UK neighbourhoods. The project is now finished. This website and the other linked sites provide a record of the activities and outputs from the project.
- 2 Mistra Urban Futures was formed in 2010 as a programme and centre for knowledge and research on sustainable urban development, funded by Mistra, Sida and a Gothenburg Consortium. The Centre brought together academics, professionals and other stakeholders for ten years to co-produce new knowledge and contributions towards urban transitions to more sustainable paths for development. As of January 2020, the Gothenburg part of the Centre has become Urban Futures. <https://www.mistraurbanfutures.org/en>

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02

CHARACTERISTICS OF INTEGRATION IN INTER- AND TRANSDISCIPLINARY URBAN RESEARCH AND PRACTICE

Erik Weber and Julie Mennes

Introduction

In this chapter, we offer a *philosophy of science* perspective on the dimension of *integration* in inter- and transdisciplinary (ITD) processes. We reflect on different disciplinary understandings of integration and relate this to some of the urban case studies presented in Part II in this volume and build on some of the concepts and vocabulary used.

Unlike most (if not all) authors who contributed to this book, our main research activities are not in the urban domain. We work in the philosophy of science, a field of study that aims to obtain a better understanding of scientific methods, concepts and knowledge-generation processes, but also of what science is – as a whole – and how it evolves. One subject that we study is “cross-disciplinary integration.” We use the term “cross-disciplinarity” for all scientific endeavours that transgress the boundaries of established academic disciplines. Cross-disciplinary research occurs in various forms, including in the shape of multidisciplinary, interdisciplinary and transdisciplinary research.¹ Cross-disciplinary integration is also popular in the urban domain because urban problems are necessarily multi-dimensional and complex, and their resolution requires the integration of knowledge and skills from different disciplines (Kraas et al., 2016). Philosophers of science and urban researchers thus share an interest in cross-disciplinary integration. Yet, the ways in which the issue is approached in both domains differs slightly. In the philosophy of science integration is commonly approached as a process of combining elements from different “models,” “concepts,” “theories” and “methods” (e.g. Darden & Maull, 1977; Klein, 2014), while in urban studies the focus is often on integration as a process of “knowledge co-creation,” “co-design” or “co-production” (e.g. Pohl, 2010; Polk, 2015).

Reflecting on *integration* in urban studies from a philosophical viewpoint offers an additional, potentially broader, perspective on inter- and transdisciplinary processes central to this volume. It

FIGURE IV.2.1 Erno Goldfinger’s innovative 1939 Modernist house, 2 Willow Road, London – detail of staircase. Photo by Olivia Bina.

allows us to compare integration in urban studies to integration in other domains, thereby revealing what the characteristic traits are. In philosophical and science studies literature, integration is often characterised by means of a mere metaphor, such as “fusing,” “melding,” “amalgamating,” “harnessing” or “knitting” (O’Rourke et al., 2016, p. 67). Philosophical accounts of integration that go beyond the typical metaphors are often vague. For instance, in O’Rourke et al. (2016) we find claims such as: “integration is a generic combination process the details of which are determined by the specific contexts in which particular instances of integration occur” (p.67). Also that “integration is an input/output process, where a series of changes to the inputs results in a ‘bringing together’ or combination of inputs, producing an output” (ibid. p.67). Because the characterisations are vague we attempt to gain more insight into what integration, the “bringing together,” the “combination” looks like in the context of the case studies presented in Part II in this book.

In the first part of this chapter we focus on identifying common denominators of characteristics of the outcomes of integration, differentiating between both types of integrative cross-disciplinarity namely, inter- and transdisciplinarity. In the second part of this chapter we discuss challenges and difficulties for transdisciplinary research and practice, and highlight its democratic potential in general and more specifically in the urban realm.

Interdisciplinary Integration

A theoretical characterisation of interdisciplinary integration – namely the integration of academic disciplines – in the urban realm is developed through an analysis of Andersen and Kirkeby’s chapter on Care Homes in Denmark (Chapter II.8) and by reflecting on other non-urban interdisciplinary research projects.

The Nature of Urban Knowledge

As an entry point to the fundamental importance of inter- and transdisciplinary integration in the urban realm, we use the introduction of Hans Thor Andersen and Rob Atkinson’s edited volume on *The Production and Use of Urban Knowledge*² where they put forward two characteristics that are important for us. The first one is about the future:

“[T]here is an increasing demand that urban knowledge should look forward rather than simply backward (i.e. attempt to provide guidelines for policy intervention instead of purely building knowledge on retrospective analysis); this requires the development of a more forward-looking approach based both upon ‘science’ and knowledge constructed on the basis of experience (e.g. about what works and what does not work). This approach implies the need to identify possible solutions to problems rather than simply looking for empirical evidence of failures” (pp. 2–3).

The second characteristic is the involvement of many scientific disciplines:

“[A]s no single academic discipline covers the full spectrum of urban relationships, it is almost always necessary to combine different disciplines. Relevant knowledge of cities, their structures and relationships and so on is not limited to one discipline (e.g. geography, architecture, sociology). On the contrary, elements essential to it can be located in many disciplines and no single discipline assigns the urban a central role in its field of studies, as a result ‘the urban’ too often falls into the cracks between disciplinary fault lines” (p. 3).

These two features give a characterisation of integration in the context of the production of urban knowledge. Theorising this characterisation we propose that integration in the urban realm typically involves bringing together knowledge from various source disciplines to develop and support an *intricate scenario*. It is claimed that, if this scenario is executed, this results in an *end state* of the relevant part of the world in which several *divergent* requirements are simultaneously satisfied.

Let us clarify the terms in italics. “Scenario” is a common umbrella term in urban planning that refers to, among other things, plans in the traditional (architectural) sense. This is exemplified by two chapters from Part II of this volume that we will use later in this chapter: the first “Barriers and Potentials of Interprofessional Planning – Creating Care Homes for People with Dementia” (Chapter II.8) and secondly “Explorations on Residential Resilience, the Brf Viva 2011-2019” (Chapter II.3). However, the policy recommendations document in Chapter II.2 “A Creative Nano-Town in Calabria” is also a scenario in our sense, as well as the regeneration plans that are the core of City Regeneration Plovdiv (Chapter II.7) and the future scenarios used in Chapter II.1 on energy where relevant community scenarios were key to the whole transdisciplinary project.

“End states” can be diverse. Sometimes the end state is a particular building as in the Cooperative Housing in Gothenburg (Chapter II.3). Sometimes it is a collection of buildings sharing some crucial features as in the chapter on Care Homes in Denmark (Chapter II.8). Sometimes it is the urban outlook and appeal of a village, as in NanoTown, Gagliato (Chapter II.2) or a city district as in the chapter on City Regeneration in Plovdiv (Chapter II.7). It is often combined with enhanced socio-economic conditions of the inhabitants.

Finally, we call a set of requirements “divergent” if, in order to show that they are satisfied, we require research that belongs to different scientific disciplines. A scenario that is expected to lead to an end state with divergent properties is called an *intricate* scenario. Showing that the execution of an intricate scenario can be expected to result in an end state with divergent properties requires research in different scientific disciplines. This corresponds to the second characteristic of Andersen and Atkinson of the involvement of many disciplines. Their first characteristic is incorporated by means of the idea of scenarios, which are always forward-looking. What we add is a crucial connection between the two characteristics and the link with integration: developing and supporting intricate scenarios is what integration amounts to in the context of the production of urban knowledge. The result is a theoretical characterisation of integration in the urban realm that revolves around the desired outcome of urban planning.

For the illustration based on the case of the Care Homes in Denmark (Chapter II.8), we focus on the two steering groups that were involved. In Denmark, steering groups are appointed to follow and guide the planning process. In our terminology, these groups are without any doubt cross-disciplinary, since they contain experts from different fields. The authors describe the diversity of the two steering groups of two building projects near Copenhagen,

“Taken together, they covered knowledge concerning medical aspects, care aspects, ergonomic aspects for staff working in the care home, economics, social aspects, architecture and construction. Their professional backgrounds were from architecture, engineering, political science and nursing” (Chapter II.8, p. 157).

So, the functioning of these steering groups requires a kind of cross-disciplinary cooperation. However, the authors of the chapter use more specific labels: they talk about “interdisciplinary cooperation” and “interdisciplinary knowledge transfer.” According to the definitions of the baseline vocabulary that we also briefly discussed in the introduction to this chapter, the use of these more precise labels requires the integration of knowledge to be present in the case at hand.

The use of more specific labels is adequate here because there is integration of the type explained in the previous section. The steering groups aim at co-designing care homes that simultaneously meet the following requirements:

- a) economically well-functioning;
- b) well-functioning from a care perspective (supports staff members working with the patients);
- c) creating a feeling of homeliness; and
- d) having optic and acoustic qualities that are agreeable to people with dementia.

The co-design process, in which the architects mainly carry out the actual design work and the other members mainly constrain and define the design task, is a process in which a scenario is developed and supported. The support – which justifies the expectations attached to the execution of the resulting design – comes from different scientific disciplines, because the requirements are obviously divergent. Apart from engineering constraints, there are requirements that fall into the realm of the biomedical sciences, psychology, labour sociology and economics. So, the research exhibits the type of integration of developing and supporting intricate scenarios.

Similarities and Differences

Two other interdisciplinary fields, namely economic sociology and social robotics are used here to enhance our understanding through the similarities and differences of urban and non urban research and practice. Our discussion of interdisciplinary integration comes initially from the founding father of economic sociology Richard Swedberg in *Principles of Economic Sociology*. He sees economic sociology as a kind of interdisciplinary research aimed at “better knowledge of a phenomenon,” e.g. success in explaining economic phenomena that have not previously been explained. Swedberg’s view is that in order to explain and understand the dynamics of the different types of economic organisations and markets, one needs to look at both (self-)interests which are traditionally ignored by sociologists and social relations which are traditionally ignored by economists:

“The main theoretical point [...] is that we cannot fully understand the dynamic of the different types of economic organization without realizing that their structures are determined by a combination of interests and social relations” (2003).

Swedberg’s idea of “interest” is a classic economic one: human behaviour is explained by assuming that people are isolated, all-knowing, and utility maximising economic agents. Paying attention to social relations means that you use relevant categories of social relations in your analysis (e.g. “exchange,” “conflict,” “trust,” “subordination”).

Milan Zafirovski’s (2002) discussion of models of production in economics is a function of variables such as capital, labour, energy and materials, a simple and determined process based on “outputs” and “inputs”. By contrast, economic sociology develops models that allow us to describe and explain variation in production (p. 153). In order to be able to do so, production is approached as a complex process that involves human decision-making and is characterised by human limitations taking sociological factors into account, such as networks, groups, social structures, institutions, social controls and cultural context (p. 152). Thus in economic sociology, the desired outcome of

integration is a *model* that has high *explanatory power*, in urban planning, it consists of a *scenario*, the execution of which is expected to *meet diverging requirements*.

The aim of “social robotics” is to develop and study robots that are able to interact and communicate among themselves, with humans and with the environment. So, a social robot has the ability to interact autonomously with humans, generally to achieve social–emotional goals related to different disciplines – education, health or entertainment.³ What we see here is that integration is “materialised” in an artefact. The aim of creating one object in which all these diverging properties are combined is the driving force behind the interdisciplinary co–operation and could be conceived as similar to what happens in urban planning. However, the main difference is that, while in social robotics, the desired outcome of integration is a physical prototype that has diverging *properties*, in urban planning or architecture, the desired outcome consists of a *scenario* (in the case of Care Homes Denmark, a building plan for a care home), the *execution* of which is expected to *meet diverging requirements*.⁴

Transdisciplinary Integration

For transdisciplinary integration, we propose a theoretical characterisation and illustrate it by means of another one of the case studies in Part II of this book, The Cooperative Housing Gothenburg (Chapter II.3).

The characterisation we propose is that transdisciplinary integration in urban planning typically aims at developing and supporting an intricate scenario that is *entrenched*. It is claimed that, if this scenario is executed, this results in an end state of the relevant part of the project that satisfies the preferences of the most important stakeholders.

If we compare characterisations of both entrenched and intricate integration we see that the idea of (forward-looking) scenarios is maintained, and in this way, the characteristics of urban knowledge identified by Andersen and Atkinson are incorporated. What is new (compared with intricate integration) is the idea of an *entrenched* scenario: one that supposedly satisfies the preferences of the most important stakeholders.

We will now illustrate this by means of Cooperative Housing Gothenburg (Chapter II.3 in this volume). This illustration will also clarify that arriving at an entrenched scenario typically requires a transdisciplinary dialogue (i.e. requires that the stakeholders are involved in the development of the scenario). Initially, the preferences of stakeholders are often *vague* and are expressed by means of concepts that can be operationalised in many ways, such as “sustainable,” “green,” “social,” “ethical.” The transdisciplinary dialogue is required to define the concrete preferences that have to be incorporated. Sten Gromark and his co–authors present their project as transdisciplinary:

“The intricate process that was unfolded of a transdisciplinary dialogue of exchange within Positive Footprint Housing© between different partners and stakeholders, academic and professional, even extended to local inhabitants and future residents, may be considered the very key to the alleged virtual success of the project” (Chapter II.3, p. 82).

The intended end state is an urban residential block with 133 apartments in total. Planning started in 2011, building in 2016. So, a forward-looking scenario is clearly present. As to the interdisciplinary nature of the project, the authors stress that academics of different departments of Chalmers University of Technology and the University of Gothenburg were involved. In general, there were

issues of ecological, economic and social sustainability. These require a variety of academic inputs. The authors explicitly mention that some of the preferences of the stakeholders were vague, and that the development of a concrete scenario required some negotiations:

“Throughout this process, the inherent vagueness of general formulations of sustainability, predominant from the beginning, especially concerning social sustainability, was made very clear to all. This also underlines the importance of undertaking inter- and transdisciplinary research directly in the conflicting social fabric, where sustainable goals are negotiated and given a concrete, substantial significance” (Chapter II.3, p. 83).

Social sustainability relates to issues about social solidarity, economic justice and adaptability of the building. The idea is that social sustainability can only become more precise and substantial by means of a transdisciplinary dialogue. Once the preferences have been made precise, transdisciplinary integration becomes possible and an intricate and entrenched scenario can be developed and supported.

Challenges and Potential of Transdisciplinary Research

Having explored integration and its possible outcomes in the context of urban studies, we now discuss an example of both the challenges and potential of transdisciplinary research.

In the case study by Elena Dimitrova on City Regeneration in Plovdiv (Chapter II.7), one sees disappointment surge up. The researchers involved in this project were not happy with the way things went. The ideals of interaction and integration encoded in the chapter on Care Homes (Chapter II.8) discussed above, allow us to understand their disappointment: these ideals were shared by the Plovdiv researchers, but not realised in this project. Elena Dimitrova calls City Regeneration in Plovdiv a “transdisciplinary initiative”:

“urban experts not only cross disciplinary boundaries but also enter a transdisciplinary dialogue with local communities about their needs and values in building a path to the future” (p. 139).

The project investigated the possibilities of developing a creative district close to the city centre. It is clear that the researchers wanted their proposals to be “entrenched” in the sense defined in the previous section. They actively searched for relevant input during a two-day visit to the Kapana quarter in Plovdiv by the student teams involved in the project. The visit was also combined with meeting some key local actors: municipal planning experts, a specialist from the city library, and representatives of citizens’ organisations and small local arts and crafts businesses.

“This provided a chance to ask questions about the past and present of the quarter, and to listen to various visions about creative industries in general and the envisaged future of the area” (p. 143).

On the academic side, the project involved research teams from four disciplines: ethnology, sociology, urban planning and architecture. The involvement of these four disciplines makes the project cross-disciplinary, but not necessarily interdisciplinary: the latter requires integration.

The project suffered from huge time constraints in both the preparation and execution phases. Such constraints were experienced by the staff members as well as the students involved. These time constraints had a clear impact on the project, where no explicit interdisciplinary interaction was envisaged due to the estimated shortage of time.

The project was clearly forward-looking, but did not lead to an integrated scenario: the teams focused on different aspects of the urban process and developed different types of intervention proposals. This conflicts with the ideals of interaction and integration and explains the disappointment of the researchers involved.

The Democratic Potential of Transdisciplinary Research

In this section, we use Chapter II.2 (in this volume) to highlight the democratic potential of transdisciplinary research and to discuss the role of scientific expertise in democratic societies. Giulio Verdini and his co-authors introduce the NanoTown project as a two-year research programme from 2016 to 2018, where scholars and students from different disciplinary backgrounds engaged with the local community of the town of Gagliato in Calabria, Italy, to co-produce future scenarios of local development. The different disciplinary backgrounds mentioned here include architecture, urban planning and economists. The main “operational tool” in the project was a “participatory design workshop” held in July 2017. The output of the workshop (and the main output of the project as a whole) is a policy recommendations document. So, the research is clearly forward-looking: a scenario is developed. The idea is to inform the political agenda of the town. The idea is that this scenario is entrenched in the sense defined earlier in this chapter:

“The research has been designed to enable transdisciplinary knowledge production in the urban field that could matter for the local community and would ultimately produce a real, positive impact on people’s lives” (p. 65).

This ambition and the way the NanoTown Gagliato project was implemented provide an illustration of the crucial role that transdisciplinary research can play in a democratic society: it allows us to reconcile the ideals of democracy with the idea that policy should be evidence-based (based on scientific knowledge).

Arguments in favour of democracy as a political system start from the idea that the interests of all inhabitants of a state are equally important. Political philosopher Amy Gutmann (2007) formulates the idea that “all types of democracy presume that people who live together in a society need a process for arriving at binding decisions that takes everybody’s interests into account” (p. 521).

This is not in itself an argument for democracy. In principle, it is possible that an enlightened despot looks after the interests of all residents in a society evenly. Epistemic arguments have been formulated against this option: it is impossible for the despot to know what the interests are, and any balancing of those interests is debatable. Applied to the case at hand, however, this means that the local inhabitants of Gagliato have to determine what matters and which aspects of their life need to be addressed. The academics cannot and should not do this. If they were to do this, they would not necessarily become “enlightened despots,” but they would become “technocrats.” In his book *Technocracy and the Politics of Expertise*, Frank Fischer (1990) defines technocracy as “Technocracy, in classical political terms, refers to a system of governance in which technically trained experts rule by virtue of their specialized knowledge and position in dominant political and economic institutions” (p. 17).

What the academics should do instead is to find out what people consider important, which motivates transdisciplinary research in this case and more generally. The need for transdisciplinary

research is connected to democratic ideals; more precisely, to the ideal of finding a non-technocratic way of using scientific knowledge in democratic policy decisions. In his book *The Politics of Evidence-Based Policy Making*, Paul Cairney (2016) puts forward the following ideal that “Scientists can help identify problems, and assess the effectiveness of solutions without feeling that they should be at the centre of a democratic policymaking system” (p. 4).

Transdisciplinary research is a way in which scientists can have impact without occupying centre stage.

Summary

The purpose of this contribution to *Enabling the City* was to reflect on *integration* in the urban realm from a philosophical viewpoint, to offer a broader perspective on inter- and transdisciplinary processes central to this volume, and their possible outcomes. First, we developed a theoretical characterisation of integration of academic disciplines in urban planning and architecture. This characterisation, was illustrated by means of the chapter on Care Homes in Denmark, and the resulting reflections helped describe how integration in urban planning differs from what goes on in other interdisciplinary research projects. We compared the desired outcome of integration in the urban realm, which consists of an intricate *scenario*, the execution of which is expected to *meet diverging requirements*, with the alternative disciplinary examples of social robotics (where the desired outcome is an *artefact* that has diverging *properties*) and economic sociology (where the outcome is a *model* that has a high *explanatory power*).

Second, we discussed transdisciplinary integration in an analogous way; we proposed a theoretical characterisation of entrenched integration and illustrated it by means of the chapter on Cooperative Housing in Gothenburg. Transdisciplinary integration in urban planning and architecture typically aims at developing and supporting an intricate scenario that is *entrenched*. The outcome here is linked to the execution of the scenario, resulting in an end state of the relevant part of the world (in this case Gothenburg) that satisfies the preferences of the most important stakeholders.

Third, we explored the extent of challenges in inter- and transdisciplinary processes. We used the characterisation of intricate integration to explain the disappointment of the researchers involved in City Regeneration Plovdiv. In the framework (Chapter I.2 in this volume) “time” was proposed as a key enabling condition for inter- and transdisciplinary research, and we saw here that lack of time made it impossible to realise the ideals of interaction and integration.

Finally, we sought to reflect on the democratic potential of inter- and transdisciplinary processes. We used NanoTown Gagliato to connect inter- and transdisciplinary research to democratic ideals and challenges (such as avoiding technocracy and ensuring that policy is evidence-based), thus reconciling ideals of democracy with evidence-based policy which are also central to the United Nations agendas discussed in the final chapter of this book (Chapter IV.3).

Notes

- 1 As defined in the baseline vocabulary (Chapter I.3 in this volume), in the philosophical and science studies literature, multidisciplinary and interdisciplinarity are distinguished by a degree of integration, where multidisciplinary is considered non-integrative and interdisciplinarity integrative (e.g. Bruce et al., 2004; Holbrook, 2013). Transdisciplinarity is generally distinguished by means of a scope of integration; whereas multi- and interdisciplinarity are considered a strictly academic endeavour, transdisciplinary research is usually characterised as a type of cross-disciplinary research that involves the integration of academic disciplinary knowledge with knowledge, values and interests of people outside academia (e.g. Kötter & Balsiger, 1999; Jahn et al., 2012).
- 2 Andersen & Atkinson (2013), Production and Use of Urban Knowledge also resulted from a COST action.
- 3 To illustrate the interdisciplinary character of social robotics research and to show what kind of integration takes place in that field, we use the robot Probo, which was developed by a team of Belgian researchers based

at the Free University of Brussels (VUB). Probo is a social robot that is designed to serve as an interface (during therapy) for children with an autism spectrum disorder. It looks like a green elephant, can move its head and can “talk.” The main goal of the team working on Probo was to create a robot that has the ability to perform certain movements of the head, eyes, ears, mouth and trunk in an accurate, repeatable and durable way and the ability to express six emotions (happy, sad, disgust, anger, surprise, fear). In more abstract terms, the Probo team wanted to create an artefact with properties that are defined and investigated by different disciplines. The expressing of emotions is a “psychological” feature; the mechanical movements are an “engineering” feature. Developing Probo thus required engineering research (described in detail in Goris et al., 2011) and psychological research (described in detail in Saldien et al., 2010).

- 4 The typical “cognitive products” in urban planning and social robotics differ strongly. In a literature review, Julie Klein proposes her “Principle #1. Variability of Goals,” according to which the cognitive products that cross-disciplinary researchers aim at are diverse. She mentions, for example, technical equipment, information technology protocols, medicines and measuring devices (2008, p. S118). We see this diversity by comparing urban planning with social robotics.

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03

ENABLING THE CITY: LEARNING FOR TRANSFORMATIONAL CHANGE

Josefine Fokdal, Olivia Bina and Giulio Verdini

Connecting to Global Agendas

“All cities aim to increase prosperity, promote social inclusion, and enhance resilience and environmental sustainability” (SDSN, 2016, p. 21).

This chapter brings together some of the lessons drawn from previous chapters – the case studies, practice stories and the framework for inter- and transdisciplinary processes with three global agendas and their aspirations. Firstly, the New Urban Agenda (NUA); secondly the UN 2030 Agenda and the Sustainable Development Goals (SDGs), specifically goal no. 11 on Sustainable Cities and Communities and no. 4 on obtaining a quality education; and thirdly the Education for Sustainable Development (ESD) initiative led by the United Nations Educational, Scientific and Cultural Organization (UNESCO).

A key requirement of these global agendas is the need to be adaptable and local, which depends on the enhancement of capacities for “participatory, integrated and sustainable” planning and management.¹ Implementing international, national and even regional policies and plans into the specific realities of cities and towns locally, is often problematic. Turning globally conceived agendas local means enabling interconnected and sustainable urban knowledge, and giving voice and legitimacy to a multiplicity of agencies, worldviews, ways of knowing and understanding the problems and the possibility for alternative ways of doing things.

We question how to localise the global agenda, in relation to the specific targets of the SDG on Sustainable Cities and Communities to “enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries” and explore the contribution of inter- and transdisciplinary processes to this. We then

discuss some of the challenges faced by research and practice when attempting to contribute to systemic change in urban policy and management.

Our final section highlights the crucial potential role of higher education in generating more sustainable cities by connecting two aspects of the framework introduced in this book: the cross-cutting dimension and quality of “learning,” and the enabling condition of “competences and dispositions” in urban pedagogy in higher education² with the international agenda. We focus on the collaborative practices arising from the actual engagement with such processes, which provide opportunities for mutual and transformational learning; and the recognised need for a wider application of inter- and transdisciplinary processes in the production of urban-related knowledge that entails changes in higher education – particularly in terms of competences and dispositions.

In doing so, we seek to strike a balance between support for the agendas and their optimistic embrace of inter- and transdisciplinary processes, for the transformational potential that certain interpretations of global urban and educational agendas may offer, and a cautious note regarding the persistent challenges to the ethos as well as the practice of inter- and transdisciplinarity and cooperation.

From Global to Local – Persistent Challenges

The New Urban Agenda was adopted in 2016 in Quito by the United Nations General Assembly. As the first document of its kind, it sets up a global standard for a more sustainable future and should be seen as a complementary document to the 2030 Agenda for Sustainable Development, signed by all 193 United Nations member states in 2015. Despite the high-level commitment of this document, and references to the importance of cities reaching the goals set out, it leaves many loopholes that are in many ways a reflection of limited progress in the overall sustainable development agenda (Göpel, 2016; WBGU, 2017).

The New Urban Agenda has, for example, been criticised for not being binding (Garschagen & Porter, 2017) and in lacking actual guidance on how to reach the targets. (e.g. Satterthwaite, 2017). It is also criticised for taking a techno-managerial approach that lacks innovation (Kaika, 2017), amongst other things. Moreover, the New Urban Agenda and Sustainable Development Goals have universal ambition, unlike the previous Millennium Development Goals that primarily focused on the least developed countries. This means that most of the normative assumptions and general statements incorporated may be relevant in one context and less so in others (Parnell, 2015). This is the case of the “right to the city” discourse, an agenda pushed by civil society organisations of Latin American countries and not necessarily fully shared by others (Watson, 2016). The “right to the city” discourse has gained ground in scholarly debates, over the last few decades (Brenner et al., 2012; Mayer, 2012; Harvey, 2012) and, as a result of the late 1960s’ protests, has demanded a stronger focus on social use values rather than on capital exchange value (Lefebvre, 1968; Schmid, 2012). It is an approach based on the need to change the way cities are governed in order to make them more inclusive (Cirolia et al., 2015). First coined by Lefebvre, the “right to the city” is a vision for an urban future, in which power relations are rebalanced and civil society – and modes of collaboration – play a much stronger role in shaping the urban, reducing inequalities. The Sustainable Development Goals, and consequently the New Urban Agenda, take into consideration how to tackle poverty,³ however, they also seem to deliberately ignore some of the underlying conditions of urban injustice, notably those related to the impact of financialisation of urban development processes and housing markets (Farha & Porter, 2017). Based on this, advocacy for the “right to the city” seems rather loose

and meaningless, and the New Urban Agenda, therefore, appears still to be based on an underlying neoliberal framework of urban competitiveness, modernisation and economic growth (Huchz-meyer, 2018).

In terms of urban planning, it is not a coincidence that, in the aftermath of the launch of the New Urban Agenda, some eminent dissonant voices emerged. Richard Sennett, Ricky Burdett and Saskia Sassen, together with the former executive director of UN-HABITAT Joan Clos, pointed to the still persisting ideology of modernity and order in the way to produce contemporary cities and design mainstream urban policies. As explained in the so-called *Quito Papers*, such ideology produces a dystopia of segregation of functions, pursued for the sake of efficiency, particularly in emerging countries (Sennett et al., 2018). The pervasiveness of the concept of urban *tabula rasa* in modern planning, which has justified, for example, large-scale demolitions of existing neighbourhoods over recent decades, has generated a plethora of examples of arbitrary practices of urban clearing, particularly of the so-called slums. This has been instrumental in developing highly profit-driven real estate developments, often isolated and gated from the rest of the urban life. Therefore, in response to the growing problems and tensions arising from rapid urbanisation, the *Quito Papers* call for a new, non-violent urban ethic, which refuses the over-specification of functions and forms imposed by pure market-led urban processes (Sennett et al., 2018). Their criticism of contemporary urbanism stems from an awareness of the need to change the current practice, and the mindset, of those in charge of planning contemporary cities, by re-learning the art of designing cities and opposing the *status quo* of urban speculation.

Their contribution is just the latest in a long history of critique. The claim of the failure of modern and rational planning has mobilised some of the most important intellectuals of the twentieth century such as Jane Jacobs (Jacobs, 1961). However, despite rich academic debates and activists' works, this has not necessarily implied a new season of innovative urban practices. On the contrary, bureaucratic and top-down approaches have been only replaced by the free market and capitalism, leading to different forms of rigid, closed, profit-driven and ultimately unsustainable processes of urban transformation. Sennett et al. (2018), therefore, ultimately advocate for open-system thinking in designing the cities of tomorrow, beyond narrow market demands. In doing so, they respond to the long-lasting, yet not completed, critical revision of modernist urban planning principles. In recent decades, it is undoubtedly evident that efforts have been made to identify causes and possible remedies of fast urbanisation processes and to move towards a new paradigm of urban sustainability (UN-HABITAT, 2009). Admittedly, the *Quito Papers* (2018) did not consider this enough. They instead suggest the development of “a new science of urbanization” that would require a systemic approach to integrate “competences in municipal finance, urban planning and design and urban regulation” to produce a more inclusive and sustainable urbanisation.

The persistent challenges outlined here with reference to urban policies and new ways of undertaking science and producing knowledge are in many ways an echo of challenges to the transformative changes needed to shift towards sustainable patterns of development (Brand, 2014; Sachs et al., 2019; WBGU, 2017). We now turn to explore bridges between agendas, and learn from their common difficulties, from seedlings of locally based successes, and from the promise arising out of transformative learning.

Target 11.1	By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.
Target 11.2	By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.
Target 11.3	By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.
Target 11.4	Strengthen efforts to protect and safeguard the world's cultural and natural heritage.
Target 11.5	By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.
Target 11.6	By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.
Target 11.7	By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.
Target 11.A	Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning.
Target 11.B	By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels.
Target 11.C	Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.

FIGURE IV.3.2 Targets for Sustainable Development Goal no. 11 and the Relevance of Inter- and Transdisciplinary Processes. Source: UNGA (2015); <https://sustainabledevelopment.un.org/>

The Sustainable Development Goal for Cities and Communities (no. 11) and Inter- and Transdisciplinary Processes

“For a truly participatory process, public engagement and collaboration should be enabled through the whole cycle of SDG planning, implementation and evaluation” (SDSN, 2016, p. 21).

Inter- and transdisciplinary approaches to the design and implementation of urban research and practice can be considered essential tools for implementing the United Nations sustainability agenda, as discussed in our Introduction (Chapter I.1) and in Chapter I.2. Here, barriers such as institutional structures, limited time availability, lack of competences and dispositions for guiding inter- and transdisciplinary processes have been identified. Interdisciplinary approaches can help to set agendas for policymaking and planning that break down some of these barriers, and transdisciplinarity can ensure that a plurality of actors – both directly and indirectly affected – is engaged in such processes. There have been plenty of calls for new approaches to knowledge production (e.g. Regeer and Bunders, 2009; Hirsch Hardorn et al., 2008), and promoting the transformative changes implied by Sustainable Development Goals will require a significant breaking down of traditional silos in urban governance and related institutions.

While our case studies were not designed to contribute directly to Sustainable Development Goals, Table IV.3.1 opposite shows how all of them address one or more aspect of Sustainable Development Goal no. 11: *“Make cities and human settlements inclusive, safe, resilient and sustainable,”* which includes targets (Figure IV.3.2) related to housing, transport, planning, heritage, vulnerability, environment, public space, urban–rural policies, capacity development and large-scale environmental changes.⁴ Inter- and transdisciplinary processes of knowledge production are meant to enhance our capacity for collaboration, both in terms of ethos and practice, and are thus a critical means for reaching Target 11.3, which aims “by 2030, [to] enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.” The case studies and practice stories in Parts II and III discuss knowledge processes that respond in part to the requirements identified in this target.

Time and (Limited) Systemic Change

The assumption behind the new drive for transformative planning and policy, embedded in much of the literature and guidance for implementation of Sustainable Development Goals, is that participatory processes, which include what we call in this volume transdisciplinarity – with co-design, co-production, dissemination and continuation as crucial stages in our framework – are rebalancing power relations, enforcing a re-learning and the production of new knowledge and, thus, leading to more inclusive and sustainable solutions. The expectation, however, that “a truly participatory process, public engagement and collaboration should be enabled through the whole cycle of SDG planning, implementation and evaluation” (SDSN, 2016, p. 21) clashes with the multiple obstacles of far lesser expectations in this arena. In Chapter I.2, we discuss the desirability and significant challenges of a “continuation phase.” That time matters is generally recognised in the inter- and transdisciplinary discourse. From Parts II and III, time especially matters in terms of building trust on different levels (individual, institutional and within a team) and in terms of experiences (so time of engagement). In a study on the kind of system change needed for a more sustainable future, Jordan et al. (2013, p. 60) identified four categories of what they call “societal entrepreneurship”: event-focused, operations-centric, systemic and dialectical. Event-focused societal entrepreneurship

PART II	Themes	SDG Targets
Chapter II.1	Energy Climate change Renewables Community Student involvement	Target 11.6 Target 11.B
Chapter II.2	Economic prosperity Inclusive governance Heritage Student involvement	Target 11.4 Target 11.A
Chapter II.3	Creative industries	Target 11.4
Chapter II.4	Housing Student involvement	Target 11.1
Chapter II.5	Mobility Public space Student involvement	Target 11.2 Target 11.6 Target 11.7
Chapter II.6	Public space Regeneration Heritage	Target 11.4 Target 11.7
Chapter II.7	Regeneration Student involvement	Target 11.4
Chapter II.8	Housing Demographic changes Health care	Target 11.1
Chapter II.9	Public space Heritage	Target 11.7

SDG#11 – Target 11.3:
 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

TABLE IV.3.1 Part II Urban Stories and Sustainable Development Goal Themes and Priorities. Source: Authors.

focuses on single events and does not necessarily aim at systemic change beyond creating awareness around a topic through the event. Operations-centric societal entrepreneurship involves a group of people that are interested in solving a specific societal problem that they have identified. Systemic societal entrepreneurship aims at influencing how other actors or systems behave by advocacy and showing how things can be done differently. Finally, dialectical societal entrepreneurship includes a strong perspective awareness, which is not the case in the three other types, and requires time.

The dissatisfaction with the lack of time and limited change on the systemic level as described in several cases (e.g. Dimitrova, Verdini et al., Nikšič, Paadam and Ojamäe, all this volume) is at the basis of the discrepancy between the actual engagement as a more operations-centric societal entrepreneurship and the envisioned impact on a systemic level. What the cases in Parts II and III describe, however, is also that most of the inter- and transdisciplinary processes in the local urban setting are navigating within the realm of event-focused or operations-centric societal entrepreneurship. In particular, in the cases in which students are involved (Chiles et al., Nikšič, Verdini et al., Dietz et al., Dimitrova, Gromark et al., all this volume), the time constraints of semesters and academic schedules are described as an obvious obstacle to real transformation. As long as inter- and transdisciplinary processes stay within these two realms, however, a systemic change will not happen, reflecting wider reviews of challenges and obstacles to the kind of transformative change expected in relation to sustainability. There is a need to move beyond these two approaches and to move towards a more systemic and dialectical societal entrepreneurship, especially if we are to localise international agendas such as the New Urban Agenda and the Sustainable Development Goals.

Learning and Re-learning for Transformational Change

Re-learning how to design cities and testing new approaches to urbanism entails a new mindset for planners, architects and all those involved in shaping and inhabiting the processes of urbanisation.

This requires two major changes in the realm of knowledge to envision a new paradigm for twenty-first-century urbanism, which are well rehearsed (see Chapter I.2 and Chapter IV.1 in this volume) but far from orthodoxy. The first implies the capacity to deliver new forms of knowledge in new ways, questioning the roles of traditional actors involved in the process of shaping cities. This is witnessed in the inter- and transdisciplinary processes analysed in this volume. The second requires new educational models to shape the priorities of sustainable development, as in the Rio Declaration (UNCED, 1992) and the resulting United Nations Educational, Scientific and Cultural Organization initiative on Education for Sustainable Development (2009). Agenda 2030 reinforces this in its Sustainable Development Goal no. 4 to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.” Crucially, underlying the United Nations agenda is the assumption that education plays an essential role in achieving all Sustainable Development Goals, therefore requiring systemic, connected and collaborative thinking (Leicht et al., 2018; SDSN Australia/Pacific, 2017; UNESCO, 2017).

All this has implications for educational practices for sustainable urban development, where progress has been made, and yet significant changes remain pending (Bina et al., 2016). The open-system thinking, which Sennett et al. (2018) relate to as a re-learning of how to design cities, finds interesting correlations with core characteristics of the Education for Sustainable Development as propagated by the United Nations Educational, Scientific and Cultural Organization:

“it requires individuals to act in complex situations in a sustainable manner – to explore new ideas and approaches and participate in socio-political processes, with the objective of moving their societies progressively towards sustainable development. ESD, understood in this way aims to enable learners to take responsible actions that contribute towards creating sustainable societies now and in the future” (Rieckmann, 2018, p. 39).

Education for Sustainable Development entails the development of cross-cutting competences and learning outcomes (cognitive, socio-emotional and behavioural) crucial to achieve the Sustainable Development Goals. In practice, education needs to be forward-looking and propose approaches and models that can: deal with complex sustainability challenges; enable individuals to reflect on their actions, taking into account their current and future impacts (from a local and global perspective); enable individuals to act in complex situations in an innovative and sustainable manner, participating in socio-political processes; promote sustainable development and lifestyles. This is achieved not only by integrating topics directly or indirectly linked to the domain of “sustainability” into teaching curriculums (such as climate change, inequality, and so on), but also by facilitating innovative, interactive, learner-centred educational settings:

“ESD ... takes the form of an action-oriented transformative pedagogy, characterized by elements such as self-directed learning, participation and collaboration, problem-orientation, and inter and transdisciplinarity, as well as the linking of formal and informal learning. Such pedagogical approaches are essential for the development of competencies vital for promoting sustainable development” (Rieckmann, 2018, p. 40).

Through our exploration of inter- and transdisciplinary processes in practice, we note a significant overlap between the needs of education for sustainability, of a new planning paradigm, and those of inter- and transdisciplinary science: 1) greater collaboration and learning between different actors and parties directly and indirectly involved in urban projects, and 2) greater integration and connectedness between ways of knowing and disciplinary perspectives and insights.

Forms of Learning Through Inter- and Transdisciplinary Processes

As the diverse experiences in this volume show, it is not so much methods that “enable the city,” but rather competences and dispositions combined with mutual and transformational forms of learning. Building on the work of Julie Klein (2013), Mitchell et al. (2015) define mutual learning as a social aspect that is context dependent and focuses on the interaction between collaborating partners, and their collaborative generation of new insights:

“The social aspect of learning ... draws attention to the interactions, communications and relations amongst actors and the quality of dialogue leading to collective definitions and accommodations in terms of both the nature of the situation to be addressed and the means of determining desirable and feasible pathways. It is the experience of the collaborative, coordinated research endeavour that provides the enabling environment for the depth of reflection associated with deeper conceptual change. This kind of learning can occur at group, community, or societal scales” (2015, p. 93).

Mitchell et al.’s (2015) description of transformational learning is illuminating in terms of the value of inter- and transdisciplinary processes for their potential to trigger both mutual learning and a deep,

PART II	Forms of learning	Topic/context around which perceptions were changed	Change
Chapter II.1	New social relations were built and the weekly meetings facilitated mutual learning. Learning has a double connotation here: education through the involvement of students and the mutual learning within the community.	Renewable energy	A dialogue was established and people were brought together and established a common language, recognising the history of the place.
Chapter II.2	The format was already established. students acted as individual “change agents” at the same time building capacities and empowering through shared learning experiences.	Economic prosperity	“A positive atmosphere for change,” already partially established, helped to develop new ideas and linking different initiatives.
Chapter II.3	The mutual learning in this case is part of the process.	Creative industries/entrepreneurship	There was a changing perception of the risks related to ITD and the role researchers can play in accompanying a transformative process.
Chapter II.4	The experiment of developing new ways of residing involved mutual learning for all actors involved. In particular, the monthly meeting over several years facilitated the dialogue and the respect and value of different kinds of knowledge. Also, a PhD was written within the process.	Housing	The hierarchies of knowledge were “broken” down due to long-term involvement.
Chapter II.5	The community learned with the research team through the method of experimenting! In this case a temporary installation was used as a starting point.	Mobility and quality of public space	The belief that something can change – empowerment – led to the establishment of the association that continues to facilitate a dialogue around the quality of the public space.
Chapter II.6	The multifaceted extensive research was a new approach in the context of planning culture. The “urban forums” facilitated a participatory dialogue.	Regeneration	The “urban forums” created a “safe space” to discuss the development of the city.
Chapter II.7	Twofold learning: 1) education of future planners and the fact that collaboration did not work in the way that was intended led to “learning by failure.” And 2) a self-reflexive process within the involved academic community.	Regeneration	The processes catalysed a self-reflexive process within the academic community and was used as a starting point for a new dialogue.
Chapter II.8	Experience matters! People learn from past experiences and transfer the lessons learned (context-independent knowledge) into new ITD processes.	Health, dementia and housing	Good leadership is manifested as the conductor of an orchestra – someone who is capable of sensing when and what has to be said or done by whom.
Chapter II.9	The mutual learning was that a new way of interaction was needed and trust building around a local context that is highly contested happened.	Neighbourhood development – quality of public space	Clarification of the need to strengthen cooperation between the state, local authorities, residents and academic institutions.

TABLE IV.3.2 Illustrates the forms of learning explored in the cases illustrated in Part II. Source: Authors.

triple loop learning (Schön, 1983), which partly echoes with the interpretation of transdisciplinarity explored in Chapter IV.1 (this volume):

“Transformative, higher order, ‘conceptual’, ‘generative’ learning involves changes in norms and values, redefining goals that govern the decision-making process, reviewing and adjusting problem definitions (or perceptions of real-world situations), strategies, and actions of organisations and individuals involved. Transformational learning as defined in this framework denotes learning that leaves a legacy and contributes to changing the situation. ... creating change towards sustainable futures requires persistent change in both cognitive and behavioural realms. Persistent change is associated with these higher order, deeper, levels of learning that enable new perspectives and open up new possible paths. Shifts of this kind require a supportive organisational culture – one that values experimentation and ‘learning from failure’” (Mitchell et al., 2015, p. 93).

The case studies and practice stories emphasise different competences and skills as well as methodologies, reflecting different contexts (institutional, cultural, political, etc.). The chapters by Paadam and Ojamäe (Chapter II.6), and Wolf et al. (Chapter II.4; all this volume), both reflect on deep lessons that can be learned from inter- and transdisciplinary urban research processes. The chapters by Gromark et al. (Chapter II.3), Chiles et al. (Chapter II.1) and Nikšič (Chapter II.9; all this volume) are grounded in the traditions of participatory urban planning and action research and focus on designing and implementing transdisciplinary processes around architecture and urban planning. Finally, the chapters by Verdini et al. (Chapter II.2), Dietz et al. (Chapter II.5), and Dimitrova (Chapter II.7; all this volume) centre around pedagogical models of including inter- and transdisciplinary learning processes in urban planning education and the role of academia as facilitator of inter- and transdisciplinary processes.

Education for Sustainable Development Competences and Dispositions in the Urban Realm

This view of transformational learning has significant implications for the Education for Sustainable Development agenda connected to Sustainable Development Goal no. 4. However, and more significantly, learning and education are considered instrumental to the success of the whole United Nations 2030 Agenda, which seeks to trigger transformational change in all the fields identified by Sustainable Development Goals. In this chapter, we have focused on Sustainable Development Goal no. 11 as an example of such connection; to promote the new science of urbanisation as discussed above, the next generation of urban planners, architects and urban administrators and leaders will need:

- “‘Cross-cutting skills’ and ‘key competencies’ that are relevant to addressing all of the SDGs: systems thinking, critical thinking, self-awareness, integrated problem-solving, and anticipatory, normative, strategic and collaboration competencies.
- Creativity, entrepreneurship, curiosity and learning skills, design thinking, social responsibility, partnership competencies, and being comfortable in inter-disciplinary settings.
- A basic understanding of the subject areas of each of the SDGs.
- Knowledge and understanding of the SDG framework itself and its purpose and uses” (SDSN, 2017, p. 12).

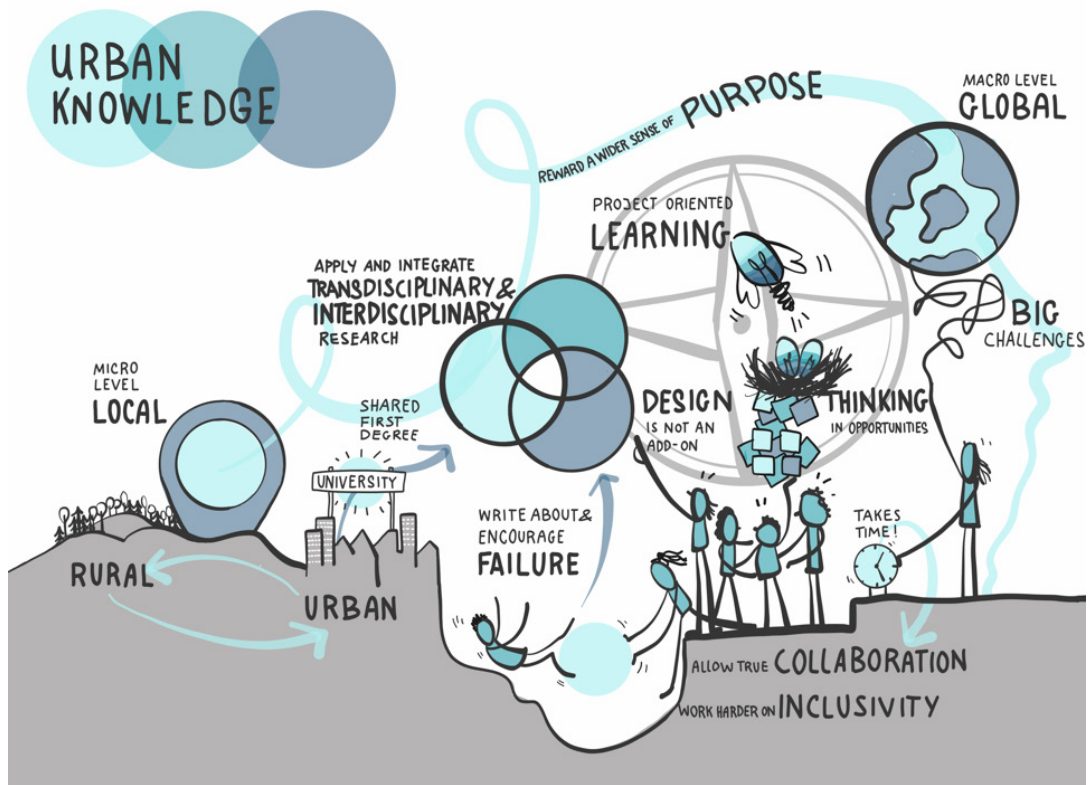


FIGURE IV.3.4 Urban knowledge and its challenges. Source: Jacob Kohlbrenner in Bina et al. (2019).

The experience from our cases and discussions over four years highlight the need for courage and a certain disposition towards risk-taking (explored in depth in Guimarães et al., 2019), as well as the capacity to embrace the inevitable ambiguity that arises from inter- and transdisciplinary processes.

The changing face of “leadership” and its constant overlap with the ubiquitous role of “facilitator” have been the subject of most of our cases. Some of the most common qualities expected in the spectrum of leader–facilitator include a combination of capabilities and dispositions: being committed, capable of promoting connectedness and building bridges, being a good communicator and listener – capable of exploring and clarifying differences and ambiguities, being flexible and adaptable, and capable of promoting learning. Another key role that occupies the spectrum between leadership and facilitator is that of “change agent and societal entrepreneur,” who is motivated by societal transformation, and who can aid transformation towards more sustainable futures by being aware of complexities (key for system-wide changes).

Figure IV.3.4 summarises the main challenges involved in inter- and transdisciplinary processes that specifically address urban knowledge, as seen through the eyes of the INTREPID network

UNESCO critical competences for sustainability	Quito Papers and illustrations from cases in Part II
<p>Normative competency: the abilities to understand and reflect on the norms and values that underlie one's actions; and to negotiate sustainability values, principles, goals and targets in a context of conflicts of interests and trade-offs, uncertain knowledge and contradictions.</p>	<p>To recognise the contested nature of the urban realm, interpreting different rationales of stakeholders (Chapter II.4; Chapter II.8).</p>
<p>Critical thinking competency: the ability to question norms, practices and opinions; to reflect on own one's values, perceptions and actions; and to take a position in the sustainability discourse.</p>	<p>To acknowledge the limits of mainstream modernist practices, taking positions and opposing narrow visions of city development (i.e. those driven by real estate speculation). (Chapter II.9; Chapter II.6).</p>
<p>Systems thinking competency: the abilities to recognise and understand relationships; to analyse complex systems; to think how systems are embedded within different domains and different scales; and to deal with uncertainty.</p>	<p>To stimulate reflections on complex local system, provoking discussions on uncertainty. Examples: reflecting holistically on environmental constraints and social aspirations of communities (Chapter II.2; Chapter II.8).</p>
<p>Integrated problem-solving competency: the overarching ability to apply different problem-solving frameworks to complex sustainability problems and develop viable, inclusive and equitable solution options that promote sustainable development, integrating the above-mentioned competences.</p>	<p>To focus on concrete problems when discussing solutions with local stakeholders (all case studies in Part II).</p>
<p>Self-awareness competency: the ability to reflect on one's own role in the local community and (global) society; to continually evaluate and further motivate one's actions; and to deal with one's feelings and desires.</p>	<p>To develop in situ learning experiences where students/community interaction can take place (Chapter II.1; Chapter II.2; Chapter II.5 and Chapter II.7).</p>
<p>Collaboration competency: the abilities to learn from others; to understand and respect the needs, perspectives and actions of others (empathy); to understand, relate to and be sensitive to others (empathic leadership); to deal with conflicts in a group; and to facilitate collaborative and participatory problem-solving.</p>	<p>To work across different disciplinary fields, setting up multidisciplinary teams, and to facilitate collaborative practice with local citizens (Chapter II.1; Chapter II.4 and Chapter II.5).</p>
<p>Strategic competency: the abilities to collectively develop and implement innovative actions that further sustainability at the local level and further afield.</p>	<p>To initiate alternative strategies for sustainable urban planning, by incorporating different expertise from academia and practice (Chapter II.6).</p>
<p>Anticipatory competency: the abilities to understand and evaluate multiple futures – possible, probable and desirable; to create one's own visions for the future; to apply the precautionary principle; to assess the consequences of actions; and to deal with risks and changes.</p>	<p>To develop alternative visions for urban futures and to test local solutions of urban sustainability (Chapter II.1; Chapter II.2; Chapter II.3; and Chapter II.9).</p>

TABLE IV.3.3 United Nations Educational, Scientific and Cultural Organization Critical competences for Sustainability: Global and Local Relevance.] Source: UNESCO 2017 with Author's commentary.

scholars and practitioners. It overlaps with most of the United Nations Educational, Scientific and Cultural Organization (2017) competences for sustainability in Table IV.3.3. It refers to the constructive tension between local and global focus, central to the agendas of the Sustainable Development Goals and New Urban Agenda and linked to the United Nations Educational, Scientific and Cultural Organization's self-awareness competence, to the importance of acknowledging a sense of purpose and thus the United Nations Educational, Scientific and Cultural Organization's normative and critical thinking competences. It also calls for greater collaboration between the city and university (in line with ideas of civic universities).

Table IV.3.3 brings together the United Nations Educational, Scientific and Cultural Organization's (2017) set of eight competences for sustainability (which include what we call here dispositions) with our recommended categories and a reflection on how all this links to the global priorities identified by the influential set of *Quito Papers*, and to the local experience of our cases.

This book has explored how collaborative processes of knowledge production, and learning, may contribute to craft transformative pathways. The case studies (Part II) and the practice stories (Part III) are examples of collaborative processes, framed as experiments of inter- and transdisciplinary science that is almost ubiquitously expected to help produce more inclusive and sustainable results (see also Chapter I.2 of this volume). These experiments show a diversity of experiences and traditions of spatial planning within several European countries. While, in some countries, participatory processes are established practice and embedded in the legal planning framework (e.g. Germany), other countries have just started to experiment with other modes of collaboration. This is the case with the establishment of "Urban Forums," as in the city of Tallinn, or through the experimentation of bottom-up trust-building processes, as illustrated by the cases of Ljubljana and Gagliato, due to a long-lasting mistrust in the state. Taken together, this diversity of experiences reinforces the assumption that enhanced collaboration among all actors in cities, at different scales, is conducive of more sustainable urban outcomes and essential for re-learning and consequently for dealing with the urban complexity of the twenty-first century (Griffith et al., 2018). In the present volume, the cases provided show how inter- and transdisciplinary processes enable micro-scale forms of knowledge production, of mutual learning and collaborative science deemed essential for cities to develop more sustainably. Forms of re-learning of the art of producing urban space, not just physically but also socially and economically, are taking place at the very local scale (neighbourhood, village and so on). While essential to all levels of policy and planning, such experiences show a significant potential for triggering innovative learning at the local level.

Concluding Remarks

As twenty-first-century problems accelerate in scale, pace and interconnectedness, even the term "wicked problem" (Hulme, 2009) feels somewhat insufficient to grasp what is at stake. The rising popularity of the term "transformative" (including for the United Nations 2030 Agenda: UNGA, 2015) as opposed to more incremental "transitions" (Brand, 2014), seems to underpin this inconvenient state of affairs. Partly in response to this, we are witnessing a relentless growth in the demand for collaborative and participatory processes, co-designing and co-producing problems and solutions. The plethora of global, regional, national and local assessments and planning efforts appear to be embracing (or at least paying lip service to) such processes. Yet, for all the clamour, we are still largely having to find the way to such processes, case by case. While cases, lessons and frameworks (including ours) help, much in our cultures, institutions, worldviews and incapacities still does not.

Resistance and inability to promote transformative change have a long tradition, and in this chapter we have connected at least three policy arenas with a share in it: 1) the long-standing critique of progress to more sustainable development – including in urban contexts; 2) the limited results of the education agenda for sustainable development; and 3) the encouraging but still inadequate progress in the theory and practice of collaborative science and inter- and transdisciplinary processes. As the century advances from one crisis to another, affecting global ecology, financial and health systems, urban areas find themselves as key players in both causing the crises and potentially shaping transformative solutions. Cities are increasingly under pressure to respond and to imagine new sustainable pathways. For this, they need to enhance capacities for “participatory, integrated and sustainable” planning and management, as highlighted in Target 11.3 of the Sustainable Development Goals (UNGA, 2015), to be able to frame problems and solutions that have yet to be imagined.

In this chapter, we reflected on the interconnections between these three policy arenas through the lens of the inter- and transdisciplinary experiments at the local level, as presented in Parts II and III of this volume. We highlighted the strong link between the concept of learning and re-learning how to design and plan cities in a holistic manner, and collaborative and participatory processes entailing inter- and transdisciplinarity. We then argued for the need to further develop and integrate the necessary competences and dispositions into urban-related studies in higher education. The experience shows how, in addition to resistance and lack of capabilities and dispositions, scholars and practitioners are also confronted with contradictions between what is needed (and deemed ethical) and actual societal standards and expectations. The complex nexus between dispositions, risk-taking and courage is illustrative: on the one hand, risk-taking, for example, increases the likelihood of developing innovative solutions; on the other hand, it also increases the “risk” of failing (problems with funding institutions, publications, learning targets, etc.), which can rarely, if ever, be a valuable approach for practice. Yet, failures can be extremely productive and are seen as important for learning especially in design and planning processes (Sawyer, 2018).

To address the combination of resistance, limited capabilities and inevitable contradictions, our inter- and transdisciplinary experiments – the framework as well as the INTREPID journey – call for new educational models and a reprioritising of the kind of knowledge that needs to be taught, away from technical skills towards softer competences and dispositions. In our 16 accounts of inter- and transdisciplinary processes, we sought to strike a balance between enthusiastic support for their transformational potential and a cautious note regarding the persistent challenges to the ethos as well as the practice of inter- and trans-disciplinarity and cooperation. In this spirit, we have translated the lessons learned, and those still to be learned, into a framework that is simple, though by no means easy to apply when confronted with the persistent challenges of real-world inter- and transdisciplinarity (see Chapter I.2 in this volume). Knowing what phases are critical in any collaborative and participatory process and making an early effort to allocate human and financial resources as well as time to each phase, will make a world of difference. Finally, learning, and the disposition to learn, may feel like an unsatisfactory conclusion for a journey into the joys and travails of actual inter- and transdisciplinary processes, and yet the experience we have shared within INTREPID’s network is that trust, humility, and mutual and transformative learning are the too-often invisible levers of change, contributing to enable sustainable cities.

Notes

- 1 This is highlighted in Target 11.3 of the Sustainable Development Goals (UNGA, 2015).
- 2 For our definitions and more detail please see Part I, Chapter 2 in this volume.
- 3 Sustainable Development Goal no. 1 is “End poverty in all its forms everywhere” and Target 1.3 states that “By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to

economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance” (UNGA, 2015).

- 4 Moreover, as many have argued, Sustainable Development Goals can only be implemented if synergies and trade-offs are fully addressed (Sachs et al., 2019), and we note that Sustainable Development Goal no. 11’s targets can entail considerable interdependence with at least 11 other goals: on Poverty (no. 1), Food (no. 2), Health (no. 3), Education (no. 4), Gender (no. 5), Water and Sanitation (no. 6), Energy (no. 7), Growth and Employment (no. 8), Infrastructure (no. 9), Inequality (no. 10) and Climate Change (no. 13).

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REF

QS ★★

GLOBAL

REF

BEST
STUDENT
EMPLOYABILITY

FUTURE CAREER

EMPLOYABILITY
FUTURE CAREER

FUTURE CAREER

RUSSELL
GROUP

TEF Gold

QS ★★
GET INSPIRED
NOBEL PRIZE ALUMNI
GLOBAL
TOP 100
UNESCO HERITAGE

NO.1
student experience

EMPLOYABILITY

BEST
STUDENT
EMPLOYABILITY

THE
TIMES HIGHER EDUCATION No. 1

GLOBAL

大学 学生福
UNIVERSITY

TOP 10

STUDENT

EXPERIENCE

QS ★★

蘇生科香絲

NO.1
student experience

MULTICULTURAL

PRINCESTON
UNIVERSITY

TEF

FACILITIES



AFTERWORD: THE FUTURE OF THE UNIVERSITY IN A TRANSDISCIPLINARY WORLD

As we bring this book to a close, we note the constant presence of the next generation in the discussions and projects we have written about. The enthusiasm and agency of young people and students, working and collaborating outside the academy, is inspiring. In the Preface we acknowledged the state of deep uncertainty linked to repercussions of the pandemic, we wish to close on a note of cautious hope and optimism on the way we may learn in the future, not least as a result of the digital upheaval we are currently experiencing in universities. The previous essay in the book, “Learning for Transformational Change” (Chapter IV.3) discusses education and learning in detail, in terms of future policy, the Sustainable Development Goals, and asking for a new paradigm for planning and development. It looks at the need for education to involve greater collaboration, greater integration and connectedness between ways of knowing and disciplinary perspectives and insights, the fundamental qualities of inter- and transdisciplinarity.

We end with an afterword highlighting some of the work and events INTREPID has explored on the “Future of Universities” during our journey exploring how universities could move from being part of the problem, to becoming part of the solution.¹ We show some inspirational ideas re-thinking the space and place for learning in the future.² The next generation will lead us in thinking about the kind of world we want to create, based on a deep understanding of the forces which shape our shared future. In our post-pandemic world we need, urgently, to collectively articulate what a “good” society needs, beyond a productive ever-growing economy – social justice, fairness and tolerance, health and wellbeing and lifelong learning.³ Universities, we believe, have to protect the freedom of ideas and research in the pursuit of knowledge, beyond daily politics and funding and combine this with an engagement with the world around us – situating knowledge that enables cities to flourish. What kind of presence should Universities have in our World?

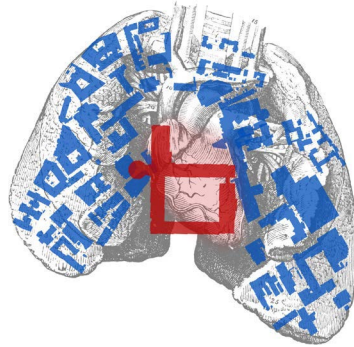


FIGURE V.1.2 Newcastle (to the west) and Northumbria (to the East) Universities are the lungs to the Civic Centre, the heart of the City of Newcastle. Author: Andrew Nelson.



FIGURE V.1.3 Univer(c)ity symposium and exhibition of Learning, the future of Universities, the Boiler House, Newcastle University. Photo by Prue Chiles.

“Let no one enter (a university) who cannot see that the issues outside are a mirror of the issues inside.”
 Otto Scharmer

An international workshop carried out in Newcastle in the UK in January 2019 was the last in a number of events on the role of inter- and transdisciplinarity in exploring the future of the university; not just the production of knowledge but the physical, digital and virtual spaces where these operate. We felt increasingly uneasy with the challenges arising from the quintessentially abstract nature of inquiries into inter- and transdisciplinary practices, and limited progress compared to hopes and expectations. The desire to embark on an exploration of the physical space and place of knowledge in the future arose as a need to somehow make things more tangible.

“Thinking about this journey: the necessary starting point becomes the human scale and the human body itself, with its six senses and its infinite potential for skills and dispositions that can be enhanced or defeated by the nature of space and place. Then comes the institution of academia and higher education with its buildings and campuses, their space and place. Followed by a necessary redefinition of the civic interaction and integration of the university and city: the place of reference and thriving dialogue. Finally, the inescapable leap into the digital world beyond place into infinite space, where the ways of knowing can be multiplied with no boundaries.”²⁴

Throughout the three days, academics, practitioners and students from different institutions and with various disciplinary backgrounds, gathered to critically reappraise the idea of the university and the spaces in which we teach, learn, think, create and produce knowledge – at a time of rapid socio-economic, cultural and political change. Provocations and talks on the first day were based around broad themes – the university embedded in the city, a university’s relationship with the knowledge and digital economies and the de-colonisation of universities globally. The second day we divided into working groups to explore different scenarios to shape future universities and a small sample of key findings, forming the beginnings of a manifesto for making the university of the future.



FIGURE V.1.4 The importance of a front door and the university as “a good neighbour”. Different models of collaboration and “sociality”, sharing knowledge with industry and community. Author: Howard Evans of CE+CA.

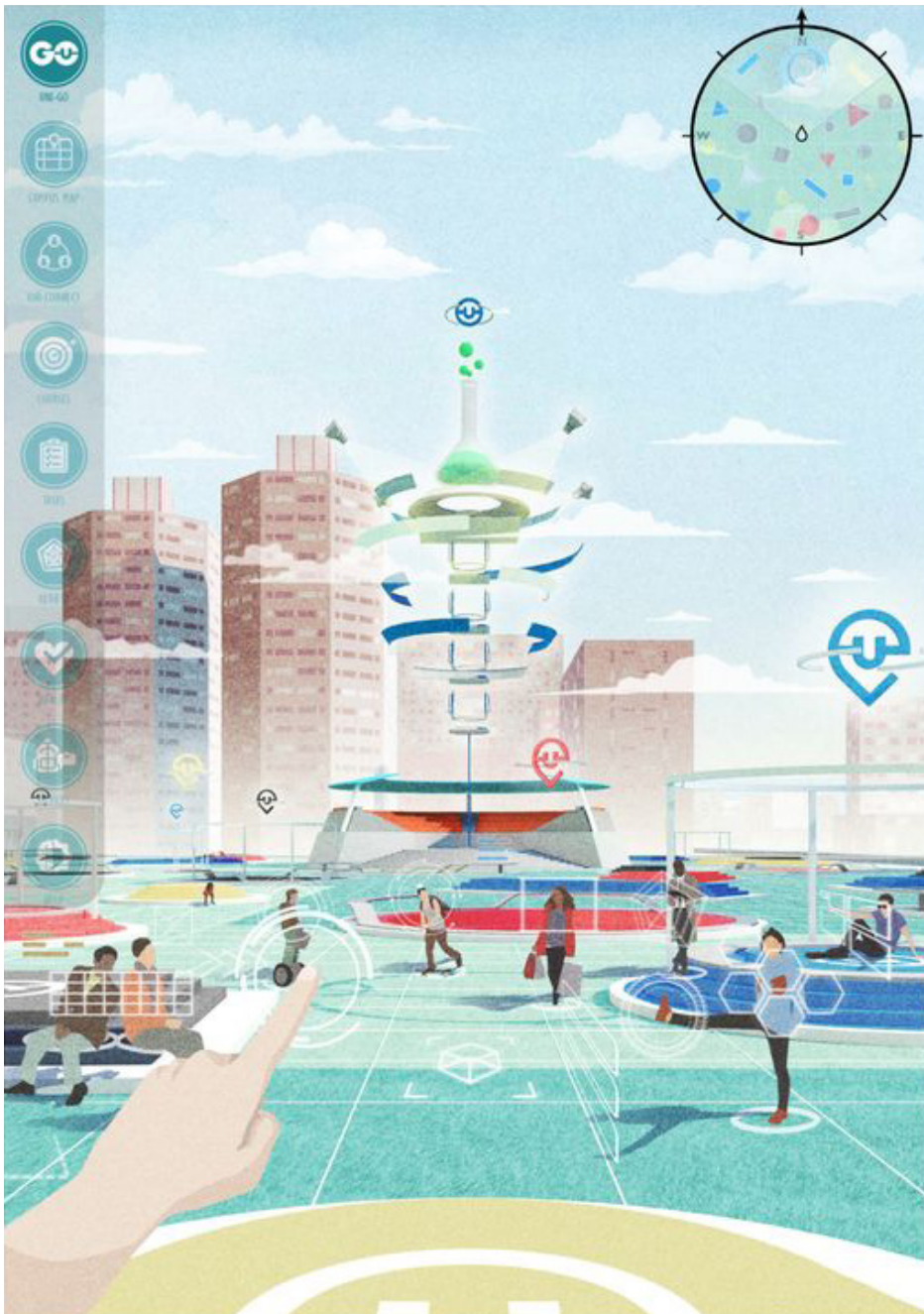


FIGURE V.15 Uni-Go, a virtual world of knowledge, augmented reality, the city is the campus. Authors: Cheung Yui Ming, Leung Verena So Cheuk Ying Sharon, University of Hong Kong.

A manifesto for building a future university

- A soft boundary between the university and the outside world: both locally and globally.
- The democratisation of access to knowledge, skills, opportunities for all regardless of gender, race, sexuality and means.
- Interdependent structures rather than elite arrangements.
- Open spaces of negotiation and difference, as a pre-requisite for change for a prospect of transformation in the absence of revolution.
- Break down a range of institutional and spatial dimensions where the legacies of colonialism and imperialism are evident.
- Create an environment where knowledge is no longer colonised, where we stop universalising, when we acknowledge the role of the other.
- Manage change by understanding the ethical implications of what we are doing.
- “Engagement” becomes the third mission of the institution alongside teaching and research, for transformative, responsive solutions and action.
- Facilitate research which is outside usual modes and methods.
- Address the negative bifurcation and gap between “thinkers” and “makers”.
- Encourage one of the bases of the knowledge economy: innovation, which happens when different minds meet and when people exit their disciplines or silos.
- Create systemic change to address the thinking frameworks defined by disciplines.
- Involve the people working in universities in inventing the spatial future of their university world.
- Change the paradigm for “centres for inter-disciplinarity” inviting others from outside the academy.
- In thinking about a future we imagine for universities, we can also think about the future that we imagine living in; what is the role of universities in the way we live?

In a desire to expand our exploration of the space and place of inter- and transdisciplinary knowledge, we joined forces with the remarkable organisation non-architecture who agreed to run one of their competitions series around our theme of: Learning – and the future University.⁵ The competition was global and open to all, asking creative people, mainly students from around the world to produce innovative ideas for the university of the future. Over 300 entries were submitted and 50 shortlisted proposals were exhibited in Newcastle and Lisbon. The three winners were judged and announced at the Newcastle symposium in a live feed and are illustrated here. Notable is the number of entries that explore virtual ideas, questioning the need for a physical campus at all.

Others in opposition acknowledge the university cannot thrive without the city, they are interdependent. All are thought provoking, given the situation we found ourselves in the spring of 2020.⁶ A number of the submissions ask for the break-down of disciplines into new learning experiences and many state in their entries that it is the social aspects of university that are the most important.

Quoted by one of the winners, Unbound.

“Tell-me and I forget. Teach me and I remember. Involve me and I learn.” (Benjamin Franklin). This is our future.



FIGURE V.1.6 The Labyrinth Campus – learning flow and journeys that make you lose yourself within. Exploring movement as a main driver for learning and new collaborative networks of learning and making with industry. Author: Jocelyn Tay, RMIT University.

FIGURE V.1.7 (opposite) Unbound – where experience is knowledge and infinite plain of digital knowledge in interactive spherical spaces. Authors: Kristijan Dapcevic, Savo Radovic, Politecnico di Milano and University of Montenegro.

UNBOUND

.... BY THE LIMITS OF
PHYSICAL BOUNDARIES. EXPLORE THE DIGITAL
REALITY THAT YOU HAVE CREATED



Acknowledgements

We would like to thank many participants and presenters at the Newcastle Workshop: Profs. John Goddard, Ali Madanipour, Martyn Dade Robertson, Roger Burrows all from Newcastle University, Roger Hawkins (Hawkins Brown Architects, UK), Henrietta Palmer (Chalmers University, Gothenburg Sweden), Iain Low (University of Cape Town, South Africa) and James Ayers (Blekinge Institute of Technology, Karlskrona Sweden).

The non-architecture team, Luca De Stefano, Marco Mattia Cristofori, Daniela Silva and Veronica Baraldi.

The final year architecture students who mounted the exhibition for non-architecture: Safira Albarakbah, Andrew Nelson, Ciaran Costello, Koay Hui May, Dominic Freddie Armitage, Jamie Morton, and Sabina Cioboata (PhD student at Westminster University) for her brilliant listening and reporting skills and her report on the conference.

CE+CArchitects Howard Evans, Leo Care and Claire Kemp who ran and drew the workshops.

Notes

- 1 Bina, O. and Pereira, L. (2020). Transforming the role of universities: from being part of the problem to becoming part of the solution, *Environment: Science and Policy for Sustainable Development*, 62, 4, 16–29, doi.org/10.1080/00139157.2020.1764286. This is part of a Special Issue “Sustainability and the Role of Higher Education” in: *Environment: Science and Policy for Sustainable Development*, Volume 62 <https://www.tandfonline.com/toc/venv20/62/4?nav=toCList>
- 2 The Initiative was launched at a workshop at Westminster University in March 2017. Overall it entailed seventeen events, including workshops, conferences and training schools. The most significant moments:
 - EXPLORING THE TERRAIN: CHALLENGES, QUESTIONS, APPROACHES: London’s workshop (March 2017): Universities and Knowledge for Sustainable Urban Futures: as if ID and TD mattered <http://hdl.handle.net/10451/29170>
 - GATHERING VIEWS AND PERSPECTIVES: Lüneburg’s conference session (September 2017): Thinking about the Future of Universities <http://www.intrepid-cost.eu/wp-content/uploads/2017/11/INTREPID-Future-of-U-Reflection-Bina.pdf>
 - APPLYING THEORY U TO THE QUESTION OF ACADEMIC FUTURES: Barcelona’s training school (March 2018): The future of university as if sustainability mattered: A co-creation experience through Theory U journey <http://hdl.handle.net/10451/38174>
 - RE-THINKING CURRICULA: Ljubljana Workshop (Dec 2018) Re-imagine Urban Curricula (a needs assessment) <http://hdl.handle.net/10451/38175>
 - GLOBAL COMPETITION ON FUTURE SPACES AND PLACES OF LEARNING: Non-Architecture global digital competition (Oct 2018-Jan 2019) Learning: Alternative designs for universities <https://www.nonarchitecture.eu/learning-the-book/>
 - EXPLORING SPACES AND PLACES OF FUTURE UNIVERSITIES: Newcastle’s workshop (January 2019): Univer-city: the future space and place of knowledge <http://hdl.handle.net/10451/38177>
 - WRAPPING UP AND MOVING FORWARD: Lisbon, Final Conference (27–29 March 2019) INTREPID Knowledge and the Future of Universities.

More information on these events and all others related to the INTREPID Futures Initiative, can be found in our final report: INTREPID Knowledge: http://intrepid-cost.ics.ulisboa.pt/wp-content/uploads/2019/09/INTREPID_ebook.pdf
- 3 Wonkhe.com
- 4 Bina, O. and Chiles, P. (2019). Editorial: INTREPID and the Future of Universities Initiative. In Learning (Ed, Non Architecture) Non Architecture, eBook, in collaboration with INTREPID, COST Action TD1408, <https://www.nonarchitecture.eu/learning-the-book/>, pp. 7–9.

- 5 <https://www.nonarchitecture.eu/>
- 6 All the shortlisted entries are published in the bookstore on the non-architecture website which also publishes work from final year architecture students at Newcastle University also exploring the future of the university in their thesis projects, what a library should be, placing for life-long learning, a marine university, a de-colonised “making campus” in Kuala Lumpur. All the projects and a write up of the Newcastle symposium Univer(c)ity can be found published on-line by ISSUU – and also in Chiles et al. (2019) 10th INTREPID Report Univer(c)ity, the future space and place of knowledge, Newcastle University Jan 2019, <http://hdl.handle.net/10451/38177>.



BIO NOTES

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FIGURE VI.11 Authors cooking dinner together at OR Haus 14, Spreefeld co-housing in Berlin, 2017. Photo by Prue Chiles.

Prue Chiles is Professor of Architectural Design Research at Newcastle and part of the practice Chiles, Evans and Care Architects CE+CA. Prue works to strengthen connections between people, place, teaching, imagination and architectural design. Recent academic projects include looking at alternative site processes and time and collaborative urban development work in the UK, Africa and Italy.

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Julia Heslop is an artist and postdoctoral research fellow in Architecture at Newcastle University. She has a Master of Fine Art (Newcastle University) and a PhD in Human Geography (Durham University). The potentials for deep participation in (re)creating the urban environment are central to her work which spans large-scale architectural installation, video and painting. She often works in collaborative, slow ways with groups and communities and uses her practice to ask questions regarding land and property ownership, housing precarity, urban planning and local democracy.

Raul Järg is an architect and city planner and co-founder of Ühinenud Arhitektid. He has worked in Canada for Parkin Architects and was the City Architect of Rakvere (Estonia). From 2013 he has run the Estonian Centre of Architecture and Tallinn Architecture Biennale and is the commissioner of the Estonian pavilion at Venice Architecture Biennale.

Inge Mette Kirkeby is an architect with a particular interest in preservation of buildings and the adaptation of buildings – such as schools, kindergartens, elderly care homes etc. – to human needs. She has worked with the transfer of knowledge from researchers to practitioners, i.e. architects, craftsmen and others in the construction sector.

Michael La Fond is a co-housing expert and urban activist. He is the founder of id22: institute for social sustainability in Berlin. He teaches at TU Berlin and researches. He is author on “Co-housing inclusive” and EXPERIMENTDAYS housing market. Michael has an interdisciplinary background in art, architecture and community development; his doctorate has led to research on self-organisation, urban democratizations, edible landscapes and conviviality. He teaches at TU Berlin.

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Alan Mace is Associate Professor of Urban Planning Studies at the London School of Economics. Previously a spatial planner in London, he worked on policy development and has considerable experience of community involvement in planning. He combined this with his role as senior lecturer at the University of Westminster. Alan’s research interests include planning cultures and socio-cultural aspects of housing including second homes and suburban cultures.

Jesús A. Martínez Zárate is a Stuttgart-based architect and urban planner who focuses his praxis on the recovery, design and social development of public spaces. As research assistant for the Institute of Landscape Planning and Ecology at the University of Stuttgart he coordinated the Realworld experiment “CASA Schützenplatz”.

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Katrin Paadam is Professor of Sociology in the School of Business and Governance, Tallinn University of Technology. Katrin has an integrated approach towards urban and residential dynamics and her research focuses on transforming actors' practices and cultures on different scales of city space in the interplay of material structures and larger socio-spatial processes.

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Paola Raffa is an assistant professor at Mediterranea University of Reggio Calabria. Like her PhD in *“Rilievo e Rappresentazione dell'architettura e dell'ambiente”* her research includes survey, representation, and analysis of Mediterranean landscapes, cities and architecture and she has also published on cultural heritage and digital humanities.

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