Architecture is co:
an ethnography of architectural presentations and representations in Copenhagen

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Declaration

This thesis is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the Preface and specified in the text. It is not substantially the same as any that I have submitted, or, is being concurrently submitted for a degree or diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. I further state that no substantial part of my dissertation has already been submitted, or, is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text.

Abstract

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This dissertation explores some of the ways in which architecture and design were practised in the Danish capital of Copenhagen at the end of the 2010s. In 2018, a building called BLOX was opened on Copenhagen's harbour front after more than a decade-long period of design, planning and construction. Most of the fieldwork for this thesis took place in and around this new building complex. Supported by the Danish government and by a private foundation, BLOX was to become the meeting point for 'Denmark's world of architecture, design and new ideas', housing the Danish Architecture Centre and other organisations. Establishing BLOXHUB, the name of a new co-working space inside BLOX, was one key decision through which the ambition to 'co-create' was to be realised. 'The future is co', as the director of BLOXHUB put it. Both BLOX and BLOXHUB figure centrally in the thesis chapters.

The Danish word for design is *form-givning*, literally meaning 'giving form'. Architecture is a professional practice and a discipline, usually practised in architectural studios and schools. But it is also given many other forms and practised in other places. This dissertation explores some of these other forms of the architectural and examines the workings of architecture under co-working logics. The chapters move from the BLOX building itself to BLOXHUB and to other organisations and places in and outside BLOX. The architects and other professionals that form part of the BLOXHUB community (as they call themselves) enact architecture through a variety of everyday practices that include producing oral and written outputs that animate, define and explain their work and views.

Architecture is often described as a business now and, in the context of BLOX, its aim is expressed in the rhetoric of producing 'solutions'; this is conceptualised as a necessity but also as an opportunity to address 'global challenges'. Economics and the language of business have become a shared language across professions. This has resulted in additional perceived pressures for architecture as a professional practice and, in consequence, architects look to and cite these other domains of knowledge and practice that appear more persuasive. This dissertation examines some of these developments and transformations that are coordinated in the name of 'architecture'. At the same time, the chapters are exploring throughout the practices of presenting and representing, especially through talking and writing. These are all practices of architecture – modes of 'doing architecture', we might say – but are often ignored or subordinated to other, more familiar architectural forms. In focussing especially on this mode of doing architecture, this dissertation contributes a different focus from that of most of the anthropological literature on the architectural profession; it is a focus from fieldwork based outside the architectural studio, and explores how architects and other professionals seek to re-work architecture.

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Illustrations

All photos by the author.

Figure 1. BLOX (May 2018)

Introduction

This thesis is an ethnography of contemporary architecture and design in Copenhagen, Denmark. Similar to other recent ethnographies of architecture and design (e.g. Yaneva 2009a, 2009b; Yarrow 2019; cf. Chumley 2016; Murphy 2015), it examines questions of production and reproduction of architecture. However, this project takes a different approach. It does not focus on one architectural practice with fieldwork carried out in that firm's architectural studio. Instead, most of the fieldwork took place in central Copenhagen, especially in and around a building called BLOX (Fig. 1). The fieldwork lasted fifteen months, from June 2017 to October 2018. BLOX as a project is envisioned to house 'Denmark's world of architecture, design and new ideas' (Realdania 2018). BLOX is where representatives, practitioners and clients of those professions should meet in Denmark and where the people, processes and products of architecture and design can be seen and visited. As a result, this dissertation is an anthropological exploration centred around the BLOX building complex, consisting of the then newly opened BLOX building and neighbouring buildings from the 1740s called *Fæstningens Materialgård*.

In his *An Anthropology of Architecture,* Victor Buchli (2013: 185) draws attention to practices of iteration in architectural contexts, such as 'the importance of the palimpsest or trace in terms of the continuous iteration in direct form or anaphoric form toward the maintenance and transformation of social life.' Building on such observations, this thesis examines some of the iterations and reiterations of 'architecture', as a discipline and professional practice.[1]

The BLOX project attempts to centre architecture and design in Denmark in a single location and to encourage particular forms of encounters that were usually summarised as 'co-working' and 'collaboration'. Putting this 'world' under one roof sought to render it more visible to visitors and potential clients, collaborators, and investors.

The relationalities entailed in the practices of architecture are the basis for an anthropological examination of architecture in Copenhagen. We will see aspects in these pages of where and how architecture is produced and reproduced, presented and represented

[1] Cf. Keith Murphy's (2015) analysis of the 'diagram' of Swedish design: 'As a diagram that maps Sweden's sociopolitical landscape, Swedish design is composed of lines drawing together people (designers, consumers, curators, citizens, politicians), things (everyday objects, their particular forms and arrangements), and ideologies (of care, responsibility, equality, justice, beauty) such that the modern sociopolitical formation of Sweden, with all of its attendant norms and cultural values, is constantly marked and remade at the level of everyday life.' (ibid.: 37)

in Denmark: in buildings such as BLOX, organisations such as BLOXHUB, the architectural school in Copenhagen, events such as conferences, and exhibitions in the Danish Architecture Centre or the Danish Pavilion at the Venice Architecture Biennale. We encounter architecture not only embodied by people who call themselves architects or who are other professionals working on architecture, design or the built environment and as buildings or architectural models; but also materialised and represented through other forms – as a profession, as a discipline, as ideas, as values, as texts, as images, as numbers, as exhibitions, as talks, as presentations and other speech and self-consciously representational practices. It is 'architecture' in the making, building on the work of the anthropologist Thomas Yarrow (2019) who focused on how such practices are constitutive of architectural selves, on

> 'architects in the making: on individual and collective selves as explicit objects of interest, on the way in which these are made through forms of expression that are primarily linguistic. Although these narratives are also shaped through practices, they take the form of interviews, conversations, reflections, documents, and presentations that are mostly set apart from the everyday work of design and construction.'(ibid.: 70-1)

The professionals I met view the products of architecture and design not just as stores of value – as 'assets', 'investments', 'property' – but also as generators of value: from 'social' and 'environmental' values to 'quality of life'. How these notions are conceptualised and put into practice by practitioners in Copenhagen constitute part of the ground of anthropological analysis here. In small part, this project attempts to give an account of political economies of Danish design and architecture. How and where processes of production and reproduction of those practices and professions take place have 'political' and 'economic' consequences for practitioners, for the Danish state and for architectural companies and organisations such as Realdania, the private philanthropic organisation that stands behind the BLOX project.

Figure 2. Signage outside BLOX

BLOX

The chapters that follow examine how architecture in Denmark is practised, envisioned, negotiated and potentially transformed through on-going projects and interventions. Figuring centrally in my study is the building BLOX on the harbour front in Copenhagen, where much of my fieldwork took place. The chapters bring broader developments in the wider world of architecture and the built environment in Copenhagen into conversation with more specific issues concerning the BLOX project. It is a study of architecture in Denmark and a building multiple, BLOX.[2]

BLOX is a building designed by the Dutch architecture practice OMA (the abbreviation stands for 'Office for Metropolitan Architecture'), designed for Realdania, a private Danish philanthropic organisation. BLOX is referred to as a 'mixed-use' building – because it is the new home of the Danish Architecture Centre (DAC) and of BLOXHUB, a co-working space and 'urban innovation hub' (Fig. 2). BLOX also houses a cafe, a gym, rental apartments, and

[2] Cf. Mol (2002).

Figure 3. Under construction (July 2017)

underground parking. Its name, BLOX, is not an abbreviation but a wordplay in capitals on its architecture, resembling stacked boxes.[3]

BLOX was always a controversial project and was more than 12 years in the making, from 2005 to 2018 (Fig. 3). 'Planning itself takes time, and during which circumstances change, ambitions alter, and different participants arrive on the scene,' as the anthropologist Simone Abram (2014: 145) summarises. Similarly, changes have been made to the project in response to public consultations, for instance; yet the basic design principles of BLOX – its form, scale, materials – have remained, broadly speaking, more or less the same since the project was made public in 2006.[4] BLOX as a building divided opinion, even before it was opened. For some, what the building wants to achieve is being hailed as the future of architecture in Denmark. Others who merely see its glassy, corporate architecture regard it as a top-down

[3] Capitalised abbreviations are common for architectural firms: this can give a separate identity to the firm, separate from the architect leading the firm; but sometimes the name of an architect forms the basis for the firm's name, such as the Danish firm BIG, where the abbreviation stands for Bjarke Ingels Group.
[4] See Figure 4 for an architectural rendering of BLOX. Cf. Stender (2017a) on the crafting of architectural images.

Figure 4. Brochure with architectural render

planning intervention and consider it a 'monstrosity' that has landed on the harbour banks in central Copenhagen. The building is a series of stacked white and green-tinted glass boxes. Due to the constraints of the site, two strips of land on either side of a major traffic thoroughfare, the building spans the road, just like its immediate neighbour, the so-called Black Diamond, an addition to the Royal Library. Danish architectural critics were vocal in their criticisms of BLOX. Its location, close to the historic centre in Copenhagen, just by the harbour front, and its architecture, a modern glass building the size of an urban block of Copenhagen, meant that the project was seen as 'disrespectful' to the surrounding historic buildings, especially to a building called Christian IV's Brewhouse.

It might also sound surprising that the Danish Architecture Centre was built by a Dutch architectural practice, OMA. Realdania, a private Danish philanthropic organisation, financed the building and was able to select any architect of their choosing.[5] Realdania representatives later stated that OMA was chosen on the strength of their ideas and experience and due to the reputation of Rem Koolhaas, the famous architect behind OMA. During the mid-2000s, no Danish architect was considered a 'star' architect.[6] But Rem Koolhaas was ultimately not too involved in the project. Instead, Ellen van Loon, a partner at OMA, is now credited as the main architect and designer of the building. In hindsight, you might argue that given the current ambitions of the BLOX project – to become the new national and international centre for Danish architecture and design – it was entirely appropriate that the building was designed by a non-Danish architecture practice. It could signal the openness of Denmark to importing and exporting designs and a commitment to the idea that what matters are appropriate design 'solutions', regardless of where they originate. Yet these ambitions were only formulated later, in response to governmental policy proposals, after BLOX had already been designed.

The dominant register employed within this context, one borrowed from the sciences, was that of 'solutions'. What was to be discussed in BLOX and to be promoted were the capacities of built environment professionals in Denmark to come up, either alone or in collaboration, with products, services – 'new ideas' – to tackle planetary problems. This kind of framing – a production of 'solutions' – turns anthropogenic and more-than-human developments into technical or design 'challenges' that are manageable and potentially solvable, if only temporarily. These kinds of problems were in earlier planning language often referred to

[5] Because BLOX was not a government-funded building, EU regulations on public procurement did not apply.
[6] At the time of fieldwork, Bjarke Ingels was regarded as a Danish star architect.

as ‘wicked problems’ (Rittel and Webber 1973).[7] But rather than disappearing, challenges seemed to multiply as more problems could be identified or scaled; at the same time, this could restore trust in human abilities to shape and redesign the current world, aided and reliant on present and not-yet existing technologies. This was seen as a business opportunity to expand the market for Danish products and service. As we shall see, this meant anticipating, generating and documenting ‘impact’.

BLOX was the place where all of this was meant to happen in Copenhagen and in Denmark. BLOX was at the centre of architectural and urban policy interventions. It was a specific version of a ‘public-private partnership’ as the building had been financed and was owned by the private philanthropic organisation Realdania but BLOX was also part of various governmental economic growth strategies. This agenda was acknowledged and openly promoted by the organisations situated in BLOX. The building itself and the work that went on inside were a showcase for foreign delegations and other visitors coming to Denmark. It was one stop on the map for multiple similar initiatives or projects that are meant to represent and stand for Denmark as a ‘design nation’, as the Danish Design Centre, one of the organisations in BLOX, put it. ‘Danish’ expertise was put on show to impress visitors and, ideally, to sell and export ‘Danish solutions’.

Copenhagen could be described as an ‘architectural village’, or as an ‘urban laboratory’. Especially since the post-war period, Copenhagen is said to have been shaped by Danish architects and designers, particularly Arne Jacobsen. More recently, architects such as Jan Gehl and Bjarke Ingels (amongst many others) are seen to have shaped the city. Copenhagen is widely known for its architecture and design community. The city is host to multiple design and architectural schools and design networks, such as the Danish Design Centre and the Danish Architectural Centre. New architectural proposals have been tested in different parts of the city. Currently, both public actors (the City municipality) and private actors (e.g. design practices) experiment with what Copenhagen and, by extension, ‘the future city’, should be. Claiming to be rooted in a distinctively ‘Danish’ (and sometimes ‘Nordic’ or ‘Scandinavian’) approach to design, both public and private actors aim to find new design ‘solutions’ and ‘innovations’. Any ‘village’ is far more complex than one might anticipate (Candea 2007) and the same holds true for Copenhagen as an ‘architectural village’. In this sense, fieldwork is unexpected and contingent (cf. Holbraad 2010) and my fieldwork in Copenhagen has

[7] See Buchanan (1992), Jarzombek (2003), Sweeting (2018) for examples of architectural discussions of ‘wicked problems’.

Figure 5. BLOX and FMG

expanded the scope of initial research questions. The professionals I met were, for example, concerned with the 'business' side of architecture.

BLOXHUB

Throughout my entire fieldwork, I followed the work of BLOXHUB, an 'urban innovation hub' and 'co-working space'. BLOXHUB was the access point into my 'field'. The BLOX building and BLOXHUB have similar spellings and names because BLOXHUB is an organisation, a 'hub', within BLOX. When I arrived in my field site in Copenhagen at the end of June 2017, BLOXHUB was one year old. BLOXHUB was founded on June 3, 2016, by the Danish philanthropic organisation Realdania, the City of Copenhagen and the Danish Ministry of Industry, Business and Financial Affairs. BLOXHUB is a 'non-profit member association' for companies, research institutions, and other kinds of organisations as well as, for example, municipalities. The thematic focus of BLOXHUB is 'sustainable urbanisation' and members need to self-identify as working in this field. To become members, companies need to apply

and pay a membership fee, which depends on the number of employees.[8] BLOXHUB spans two buildings now: BLOXHUB manages the second and third floors of BLOX and the *Fæstningens Materialgård* ('materials yard of the fortress'). FMG, as it was usually called, is a renovated complex of 'yellow buildings' dating from 1740, and located next to BLOX (Fig. 5). BLOX was only officially opened in May 2018. Before that, when I started fieldwork, BLOXHUB and the other organisations that moved into BLOX occupied FMG.

A few months before moving to Copenhagen, I had contacted the director of BLOXHUB and asked if I could potentially work with BLOXHUB. I went to Copenhagen to meet him. He was enthusiastic and I said that I could help with whatever task was needed. I was interested in the members, a wide range of architectural companies as well as other kinds of firms and organisations working in the architecture and design sector. Many thematic events – such as on the future of architecture, of Copenhagen or on aspects of how to make the most of or integrate technological innovations in the built environment – took place in BLOXHUB and related 'networking' events, usually over coffee or drinks.

During the first six months of fieldwork, I used BLOXHUB as a base for ethnographic investigations into what was happening not only in BLOXHUB but also elsewhere in Copenhagen's architecture 'scene', turning my attention 'outward'. The next nine months, but especially the last six months, I focused on BLOX and BLOXHUB and turned my ethnographic attention 'inward'. By 'inward' and 'outward', I am explicitly referring to inside and outside of BLOX. BLOX was only officially inaugurated in May 2018. The BLOXHUB team moved into BLOX at the beginning of January 2018 to initiate moving-in preparations and the first BLOXHUB tenants moved into the building in April 2018.

Altogether I spent fifteen months in Copenhagen, from June 2017 to October 2018, working with architects, designers, and other professionals. This was not my first time in Copenhagen. I had spent time there as part of an internship and had visited multiple times. Yet Denmark was not my 'home'. I had grown up in Germany but Denmark was not unfamiliar either. This ambiguous status encapsulates some of the difficulties of doing fieldwork in Europe (cf. Amit 2000). It is not quite 'anthropology at home' (Strathern 1987) but also certainly not an anthropology of a far-away (imagined) 'other'. The broad analytic and descriptive challenges of all anthropological endeavours remain: to make such worlds and their differences

[8] The membership prices in 2018 were (£1 equalled ca. 8.5 DKK): 1-5 employees: DKK 4,000 per year, 6-50 employees: DKK 8,000 per year, 50+ employees: DKK 10,000 per year. A 50% discount was applied in 2018, the 'startup year'.

Figure 6. *Industriens Hus* with exhibition

intelligible. Similarly, the worlds of architecture and design in Denmark might appear familiar but pose their own problematics. I had previously worked for an architectural practice in London, so architecture and design were not unfamiliar fields. I had been employed as an 'anthropologist' and 'urban designer' but I was not formally trained as an architect, nor as a designer.

Entering 'the field'

'Architecture and design with added value. Look inside and experience how architecture and design make a difference for the environment and people'

This text was printed in Danish on the glass facade on a building known as *Industriens Hus* ('House of Industry') that borders *Rådhuspladsen*, the city hall square in the centre of Copenhagen (Fig. 6). I had come to Copenhagen for a brief visit to talk to design professionals with whom I had been in touch by email; and I just finished a meeting near the harbour, next to the BLOX building that was still under construction. The design professionals I met usually suggested a 'meeting' and proposed a slot that fitted into their agenda, usually

at their offices: meetings are specific institutionalised forms in many professional contexts (Brown et al. 2017). These were seen as 'informal' conversations, held over coffee and outside at a table but other meetings – especially those that are important for business or deemed 'confidential' – were usually held in meeting rooms.

I walked around central Copenhagen and ended up at the city hall with its large square, which was being redeveloped for the new Copenhagen Metro line. The renovated building at the Western side of the square was noticeable due to its glass facade with company logos. This building was the home of *Dansk Industri* ('Confederation of Danish Industries'), one of Denmark's employers' organisation. The text caught my attention, also because an arrow that formed part of the graphic design pointed straight to the entrance door.

On the inside was a compact exhibition which accompanied a printed publication and a website: throughout my fieldwork, I encountered practices of display and presentation that sought to offer 'facts' about architecture in Denmark (see Chapter 5). A text that was printed in large letters on the glass wall in the back conveyed the main message of the exhibition: *Arkitektur med merværdi – en god forretning* ('Architecture with added value – a good business'). An accompanying booklet specified that this value was more than 'economic':

> 'Architecture should create more value for more people by making better use of the resources, which are available. This is the challenge in every project, large or small, because architecture creates value in many dimensions – social, environmental and economic.' (Danske Arkitektvirksomheder 2017)

Such conceptualisations of 'the social', 'the economic', 'the environment' as distinct domains that appear here and reappear throughout the thesis are, of course, widespread in Europe (cf. McDonald 2012). The worlds that anthropologists study are 'self-defining worlds of categories in action.' (McDonald 2018b [1989]: 281) These and other categories will be 'h[e]ld […] up for inspection' (McDonald 2012: 541) throughout the thesis. Here they are mobilised to evoke the effects of architecture along with the exhibited architectural models[9], screens that play videos and numbers and text printed on the glass walls. These labels explained how respective architectural interventions are seen to have resulted in the changes indicated by the numbers. For instance, the sum of 5 million Danish kroner, the text next to an architectural model explained, was saved due to a new cycling bridge, *Cykelslangen* ('the bicycle snake') designed by an architecture practice called Dissing + Weitling:

[9] See Yaneva (2005, 2009a, 2009b) for discussions of architectural models.

> ‘The Cykelslangen has become an international symbol of Copenhagen as an attractive metropolis. The bridge is used by 11,500 cyclists daily and has contributed to a 25% increase in the area’s bicycle traffic. The time that cyclists save amounts to a profit for society of 5 million Danish kroner.’

More numbers referred to similar changes brought about by other projects that were exhibited: from reducing CO2 emissions by 86%, increasing visitor numbers by 422.000 to reducing costs by 22%. As we will see in these pages, numbers have become a pervasive and persuasive element of how architecture is understood and framed. This appeal to numbers is also an appeal to forms of rationalities, in many ways because, as anthropologists have commented, ‘[t]he “modern” world sometimes describes itself in seemingly magical numbers’ (Guyer et al. 2010: 37).

The organisation behind the exhibition is *Danske Arkitektvirksomheder* (‘Danish Association of Architectural Firms’, usually referred to as *Danske Ark* in Danish), a trade organisation for architectural firms that has their offices in the building. Some months later, I find out that Danske Ark is a member of BLOXHUB and I met one of the employees behind the exhibition (see Chapter 5). The exhibition foreshadowed some of the concerns that I encountered months later – including the demands placed on architects to present their architectures in the language of economics and management.[10]

Architectural practices

Representations of architecture are critical to architectural practice today. Especially in the form of ‘publicity’ or ‘marketing’[11], the production of images has consequences for architectural reputations and brands and, more generally, for architecture as business. Such representations do not only include buildings, but they also span other architectural practices of the kind we will turn to again in this thesis: talks, presentations, literature, reviews, and other exhibitions, for example. These, too, can be said to be architectural practices – important practices that help to construct what architecture is and does. Often overlooked elsewhere, they are largely the practices I deal with in the following chapters.

Contemporary architecture in Europe is usually understood as a disciplinary field that compromises both professional practice and academic research. Architecture is considered

[10] See Stein (2017) for an ethnography of specific management logics.
[11] ‘Marketing’, ‘publicity’ and ‘advertising’ are, of course, specific sets of practices that have been analysed anthropologically, cf. Applbaum (1998, 2004) on anthropological work on ‘marketing’ and Malefyt and Moeran (2003), Malefyt and Morais (2012), Mazzarella (2003a, 2003b), Moeran (1996) on ‘advertising’.

to span, overlap or be closely related to many other existing or developing fields - ranging from engineering, consultancy services, urban design to real estate financing or building management and technological inventions and developments. As a result, there are many practitioners who work on what could be described as 'architecture' or who see themselves as working on architecture but who are not trained and registered as architects. Additionally, there are many architects who are themselves questioning or expanding the scope of what architecture is – by challenging the boundaries of architectural conventions or by seeking other collaborators. At the time of my fieldwork, many design professionals working in these fields were interested in designing for specific outcomes. Rather than necessarily limiting themselves to buildings as the exclusive form for architecture, they were interested in exploring other ideas, media and forms – even if designing buildings or spaces can end up being the key means by which those outcomes were realised.

In Europe, since the 18th century, knowledge has been divided into the 'arts' and the 'sciences' in a way now recognisable (cf. McDonald 2014). Individual 'disciplines' emerged in relation to or distinction from these and other categories. Architecture is no exception to this, and notions such as 'arts' and 'sciences' continue to frame what architects see themselves to be doing in relation to other disciplines and professions. Disciplines gather disparate but seemingly connected knowledge. Disciplinary arguments are part of the process of discipling knowledge (cf. Schaffer 2013) and architecture is not a unified 'whole', with frequent disagreement what 'architecture' should be about.

Thus, in the same way that the house as an institution is 'an illusory objectification of the unstable relation of alliance to which it lends solidity' (Carsten and Hugh-Jones 1995: 8), 'architecture' as a discipline and practice holds together various, sometimes contradictory, interests and opinions and produces this shared 'object' through commitments to it (cf. Buchli 2013: 7). 'Architecture' houses both its academic discipline as well as its professional practice. These two are typically spatially segregated, the former is typically located in universities or architectural schools and the latter in architectural firms. Importantly, there is not only crossover between those two loci of architecture but also both incorporate other professions within them. In Denmark, BLOX aims to become an additional space for architecture, described as a 'meeting place' where research and practice come together. BLOXHUB sees its members as professionals who transcend disciplinary boundaries and who work on a common goal: 'sustainable urbanisation'.

Like many other disciplines and despite or because of their origin myths (Schaffer 2013), architecture could be said to be interdisciplinary. Although doing architecture might be interdisciplinary, being an architect is usually restricted or regulated. In Europe, becoming an architect is typically regulated by a national body. In some countries, 'architect' is a protected title, which means that one can only legally carry the title after passing a registration process, which involves completing a certain educational and practical training, fulfilling certain regulatory requirements. In Denmark, being an 'architect' is not protected. The title MAA (meaning *Medlem af Akademisk Arkitektforening,* Member of the Danish Association of Architects) is protected and signals 'professional quality'. To hold this title and become a member of the Danish Association of Architects, applicants need to have gained a Master's degree from the Royal Danish Academy of Fine Arts School of Architecture (KADK) in Copenhagen or from the Aarhus School of Architecture. Foreign applicants with a degree from a recognised international school of architecture can also apply to become members (Arkitektforeningen 2019).[12] Yet for many of the architects I talked to in Denmark, the rising influence on architecture of other professions was a source of concern, especially related to what might happen to architectural quality and who was to retain control over the design process.

Built environment professionals and other designers come to BLOX and to BLOXHUB within it to talk, to meet, to exchange ideas, to give presentations, to attend events, to 'network', and to present and exhibit their work. The idea of 'networking' has become integral to contemporary professional self-understandings as enacted and lived in environments such as BLOXHUB (cf. also Riles 2001). Extending one's professional 'network' is as a professional practice imagined to be indispensable for advancing in one's professional life. At the same time, scholarly analyses and theories have also elevated 'networks' as all-pervasive explanatory frameworks to make sense of contemporary worlds.[13] Networking practices have become an important part of architectural and design work that takes place outside of design studios or architectural offices, where other practices such as drawing plans or making

[12] There is 'free movement' of professionals in the European Union. This includes regulated professions such as architects or doctors. This system of recognition of professional qualifications is governed by Directive 2005/36/EC (European Commission 2019).

[13] For instance, it is telling that Graham Harman (2009) has described Bruno Latour as the 'Prince of Networks'.

models still mainly happen.[14] Yet these 'networking' and related presentational practices are not routinely acknowledged or examined as important dimensions of architectural design. The idea that designs should 'speak for themselves' is a recurrent theme, although architects and others often speak on behalf of architectures and designs.[15] These tensions between 'words' and buildings or architecture more generally is discussed in some of the architectural literature (e.g. Forty 2004). At the same time, the practices of generating presentations and representations as well as narratives and visions (without literally privileging sight as the most important sense) play a pivotal role in architectural production. Architects typically design buildings for their clients, which are then built by a construction firm. Architects have therefore been busy producing visions – materialised and shared through drawings, plans, presentations – therefore conjuring up scenarios and building imaginary worlds to persuade others (those clients, project managers, builders, etc.) that their drawings and ideas are worth realising, worth building, as intended. Any project develops and changes form, often starting out as a 'vision' in multiple material and immaterial registers. Through a series of iterative steps and work, the project is then turned into the desired architectural output or outputs. Such outputs range from buildings and 'infrastructures' – in short, the built environment as we know it – to other kinds of designed interventions. Certain images, visions and narratives are more persuasive than others, and certain forms and media appear as more effective and impactful.

Fieldwork with professionals

The people I met in Copenhagen have in common is that they all work in the broad area of architectural and urban design with the aim of improving the quality of the built environment through design interventions.[16] The people I worked with could all be described as successful 'professionals'. Many of them could be described as belonging to the affluent or cultural

[14] At the time of fieldwork, it was only non-architectural firms who were renting office space on a permanent basis in and from BLOXHUB. The companies and organisations renting space or desks in BLOXHUB were working on architecture and design (or 'sustainable urbanisation' as BLOXHUB phrased it) but they were not architectural firms in a narrow, professionalised sense. Various reasons were given by both architects and the BLOXHUB team for this, including a need for architects and designers to have own space in order to e.g. pin up drawings, make models and engage in other kinds of material experimentation. These are activities that are only possible to a certain extent in the shared, co-working environment in BLOXHUB, where 'work' typically means working with a computer or laptop at a desk.

[15] Yarrow (2019) observes similar frictions in his work with architects in England: 'Architects, at least in this practice, spend a lot of time discussing "precedents," drawing influences and inspiration from other designs, but in the final instance they are clear: a building cannot be explained; it has to speak for itself.' (ibid.: 5)

[16] To anonymise the people I met, I tend to avoid names. The only exceptions are, for instance, when people spoke in their 'official' capacities at events, such as directors, politicians.

elites of Copenhagen's social scene – although most of them would probably not describe themselves as such because status distinctions were never openly discussed in my presence. Most of them were Danish but some of them were non-Danes who have lived in Denmark for a while. Of those non-Danes, most of them moved to Denmark for education and have stayed on to work, or they have moved to Denmark for work or because their partner is Danish. For many it is a small world: the who's who of architecture and design in Copenhagen (and even Denmark) went to the same schools and later architectural or design school, worked in the same firms or knew each other from dinners, drinks or summer house trips. For the newly arrived anthropologist, this was often apparent in 'networking' situations after events or talks. The people that I worked with during my fieldwork are both men and women. Most of them were employed or some were entrepreneurs that ran their own companies. Undeniably, their position as workers or entrepreneurs affected their interactions with me. I often had to get to know them well before they voiced what seemed to be their own opinions or criticisms, instead of what they thought might be appropriate to say to an outsider. The people I talked to were typically highly educated and often in the middle of their professional career. Most of them were at least in their mid-30s and upwards. They have families and young children. This structured their daily work life, often with fixed times that their children needed to be picked up from school or kindergarten. 'Family time' was important for many of the people I worked with and most seemed to leave their offices by five o'clock in the afternoon to spend time with their children and partners. Thus, they were all 'busy' people. 'Time' as well as 'space' were important dimensions to their work and daily lives and took on particular qualities. 'Time', as I came to find out, was always rare. For many, there was a direct link between working hours and 'productivity'. During working hours, professional ambition and workload seemed high and many of them mentioned being 'stressed'.

All of this had consequences for the types of fieldwork encounters that were initially possible. Early interactions and even some in the later stages of my fieldwork ranged between fleeting encounters and one-off meetings or unstructured but importantly scheduled 'interviews' to weekly or daily contact. Doing fieldwork in 'professional' spaces proved more difficult than anticipated. There was the general question of how to do fieldwork with professionals who spent most of their time in front of their laptops and computers: 'privacy' concerns and business interests meant that, for instance, I could not always take part in meetings – or was not invited to them – or that it became apparent that it was not always appropriate for me to observe people working. My experience is shared by other

anthropologist who have conducted fieldwork in such environments (e.g. Boyer 2005). The anthropologist Thomas Yarrow (2019) conducted an ethnographic study of an architectural practice in England. Although he gained access to the architectural practice due to a childhood friendship with the main architect, the challenges of doing such fieldwork remained because '[o]ffices are awkward places to linger without a clearly defined role. Much of what happens takes place in mostly silent exchanges between people, keyboards, the mouse, or with pencil and paper.' (Yarrow 2019: 22) The ethnographer might be perceived as a potential distraction in this environment. Drawing on earlier work by Dana Cuff (1991), Yarrow points out that 'architects can be resistant to the kinds of representation that might challenge their own presentations of professional practice.' (Yarrow 2019: 9) It is unsurprising that architects and designers have their own representations of their professional practices; and that some critical work seeks to 'unmask the reality that lurks beneath the appearance of idealized self-representations.' (Yarrow 2019: 31) Such concerns often characterise the architectural profession as elitist or conservative as well as hypocritical insofar as the profession portrays itself as progressive but is complicit in neoliberal or capitalist systems of exploitation (ibid.). This has consequences for fieldwork as imagined re-representations of professional practices by anthropologists and others can pose problems to architects and designers: the result can be 'resistance' in the form of denying 'access' and, perhaps, accusations of misrepresentation.

It could also be argued that studies of elite professionals, once known as 'studying up' (Nader 1969), can strengthen the positions and self-representations of those who are seen already to wield power; or that power dynamics involved could lead to self-censorship, omissions or biased accounts on behalf of the researcher; or that such a focus might neglect less privileged voices. Many anthropologists have tended to study and side with those voices that are not normally heard, thereby avoiding some of these issues (and encountering different ones).

In this study, I chose to focus on professionals. Inadvertently, this influenced my own positionality and methodological choices during fieldwork. Negotiating prolonged 'access' to some of those professional spaces proved difficult in the beginning. Logics of inclusion and exclusion operated in such spaces. One instance of this concerned who could enter such spaces: who is allowed to be there and, ultimately, who, quite literally, is or isn't given keys to open doors. In other words, there are already power dynamics in place that influence how fieldwork can be carried out.

As an anthropologist, one key methodological concern was for me the need to do fieldwork

and thus being granted such 'access'. Once such permissions were granted to me (through BLOXHUB), I turned my attention towards those professionals concerned, perhaps thereby inadvertently eclipsing other fieldwork options. Once my fieldwork began, relations needed to be nurtured. In hindsight, I might have been able to explore other possibilities more actively – for example, with other people who were critical of those professionals, and were outside of BLOX. However, such avenues would probably have jeopardised relations and trust with the professionals I encountered initially, whom this thesis set out to study. Also with hindsight, the initial difficulties I had in gaining 'access' to some of these professional spaces might have been one of the reasons why I did not pursue such other possibilities more actively later on. However, I did not consciously ignore such avenues, but I already had a different focus: situating and trying to understand the work and practices of the professionals of BLOX and BLOXHUB. Similarly, I did not knowingly leave out any aspects: for instance, apart from the examples given throughout the thesis, I did not come across overt critiques or articulations of opposition in relation to BLOX. This does not mean that those fieldwork opportunities could not have been created and that those voices could not have been heard. Looking back, I could, for instance, have tried to follow up the community groups that had formed during the planning phases of BLOX several years before my fieldwork. But in contingencies of fieldwork thus created, this direction would have resulted in a very different focus and thesis.

I purposefully did not want to conduct fieldwork in one architectural firm. Rather, I had planned to spend my time across various firms and companies. Negotiating this specific kind of fieldwork proved difficult: why would I want to be in their offices? What would I observe anyway? Aren't meetings and interviews enough? In one of those early meetings, a senior architect made it clear when I met with him that it would be a distraction to his team if I asked too many questions or distracted his team by looking over their shoulders. They had work to get on with. Other anthropologists have done long-term fieldwork in a single practice, thereby gradually gaining the trust of the people that they studied. Doing fieldwork in two or more competing firms did not prove feasible. This kind of 'ethnographic refusal' (Ortner 1995) made clear that there were 'business' interests at stake even if they were not always openly articulated. Businesses deal with confidential information, and at the point of initial contact I was merely a stranger, a foreign visitor, and could pose a risk. They decided that it was not a risk worth taking. It was also a financial investment: 'time' and 'space' is money in this world – and, as one senior partner at an architectural firm put it, they did not have 'enough space', meaning enough desks in their office. Instead, it was easy to meet practitioners outside

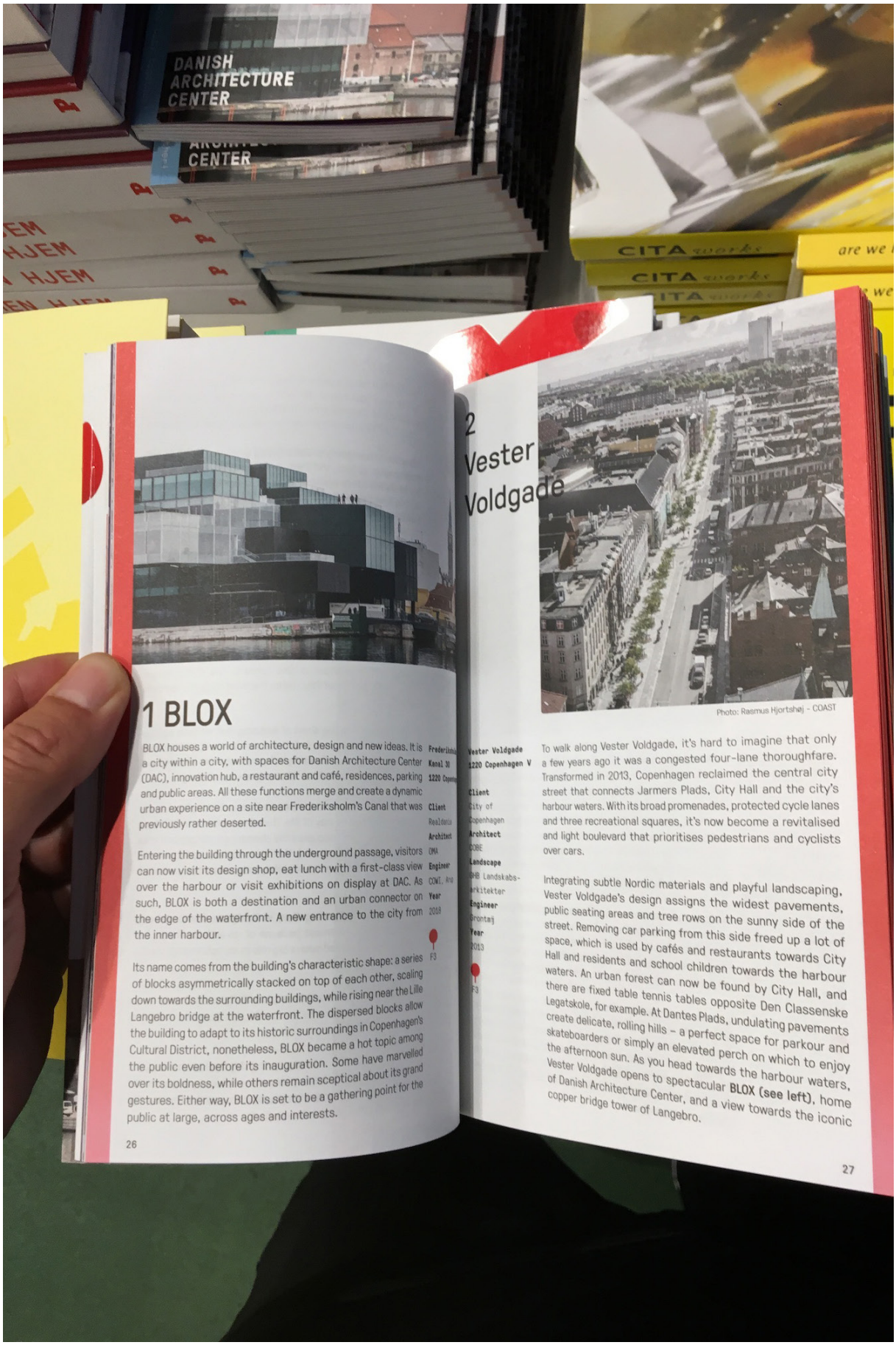

Figure 7. Guidebook (DAC 2018a) sold in the BLOX design shop

their offices, or during their 'breaks': over lunch or coffee, or drinks at an after-work event. I was granted specific, schedule meetings on their terms (cf. Brown et al. 2017). Usually this would be an hour; some extraordinarily 'busy' people scheduled me in for 30 minutes. This was perhaps also to put me in my place and to assert authority. The more they were senior, the later many of them were to scheduled meetings, thereby making explicit whose time was more valuable. In practice, once we got talking and I became more familiar, these meetings overran and lasted longer than their scheduled time. A variation of 'I have to get back to it now' would end the conversation.

These attempts to gain access contrasted with the ease and generosity that I encountered when I approached BLOXHUB. Having met the director of BLOXHUB briefly, my presence for the first months at BLOXHUB was formalised as an 'internship' and I could be there and attend events in exchange for helping out with everyday tasks and the facilitation and organisation of some of their events. It is important to mention that the main working language in BLOXHUB (and Copenhagen, of course) was Danish. But it was also an 'international' environment and if a non-Dane was present, English was used readily and without any hesitation. The first BLOXHUB event I attended, for instance was held entirely in English, for the whole two-hour session, because one person (not me) had put their hand up when the BLOXHUB director had inquired if anyone did not understand Danish. Fluency in English was expected, if not taken for granted in these professional environments. This also meant that many of my conversations switched between Danish and English with many of my interlocutors.

Once BLOXHUB moved into BLOX – the moving-in procedures and preparations had started already in January 2018 – I focused my attention on BLOXHUB. BLOXHUB has 'members' and 'residents': 'members' are firms without a physical presence and 'residents' are firms and organisation that rent desk space. Many impromptu meetings over coffee and lunch were possible with both 'residents' and 'members' in the BLOX building. Indeed, 'connecting with' professionals and employees from organisations other than one's own was often mentioned by BLOXHUB employees as one of the selling points of renting desks in, and thus being part of, BLOXHUB.

I was also attached to the architectural school in Copenhagen, The Royal Danish Academy of Fine Arts Schools of Architecture, Design and Conservation, then usually referred as *KADK*. At the school, I met many architects in training, and architectural researchers.

Anthropological literatures

This ethnography examines 'architecture' in conversation with the literature on the anthropologies of architecture and design, some economic anthropology, and anthropologies of science and technology amongst other appropriate bodies of literature. Architectural and design literature are extensions of 'the field' (see, for instance, Fig. 7).

In particular, this thesis brings together two strands of anthropological and related literatures on architecture that have previously been examined separately: on the one hand, the literature on architecture as a professional practice (e.g. Gunn 2002; Houdart and Minato 2009; Yaneva 2009a, 2009b; Yarrow 2019; cf. also Crinson and Lubbock 1994, Cuff 1991, Schön 1983); and, on the other hand, the anthropological literature that examines architecture as built space, as built environment (e.g. Humphrey 1988, Buchli 1999, Low and Lawrence-Zúñiga 2003, Murawski 2019, Ringel 2018a, Weszkalnys 2010). Whilst these studies have made important contributions – especially as anthropological investigations into the lived realities of a profession and the ambitions and experiences of its practitioners (on the one hand) as well as, put simply, the production and experience of architecture as 'space' (on the other hand) – I had set out my own research project as an investigation of architectural practices across professional and spatial boundaries.

By bringing these literatures together, this thesis provides a novel point of departure to examine how 'architecture' is shaped by a variety of people and processes: importantly, only some of which are usually and explicitly recognised as 'architectural'. In other words, the chapters examine how 'architecture' takes various forms – as built space and as a professional practice, as object and as a set of practices, as a project and as a building, both in and through what are known as BLOX and as BLOXHUB. This study contributes a novel understanding of existing approaches to 'architecture' through fieldwork in and around an architectural project – the BLOX project. This spans the BLOX building and BLOXHUB, which together form a project that aims to change architecture as a discipline and professional practice. We will see in the following chapters that 'architecture' (as a profession, as a discipline) is not only 'done' through presenting and other related practices (that are not usually considered 'architectural'), but also that many of the realities of 'architecture' (as built space) are constituted through such practices. It is not only the profession that is shaped through such practices but also what one might call the experience of architecture as built space by those who (in the language of BLOXHUB) 'live' and work in the BLOX building. The latter point became particularly

observable during these early phases of the building's lifespan – when BLOX was opened – because the architecture was frequently talked about, presented, discussed, critiqued and criticised; and those who 'lived' in the building defended and presented their own perceptions of the architecture, e.g. how BLOXHUB constituted an 'innovative' space ('eco-system') in relation to the architecture of the building.

Thus, more broadly, this thesis seeks to contribute to an emerging anthropology of architecture or architectural anthropology (cf. Buchli 2013, Ingold 2013, Marchand 2009, Murawski 2019, Stender 2017b, Yarrow 2019) as well as to an anthropology of design (cf. Escobar 2018, Gunn et al. 2013; Gunn and Donovan 2012; Murphy 2015, 2016; Suchman 2011) or an anthropology of cities and urban environments (cf. Jaffe and De Koning 2015, Low 1996, Nonini 2014, Ringel 2018a, Weszkalnys 2010). These anthropological studies build on earlier calls to take architectural forms and built environments seriously (cf. Humphrey 1988, Carsten and Hugh-Jones 1995, Amerlinck 2001) and pay attention to the practices and activities through which 'space' is produced. Another overlapping body of literature, the anthropology of space (cf. Low 1999, 2016), develops the work of thinkers such as Lefebvre (1991[1974])), and also Bourdieu's (1990 [1970]) important analysis of the Kabyle house and its spatial organisation. Other important work has focused on the 'consumption' (Maudlin and Vellinga 2014) of 'spaces' and 'architectures', emphasising how the built environment is used. Sometimes a distinction is made between vernacular architecture and professionalised architecture: architecture with a small 'a', i.e. vernacular architecture by 'the people' and Architecture with a capital 'A', i.e. professionalised architecture carried out by an educated elite (Vellinga 2011; cf. Blier 2006). Rather than reproducing such dichotomies, I seek to avoid distinctions that can, ultimately, legitimise supposedly 'modern' architecture and 'other' vernacular architectural practices. The type of analysis I propose is more aligned with Victor Buchli's (2013) analysis of anthropological accounts of architectural forms.

One of the demands that are now being placed on practitioners is to demonstrate the 'impact' or 'usefulness' of their work (cf. Strathern 2006b). The anthropological literature on 'value' (e.g. Graeber 2001, Humphrey and Hugh-Jones 1992, Maurer 2006, Munn 1986, Strathern 1992b, cf. Robbins 2013), on 'quality' (e.g. Chumley 2013, Chumley and Harkness 2013) and, for instance, on the role of technologies and 'data' (e.g. Boellstorff and Maurer 2015; Walford 2017, 2021) are relevant in this context; as is the anthropological literature on 'policy' (e.g. Apthorpe 1997, Riles 2001, Venkatesan and Yarrow 2012) and on 'planning' (cf.

Abram and Weszkalny 2013), especially as the language of 'problems' and 'solutions' has featured in much policy talk and practice.

This study also adds to existing ethnographies of Denmark (e.g. Bruun, Jakobsen and Krøijer 2011; Jenkins 2011; Pedersen 2018) with a specific focus on architecture and design in Denmark. Other anthropologists have conducted fieldwork in Denmark, and I refer to their accounts of what it might mean to be Danish, along with other markers of identity, customs and modes of sociality (e.g. Jenkins 2011). The peculiarities of everyday life in Denmark and feelings of belonging have been analysed with reference to the notion of *danskhed* ('Danishness') (cf. Redaktionen 2000). A comprehensive summary of these ethnographic accounts escapes the scope of this study but I want to highlight some broad dimensions (via Jenkins 2011: 291-2) of life worlds in Denmark. These accounts stress that being able to speak Danish, living or having lived in Denmark or having received one's education in Denmark are the most important markers of what it might mean to be Danish. Furthermore, knowing and being able to navigate everyday, collectively shared activities and practices play into *danskhed*: from singing to knowing when to say *'tak for sidst'* ('thank you for the last time'), i.e. when meeting someone again after socialising with them previously. For many Danes, patriotic feelings are strong, and to the surprise of many foreigners, Danish flags are part and parcel of all kinds of festivities, especially birthdays. For most Danes, state' social democracy' and the Danish 'welfare state' as well as the national Lutheran church are actively supported or passively taken for granted, as is the presence of the Danish royal family. Additionally, the 'social and cultural homogeneity of the Danes is an article of national faith and fundamental to what we might call "the story of the Danes, and little Denmark".' (Jenkins 2011: 289) This semblance of 'homogeneity' is often no more than that: an appearance or a 'paradox'. Denmark, and especially Copenhagen, are not as 'homogenous' as might be imagined by some Danes (especially by Danish right-wing politicians). For this reason, the issue of 'immigration' and the integration of 'foreigners' has been a repeated political concern and subject of scholarly attention (cf. Olwig and Paerregaard 2011).

Denmark and the rest of Scandinavia have emerged as an 'ethnographic region' within the anthropology of Europe (e.g. Kockel, Nic Craith and Frykman 2012). Much of this work has centred on Scandinavian notions of sociality that are usually cast in the framework of 'egalitarian individualism' and 'equality as sameness', especially via the work of Marianne Gullestad (1989, 1992). Danish anthropologists of Denmark (e.g. Bruun, Jakobsen and Krøijer 2011) have emphasised how such broad generalisations and especially the notion of 'equality

as sameness' have become 'gatekeeping concepts' for Scandinavian anthropology, limiting analysis and ethnographic investigation of particular places (ibid.: 3-4). Instead, they have called for more situated explorations of everyday socialites, other forms of hierarchies as well as differentiating concepts such as '*hygge* (coziness), *fællesskab* (community), *rummelighed* (spaciousness), and *hjemlighed* (hominess).' (ibid.: 2)

Such concepts have material dimensions that designers and architects attempt intentionally to shape. For instance, mid-twentieth century, modernist Danish design has emerged alongside the Danish welfare state, with the aim of providing high-quality and functional everyday environments and objects for the Danish population. Design continues to play an important dimension in everyday, Danish life. In contemporary Danish homes, design acts an important distinguishing factor. As Bille and Sørensen (2012: 87) note, expensive everyday designer items and objects in Danish homes (from furniture and lamps to bottle openers and toilet brushes) signal taste, success and wealth to others. Many standard Danish homes are usually described as 'minimalist': many rooms - especially living rooms - are typically sparsely decorated with seemingly few items and furniture in the room. This puts the objects that are in the rooms effectively on display. Understated but expensive and recognisable design classics furnish the homes of many well-off Danish households.

Some of these aspects of life in Denmark have been studied by non-Danish anthropologists like myself or Jenkins (2011). It is important to state that there are many Danish anthropologists who conduct 'anthropology at home' in Copenhagen or elsewhere. I build on their work and insights, especially those working on architecture, urban planning and the production of 'space' in Denmark (e.g. Bille 2015a, 2015b, 2019; Stender 2014, 2017b, 2018, Raahauge 2007, 2008). Kirsten Marie Raahauge (2007, 2008) carried out fieldwork in and around Denmark's second biggest city, Aarhus. Marie Stender (2014, 2018) conducted fieldwork in and around three new housing developments in Copenhagen, designed by well-known architecture practices. Mikkel Bille (2015a, 2015b, 2019) has worked on the importance of light and other atmospheric 'elements of architecture' (cf. Bille and Sørensen 2016). My study draws on these accounts as well as those from architectural practices in neighbouring Norway (Gunn 2002, 2007; Hagen 2014, 2017).

Architecture is 'co'

This thesis covers a time of potential transformations of architecture in Denmark. In short, this means that many professions and disciplines beyond 'the architect' practised architecture;

indeed, for organisations like BLOXHUB, this 'collaboration' was seen as pivotal to the 'impact' of architecture. In presentations in BLOXHUB and elsewhere, the future was presented as 'co', with implications for architecture as a professional practice and discipline.

Throughout my fieldwork, I observed professionals present their work and 'Danish architecture' or design, which drew my attention to the production of presentations and representations in the context of architecture. A different way of putting this is to consider the media through which architecture is constructed, communicated – such as models, images, reviews, presentations, exhibitions, etc. The thesis is therefore informed by the anthropology of media. One of the aims of this literature is to move beyond broadcasting media towards 'mediating practices, technologies, spaces, materials and institutions beyond those of communicational media.' (Boyer 2012: 384) It considers the practices through which phenomena are continuously produced. '"Mediation" is a name that we might give to the processes by which a given social dispensation produces and reproduces itself in and through a particular set of media.' (Mazzarella 2004: 346) In that sense, BLOX can be seen as one of 'those nodes of mediation where value is often produced and contested, more or less self-consciously, in the name of culture.' (ibid.: 345)

Finding the appropriate form or mediation is articulated as the task of architecture and design. The alternative Danish word for 'design' is '*formgivning*', which translates literally as 'giving form' to something. In another analytical language, this specific form could also be called a 'representation'. The concept of 'representation' has a loaded history in social theory and in anthropology for a wide range of reasons, including the legacy of the 'Writing Culture' critique (Clifford and Marcus 1986; cf. Starn 2015). I want to make clear, therefore, that the focus here is on the production of 'representations', taking a cue from Stasch (2014: 631). Stasch proposes a broader understanding of representations as 'making present', by which he argues, 'the vocabulary of representation becomes a powerful analytic for talking about sociocultural connectivity in human worlds generally' (ibid.). By shifting focus away from analytical questions about whether something is an accurate representation of an underlying 'reality', the congruence of the signifier to the signified, I want to point, instead, towards the continuous 'making present' of instances in architecture. What is made present through architectures and how are architectures made present? There are related issues, such as what is made absent through a given instantiation, what is made visible and what is made invisible. Any instantiation or expression through a given medium, of course, can also distort or misrepresent; where there is 'signal', there is 'noise' (Larkin 2008).

To most of the architects and designers I met in Copenhagen, the design outputs that they produce are not seen as absolute or finished but rather as temporary instantiations of varying stability. At one point or another, they will be superseded or would need to be renovated, reinforced or adapted. There are many possible 'representations', the one materialised was chosen for specific reasons but it could have been something different, could have been otherwise, too. The reason for this is that many architects and other designers are engaged in the iterative production and construction of instances, of what they see as architectural output. This may be buildings but it can also be the design or re-design of the contexts and conditions that make architectures possible. Architects have become aware of the limitations posed by other professions setting the framework for design, either consciously or unconsciously but with real consequences for spatial forms.

The kind of relationship that architecture is seen to have with their surroundings is necessarily a concern in this thesis. The professionals described in this thesis want architecture to have a specific, determinable effect or impact. The issue of the kind of effect that architecture has on their surroundings begs the question of who or what is affected: what is the 'context'? Is it immediate neighbours, the area as a whole, 'the city' or even 'the world', or all at once? Scaling up and down this relation (Jiménez 2005) implicates ideas of spatial and temporal arrangements. Notions such as 'sustainability' or 'liveability' are one register in which the professionals I worked with in Copenhagen articulated their own ways to judge their effort (cf. Ringel 2019).

In Europe, especially since the 1970s, the question around the impact of architecture has been the subject of much recurrent debates (cf. Kaminer 2017). This has typically been framed by architects and others as the relationship that architecture is seen to have with regard to 'society': whether architecture influences or shapes 'society' (cf. Yaneva 2017). A related body of literature is concerned with the 'agency' of things, buildings and the built environment (cf. Gieryn 2002, Latour 2005, Latour and Yaneva 2008, Miller 2005). One could summarise these debates as oscillating between dualisms that see architecture as active or passive, or somewhere in-between. Some of the key analytical moves in these various bodies of literature can be sketched here. First of all, architectural forms are either foregrounded or backgrounded. For instance, Carsten and Hugh-Jones write, 'houses get taken for granted. Like our bodies, the houses in which we live are so commonplace, so familiar, so much a part of the way things are, that we often hardly seem to notice them.' (1995: 3-4) By contrast, for architects and related professions, the built environment is at the forefront of their attention.

More recently, much of the related literature stresses ‘entanglements’ (Tsing et al. 2017) and other means to describe the linkages, connections and ‘networks’ between humans and their life worlds, building on earlier work in anthropologies of science, and science and technology studies. Analyses that do not stress relationalities or connected intensities between the human and non-human, typically locate ‘agency’ (or conceptual variations thereof) with humans. Yet, common to most anthropological analyses of architectures is the conclusion that architectures materialise, shape or reflect relations in some way. For instance, many ethnographies of modernist planning point towards the intended or unintended outcomes of architecture and planning processes (e.g. Holston 1989). The relationships between architectures and their ‘contexts’ have been typically framed in terms of their symbolic characters, e.g. specific buildings as ‘icons’ for their cities. Alternatively, it has been pointed out that certain kinds of buildings ‘dominate’ their contexts (Murawski 2011). Other anthropological work stresses how built environments ‘make present’ meanings and qualities, such as Rupert Stasch’s (2011) work on the treehouse dwellings built by Korowai of West Papua.

The chapters that follow now analyse how ‘architecture’ is ‘done’ and made present. The first chapter examines the project that became the building known as BLOX and some of the ways it was presented. The second chapter introduces BLOXHUB, the urban innovation hub and co-working space within BLOX. The third chapter turns to representations of Copenhagen, and to a BLOXHUB resident running an ‘urban lab’ and developments outside BLOX in wider Copenhagen. The next chapter focuses on questions of ‘impact’ in relation to architectural practices and designing with ‘data’. The fifth chapter examines efforts to demonstrate the ‘added value’ by a BLOXHUB member organisation (that means, an organisation not actually resident in BLOX). The sixth and last chapter returns to BLOX and will analyse how the project was received and reviewed.

Figure 8. The ‘public’ opening of BLOX

Chapter 1 Presenting BLOX

The BLOX building was inaugurated - after almost twelve years of planning, design and construction - on May 4, 2018. It is situated in a prominent location on Copenhagen's harbour front and was designed by the architecture firm OMA, which is based in Rotterdam. BLOX is referred to as a 'mixed-use' building in architectural terms. This denotes that BLOX houses not only the Danish Architecture Centre but also a co-working space called BLOXHUB, plus a cafe, gym, flats and an automated underground parking system.

This first chapter examines how BLOX was presented and narrativised, especially around the time of its opening. Architects present their designs regularly (e.g. Yaneva 2018b). Architectural visions are articulated by architects in order to persuade their clients or other decision-makers to proceed with a project in a certain way. As we will see in this chapter, this kind of work does not stop there; other stakeholders continue to articulate visions and speak on behalf of buildings like BLOX. BLOX was presented when it was inaugurated and when it was exhibited during the Architecture Biennale in Venice a month later. Through such presentations and their re-presentations, the building becomes embedded in wider stories about Denmark, histories of Danish design, and attached to claims about the future and about 'economic' success. The second part of this chapter focuses on one aspect of these narratives: BLOX as a 'green' building and the 'green' agenda in Copenhagen.

I. ‘More than a building’

The opening

According to anthropological commentaries, an inauguration can be described as a ‘modern political ritual’ (Abélès 1988).[1] What can make such events obviously ‘political’ is that they involve the presence or participation of politicians and those who are seen to exercise political power. The inauguration of BLOX involved visits and speeches by politicians and the Queen of Denmark. Opening a building can be described as a ritual as it marks a symbolic transformation in its life cycle, a redefinition: the end of its construction and the official beginning of its occupation.

The inauguration of BLOX took place over a whole weekend and began with the arrival of the Queen of Denmark who cut a symbolic ribbon on the Friday. Through this act, the building was officially declared to be ‘open’. On the Saturday, a VIP opening (it was referred to as such inside BLOX) was held in BLOX with a day full of talks, entertainment, food, and drinks. The ‘very important people’ were professionals associated with the wider Copenhagen architecture and design world. Finally, on the Sunday, a ‘public’ opening for people in Copenhagen was held (Fig. 8). These activities were sponsored by the Danish philanthropic organisation Realdania, which had also financed BLOX. The invitations to the inauguration events on Friday and Saturday were personalised and limited in numbers, in contrast to the events on Sunday – when ‘the public’ was mobilised. ‘The public’ is a conceptual construct whose histories in Europe are linked to the development of certain kinds of spaces such as coffee houses and salons in the 18th century, what the sociologist Jürgen Habermas (1989 [1962]) described as ‘public spheres’. Here news and matters could be debated, facilitated by the proliferation and consumption of print media. The related notion of ‘the people’ was central to establish legitimacy for ideas of popular sovereignty after the French and American revolutions (e.g. Morgan 1988). Similarly, ‘the public’ and ‘people’ can be legitimating factors in architecture and design – especially in Denmark – in whose name buildings with ‘public’ spaces have been constructed. If ‘the public’ use such spaces regularly, the architecture is typically deemed ‘attractive’ and a success (cf. Chapter 6). In this case, ‘the public’ meant all Copenhageners and everyone in Denmark and nearby Sweden who might be able to come on Sunday. In the weeks and days leading up to the inauguration, a poster campaign appeared

[1] Cf. Max Gluckman’s (1940) account of the ceremonial opening of a bridge. See, for instance, Humphrey and Laidlaw (1994), Stasch (2011b), Wagner (1984) for overviews of anthropological approaches to rituals.

in Copenhagen, especially at bus stops, and in Danish newspapers, inviting people to this event. The opening on Sunday was a day filled with activities, including music, food, dancing, tours of the building. It was a sunny day in Copenhagen and by noon, there were hundreds of people in and around BLOX. Some of them were already queuing to enter and visit the BLOX building. A podium had been set up on the new square next to BLOX, which had been named *Bryghuspladsen* ('Brewery Square') to memorialise the brewery that stood on this site before it burned down in the 1960s.

Politicians and the head of Realdania gave speeches and then declared the building open (again) with a countdown and a confetti canon that sprayed its contents over the assembled people. The content of the speeches on the Sunday relayed the ambitions of the project, materialising the vision, ideas, meetings, and conversations that had shaped BLOX. Some of the speakers also addressed the criticism that had been levelled at the project, in particular in national and international media in the weeks prior to the opening. The three speeches were given by representatives of the national government, the City of Copenhagen and Realdania, respectively. They embodied the agreements between the Danish state, the City administration and a private organisation that formed the basis of BLOX as a project: a form of *offentligt-privat partnerskab* ('public-private partnership').[2]

The first speech was given by the *kulturminister* ('minister of culture'), Mette Bock. In Denmark, 'culture' was imagined to be an entity to be managed and regulated by the Danish government. Conceptualisations of 'the economic', 'the social', 'the cultural' and so on as relatively discrete domains are widespread in Europe with long histories (cf. McDonald 2012). These notions (including 'the state') formed part of most people's vocabularies and daily lives in Denmark and were routinely evoked in everyday discussions to point to practices, people, and other entities. Especially 'the economic' and its language of numbers appears as more real, more persuasive to professionals in Denmark and elsewhere in Europe (cf. Chapter 5). Social scientists have drawn attention to the practices through which such entities are made tangible, for instance, how 'the economy' is performed (e.g. MacKenzie et al. 2008). In addition to the varied analytical work examining such notions in detail, anthropological commentaries have suggested that such terms are 'concept-metaphors'

[2] These kinds of contractual collaborations between firms and state-owned organisations can be controversial in other European countries, e.g. due to past experiences with privatisations of public services and subsequent deterioration of service quality, such as the running of train services. But in Denmark, I was told by design professionals that, at least for them, this was not an issue because the Danish government was trusted to regulate this accordingly.

(Moore 2004) in the sense that such notions 'maintain ambiguity and a productive tension between universal claims and specific historical contexts' (ibid.: 71). Here, the *kulturminister* spoke on behalf of the Danish government and evoked the role that architecture should play in Denmark. Similarly, the notion of 'architecture' mediates between universal claims and specific contexts. In this case, it gives a specific form to claims of quality and what good architecture is. The minister hoped that 'the house' (*huset*), BLOX, could show how architecture improved spaces and places. The Minister said that BLOX was 'something special' because of its 'architecture, location and because of the life that will be lived in and around BLOX'. She explained that 'BLOX should play a special role as a meeting point for the city's residents and for everyone else who wants to be in and around BLOX.' She continued by saying that BLOX was 'both a growth house [*væksthus*] and a think tank for new ideas about what architecture can do to make life better.' The minister acknowledged that there were public debates that discussed:

> 'whether BLOX is too big, too modern, too striking. […] BLOX has really created a debate and I think that is good, because buildings should not be indifferent. We should debate what we want to do with our architecture and our urban spaces. […] This is also what BLOX is about. Because here companies and organisations will work on making better buildings for us all. […] In Denmark, we make buildings for the sake of citizens, not for the sake of buildings. […] For this reason, there should be a willingness to debate how towns and buildings should be developed. Architecture means more for our life than we are perhaps aware of.'

The minister then reminded the audience that Denmark was known for its design history. 'We very much assume here in Denmark that good quality is something that distinguishes our country. But good architecture is not something to be taken for granted.' Ever since the early and mid-20th century, the fields of Danish design and architecture have benefitted from a good reputation. Designers associated with this period, often referred to as 'Danish Modern', designed anything from chairs and lamps to buildings. Many of these mid-century designers have become household names in Denmark and beyond, such as Poul Henningsen, Arne Jacobsen, Finn Juhl, Hans Wegner, Verner Panton, or Poul Kjærholm. The contemporary reputation of architecture in Denmark builds on these histories. The image of Copenhagen also plays into this reputation, often the city of Copenhagen is reified and becomes a proxy for Denmark and its developments more generally. The Lord Mayor of Copenhagen, Frank Jensen, spoke next and mobilised this image. He thanked Realdania for BLOX, called it a

‘vision and gift to the city’ and ‘a landmark that points to new solutions.’ He went on to say that ‘Copenhagen on behalf of Denmark as a whole […] can show the green and sustainable solutions which so many other big cities and countries over the whole world admire and want to understand, be it green mobility, clean water in our harbour, or the fight against carbon emissions and for CO2-neutrality.’ The Lord Mayor also thanked Realdania ‘for their significant and generous contribution to Copenhagen’s development […] a contribution to make sure that Copenhagen is also known in the future in the whole world as the world’s best place to live and reside.’ As the Lord Mayor’s comments allude to, both Danes and visitors have materialised Copenhagen’s brand or reputation of being a city with a high quality of life over the last decade. This narrative was bolstered by rankings carried out by various print media and other organisations. These properties have almost become brands and have been marketed as such by businesses, organisations and the Danish national and municipal governments, in part to attract capital and investments as well as increase export sales of Danish products and services. ‘Green’ and ‘sustainable’ are just some of the properties that are articulated as characterising ’Danish design’ and ‘Danish architecture’. The BLOX building is intended and imagined to play a large part in this process. Finally, the Chief Executive Officer of Realdania, Jesper Nygård, spoke about the transformation of the area and that:

> ‘Our wish is that BLOX becomes much more than a building. BLOX shall be a new meeting point in the city. A new house and a different house. A house that, with the activities of the Danish Architecture Centre and BLOXHUB, helps strengthen the exchange of Danish competences in the fields of architecture, design and sustainable urban development with the rest of the world; where good Danish solutions come out and work on a global scale. And where we at the same time take inspiration home for us in Denmark.’

Amongst many other things, he also acknowledged the criticisms levelled at BLOX (cf. Chapter 6).

> ‘I know that our project is divisive. But architecture should create debate, architecture should touch us and be touched, it should be felt, it should be lived, it should be experienced and first and foremost should architecture be used. […] BLOX is for us all. For all who live in the city, for all who come to visit, for young people, children and adults.’

Finally, he wished everyone a good afternoon and thanked everyone for coming and for ‘developing your own opinion’. Then, with a confetti canon, the building was officially

declared open again, this time for the assembled public who could now visit the building for the rest of the day.

Architectural presentations

In advance of the building's opening, the architects of BLOX, the architectural firm OMA, gave a series of interviews and tours of the building. In one of these interviews, Ellen van Loon, who is credited as the main architect of BLOX, laid out her and the firm's visions for BLOX.[3] In this filmed interview for one of the most visited art museums in Denmark, she answered questions whilst seated in the then still empty BLOX building. Much more is said in those encounters than it is possible to reproduce here. They are opportunities for architects to talk about their building and their ideas of what good architecture should be, ideally exemplified by the building in question.

Architects present their work regularly as part of the design process, to clients and other stakeholders, usually to gauge reactions and receive feedback. In her analysis of such architectural presentations with an audience, Albena Yaneva (2018b) argues that architects 'do expect to learn something […] about the way their buildings will affect, astonish, strike, disturb, shake, divide, re-distribute or reunite the participants' (ibid.: 77). Additionally, presentations can be given to journalists or architectural reviewers - but also to other audiences, for instance, in the context of events. Many architects, especially those leading teams or firms, are used to giving such interviews that often allow for lengthy explications about the building and architecture in general. These answers are usually recorded (or at least notes are taken) and this then results in a product that can be disseminated, such as a video or an article. Talking in presentations or meetings constitutes important (but seemingly underestimated) work that comprises the professional practice of architecture: in addition to producing drawings or models, this talking is also how architecture is done.

In this interview, the architect provided reasons why the architectural project, the BLOX building, was designed the way it was, and provided some of the parameters on how it should be judged. In this interview, Ellen van Loon (Louisiana 2018) said that,

[3] The various interviews did not differ significantly in terms of content: similar things were said about BLOX and architecture. I chose this interview exactly because it was recorded and distributed publicly (Louisiana 2018). I also had the opportunity to meet Ellen van Loon during one of the 'press days' (see Chapter 6) and to talk to other OMA architects (Fig. 9).

Figure 9. Ellen van Loon giving an interview in BLOX

> 'I think it was the right task for us, this site, because nobody really knew what to do with it […] and it had to do with reinventing mixed-use, reinventing DAC [the Danish Architecture Centre] and reinventing also this area of Copenhagen. So I think in that sense, it was a good task.'

Together with their client Realdania, OMA attempted to reinvent this prime central Copenhagen site. Despite being 'a neglected plot surrounded by heavy traffic', as Realdania CEO Jesper Nygård (2018: 23) described it (Fig. 10), 'the place had the potential to become a hotspot in the Danish capital.' (ibid.) For Ellen van Loon, the architectural challenge was to reinvent what they, as architects from the Netherlands, saw as Danish architecture. 'The first idea was […] to do something cubic', Ellen van Loon said, 'because, of course, we had this kind of diagram in the beginning of what is for us as foreigners the representation of Danish architecture. So, we represented Danish architecture as being a box, with a front door in it.' (Lousiana 2018) The box might be identified as 'Danish', but it is also much more, as Ellen van Loon's architectural colleague at OMA, Reinier de Graaf points out in his book *Four walls and a roof*. The box can be perceived as 'inevitable' (de Graaf 2017: 71) as an

architectural form to work with and against. Ellen van Loon also mentioned the 'connections' that needed to be maintained:

> 'The yellow houses [that located next to BLOX, are now called *Fæstningens Materialgård*, abbreviated as FMG, and form part of BLOXHUB], as we call them, are very, very small. So, and, of course, we tried to connect to them in creating a new urban space. The yellow houses, on one side, and the [BLOX] building, on the other side: trying to reduce the scale as much as we could. But, for us, what was more important to connect to was actually the typical blocks that you see here [next to BLOX], typical city blocks as you have them in Copenhagen and, of course, the water on that side. Because, of course, the water. We wanted to connect to the water. And we did one thing to this building, which is normally absolutely forbidden in Copenhagen. We put the building on the waterline, and actually it's even cantilevering over. You know there is this rule in Denmark that you have to keep six meters free along all the buildings along the waterside. But we considered that extremely boring since you have so much water. So actually we were planning to do something with the building:

Figure 10. Ring road that runs through BLOX

that you would not have the normal relation between the building and the waterside but as soon as you enter you would get close to this building, you would actually need to go through the building. That's where it all comes back to: this idea of urban connector. You can't just go through the building. The building is made in such a way that you do have to interact with the building. And, of course, the best function to have interconnected with the people was, of course, the architectural centre. So, it doesn't matter which route you take, you go through, under or inside. You have to relate to the building, and you have to build a kind of relationship.'

In this presentation, the architects produced contexts or coordinates though which the design of the building is positioned and justified: here Ellen van Loon mentioned the yellow houses next to BLOX, inspirations from local 'scales', the Copenhagen harbour (Fig. 11), existing rules and regulations, 'typical' Copenhagen city blocks. In other words, the architect localised the design of BLOX in Copenhagen. In such presentations and self-presentations by architects, the architectural process – spanning over 12 years in the case of BLOX – was compressed into decisive factors through which architects, as part of a profession, regularly

Figure 11. Harbourfront

explain the outcome of their work. On such occasions, architects conveyed how they thought other people, architects and other professionals, should (or could) view and experience BLOX. Such localisations can, of course, be contested. Although 'you have to relate to the building' in the words of BLOX's architect Ellen van Loon, not everyone (or everything) relates to architecture in the way that architects intended.

Architectural narratives

'The stories that are told about architecture can seem like quite generic stories. But it really matters how the stories are told and how they are contextualised.' An architect said this to me, after taking a sip from her beer. We had been talking about BLOX and architecture in general. She was a Danish architect in her thirties, whom I had met a couple of months earlier. She worked for the architecture and design firm which had worked on the interior design of BLOXHUB. We were talking in one of the typical Copenhagen bars that mainly serve an impressive range of bottled Danish beers, just off Kongens Nytorv and a stone's throw from the picturesque, brightly coloured town houses of Nyhavn that are one of the main sights. We were also just a good ten-minute walk away from BLOX. She told me that she had come to this bar often, especially whilst a student at the architecture school in Copenhagen.

Some architects argue that their buildings should speak for themselves. In the case of BLOX, many different stakeholders had spoken on behalf of the building. We talked about those reactions. I asked her what she meant by 'contextualising' designs. She answered that how you would contextualise architecture is, for example, by choosing to use local building materials or you could identify other aspects of a place that could then be integrated within the design of the building. The potential scope for this was wide. We talked about how many hours of discussions and meetings usually took place between the architectural team and a client but that not much of that information was communicated publicly. What happened instead was that this thinking was reduced to a few memorable pieces of information, a few soundbites.

Many of these architectural stories seem to follow a certain established pattern. Some of them make claims about the architectural project and its impact on the present, the past or the future and what those terms might mean. For instance, these narratives can establish a connection to the site and its histories. It could be stories about how the building is constructed and with what materials. It is also often a story about a specific feature: the architecture could be the highest, tallest building or the most sustainable building in its area;

or the project might display another quality that might be currently desirable. Although these narratives follow certain patterns, this does not mean that they do not have any meaning or value, she stressed. Communicating design intentions was important, as my architectural interlocutor said, and it mattered how these stories are told, by whom, and to what audience. The stories might seem 'generic' but gained meaning in relation to specific buildings and designs, and also that they are told again and again.

Many of the narratives that were told about BLOX – at the opening and on many other occasions – talked about the potentials of BLOX: of the building and of the 'world of architecture, design and new ideas' that the building seeks to house. The opening speeches exemplified this official discourse around BLOX, which was also materialised in other written forms, such as official leaflets, the book on BLOX that was commissioned by Realdania as well as newspaper articles and interviews. This rhetoric stressed the potentials of BLOX, especially its 'economic' potentials, especially as the building is meant to attract foreign investment to Denmark.

Anthropologists have drawn attention to the role of 'potentiality, as the capacity for development as yet unrealised' (Strathern 1996b: 17), such as the 'potential property' (ibid.) of intellectual property law. Anthropological work on biomedicine draws attention to 'how the naming and framing of that which is not (yet and may never be) present produces and works through dynamics of power' (Taussig et al. 2013: S12). Similarly, in the case of BLOX, its potentiality was articulated and made explicit; and it was repeated in conversations, speeches, meetings, interviews, and newspaper articles. The narratives presented situations as if this potentiality had already been realised or was (almost) certainly going to be. The anthropologist Anna Tsing (2000) describes this process of attracting capital as 'conjuring', involving a degree of spectacle. 'In order to attract companies, countries, regions, and towns must dramatize their potential as places for investment.' (Tsing 2000: 118) Tsing states that '[o]ne of the chief puzzles of globalist financial conjuring is why it works.' (Tsing 2000: 120) But it might not always work or it might only work temporarily: architecture needs to increasingly provide evidence for its impact (cf. Chapters 4 and 5). Nonetheless exaggerating positive or negative effects can be a tactic, as other anthropologists have noted. Alex Taylor (2021) illustrates how employees of ultra-secure data centres talk about and evoke threats of catastrophic futures in order to sell data storage services to companies. This could be characterised as an 'economy of words' as Douglas Holmes (2009, 2013) called it. This becomes particularly evident in Holmes' work: when the central bankers (whom Holmes

worked with) speak, they 'mak[e] the economy itself as a communicative field and as an empirical fact' (ibid.: 384). Similarly, when Realdania, BLOXHUB, the Danish Architecture Centre, the Danish government or an architectural practice speak or act in relation to architecture, then they enact 'Danish architecture'. They do not enact 'architecture' in the same way, yet these practices are gathered under the label of 'architecture' in Denmark.

This also means that not everyone might agree on how architecture is practised or should be practised. More critical narratives might challenge these representations that are produced. For instance, one architectural commentator – who wrote one of the architectural reviews of BLOX (cf. Chapter 6) – made the remark, in an article in Danish about BLOX, that there 'is something paradoxical about the global success that Danish architecture has experienced over the past quarter of a century.' (Lowenstein 2018: 80) 'Danish architecture' has become a brand; and building on the 'people-centred' approach of the Danish urbanist Jan Gehl, 'post-Gehl urban planning, urban design, Copenhagen and "Copenhagenisation", sustainability and sustainable technologies have become sought-after export goods, while the capital has been turned into a large display window for the domestic talent pool, supported by a bulging cultural bureaucracy.' (ibid.: 80) We are going to encounter this political economy of display in more detail later in the thesis, especially in Chapter 3.

An architectural gift

According to Realdania's own publications (Realdania 2018), the recent history of the project that became BLOX began in 2005. One of Realdania's subsidiaries, Realdania By & Byg, bought the site in 2005 on which BLOX was to be built. In 2006, it was announced that OMA were selected as the architects for the project. Subsequently, the construction of the project was delayed until 2013. In 2018, the building was inaugurated.

The development of BLOX is entwined with Realdania as a private philanthropic organisation whose purpose, according to their mission statement, is to create 'quality of life through the built environment' (*livskvalitet gennem det byggede miljø*) in Denmark. Realdania traces its history back to being a mortgage-credit institution, an association of borrowers (Realdania 2019). This association, *Østifternes Kreditforening*, eventually became Realkredit Danmark. Realdania was created as a result of the merger between Realkredit Danmark and Danske Bank in 2000. Due to the conditions of the merger and this history, Realdania's focus is on the built environment. Realdania's initial endowment stood at 10.5 billion Danish kroner (around £1.2 billion) but this amount, due to fluctuations in share prices, increased

quickly to 20 billion Danish kroner (around £2.3 billion) (Møller 2009). Realdania today is a membership-based, private organisation with 150,000 members, who need to be property owners in Denmark.

The project that was to be named BLOX was designed to be the new home of the Danish Architecture Centre. It was planned under the former CEO of Realdania, Flemming Borreskov. In an interview from 2008, before BLOX was built, the former Realdania CEO stressed how the project would create a connection between the inner city of Copenhagen and the harbour area. In their analysis, this connection was lacking. The proposed building was presented as a development and investment into the area, the future aesthetics and appearance of the building was not something that was discussed as a decision factor. Rather the reasons that were put forward for the creation of BLOX were to enable the development of this harbour area and part of Copenhagen.

BLOX was part of Realdania's ambition to create 'quality of life through the built environment' in Copenhagen and in Denmark. Jesper Nygård, the CEO of Realdania, said that they 'wanted to create a building and an urban space of extraordinary architectural quality that would round off the development of Copenhagen's Inner Harbour, where popular recreational areas have transformed the former industrial port into a port for people.' According to Realdania's released statements, BLOX cost 2.5 billion Danish kroner (ca. £300 million). But this is an estimation and the real cost might well be higher, depending on what was or was not included in the calculations.

Through speeches during the opening ceremony, BLOX was presented as a 'gift' from Realdania to Copenhagen and to Denmark. Much anthropological work on gift-giving, building on Mauss (2002 [1924]), has highlighted the relations and dynamics that are created through such acts between the giver and the recipient (e.g. Hann 2006, Yan 2020; cf. Murawski 2019 for an ethnography of a Soviet 'architectural gift'). Similarly, BLOX called attention to the relationships and alignments between Realdania, the City of Copenhagen and the Danish government. But, in an important sense, BLOX was not quite a gift. This is illustrated by a quick comparison with another building that was gifted to the city of Copenhagen more than a decade before. Like BLOX, the Opera House (*Operaen*), is also located on Copenhagen's harbour front, only about two kilometres away from BLOX. It was financed and given by the Danish shipping magnate Arnold Mærsk Mc-Kinney Møller. In 2004, the ownership of the Opera House was formally transferred to the Danish state in the presence of key representatives including Mærsk Mc-Kinney Møller and the then Prime

Minister of Denmark, Anders Fogh Rasmussen (Politiken 2004). But unlike the Opera House, the BLOX building was not made the property of the Danish state or the City of Copenhagen. BLOX remains the private property of Realdania via its fully-owned subsidiary, Realdania By & Byg. This also means that the housing units on the top floors of BLOX, for instance, still belong to Realdania. Realdania has opted to rent them out to tenants rather than to sell them, which means that ultimately Realdania retains control and can ultimately decide who has access to the building, for instance, by administering rental contracts. This also means that the office space on the second and third floor that BLOXHUB occupies is still owned by Realdania By & Byg. This office space was rented to BLOXHUB – 'at market rate' I was told explicitly. In turn, BLOXHUB rented out desks or square meters to other companies and organisations, its 'residents'. One consequence of this was that BLOXHUB as an organisation was under a certain financial pressure to fill the co-working space that it had rented with residents, a point raised at BLOXHUB's Annual General Meeting. As a membership-based association, BLOXHUB needed to hold an Annual General Meeting in which the Board of BLOXHUB presented an audited 'annual report' including financial figures for approval by its members. This report also showed that Realdania effectively paid itself, via its subsidiary, in the first years, because Realdania still supported BLOXHUB with a grant that covered many of its running costs.

Presenting BLOX in Venice

A month after the opening, BLOX was presented, exhibited, to another public. Every two years, the international architectural world meets in Venice for the occasion of the Architecture Biennale (*Biennale Architettura*), an architectural exhibition. The Biennale consists of a central exhibition, put together by the overarching curator of the Biennale in that specific year, and individual pavilions. These pavilions are national pavilions, which means that the curators of these pavilions select and exhibit what they see as the specific country's contribution to the biennale. Anthropologists who have studied exhibitions have drawn attention to the self-conscious production of representations involved in exhibition-making and the self-conscious staging of 'culture' or 'nations' for certain 'international' exhibitions (Harvey 1996). Similarly, the Biennale is a staging of national 'architectural cultures'. The Biennale is also a competition. A jury selects what it considers the best national pavilion and awards a prize, the Golden Lion, to the winning country's pavilion.

The theme of the *Biennale Architettura* in 2018 was 'FREESPACE', selected by the curators

Yvonne Farrell and Shelley McNamara. According to the curators, this theme 'describes a generosity of spirit and a sense of humanity at the core of architecture's agenda.' (Biennale 2018) The theme was interpreted by the participating countries in a variety of ways because it was, as a BLOXHUB resident whom I met in Venice put it, 'vague'. For instance, the curators of the British pavilion interpreted the theme literally as a freed space, leaving the actual pavilion empty. Instead, a wooden staircase was constructed to the side of the pavilion which led to a platform at roof-level. Here visitors could enjoy views over the rest of the exhibition space, the *Giardini*. But it was the Swiss Pavilion that won the Golden Lion that year.

The Danish pavilion, commissioned by the Danish Architecture Centre, featured four architectural projects in one, bigger room as well as a second, smaller room that was dedicated to BLOX. Usually, a national pavilion's curator is selected via a competition. In Denmark, the curator is appointed by the commissioning body – the Danish Architecture Centre on behalf of the Ministry of Culture. Realdania – along with the Ministry of Culture and the Danish Arts Foundation – funded the 2018 Danish pavilion. This could result in closer overlaps between political agendas and what was exhibited in the pavilion to an international audience. In the press release, the director of the Danish Architecture Centre was cited as saying:

> '[The curator of the Danish pavilion in 2018] Natalie Mossin has chosen to tell a Danish story of how we together can approach holistic sustainable development through partnerships across disciplines, across business sectors and across society. This topic is particularly relevant in Denmark this year where the philanthropic organisation Realdania is generously handing over the keys for BLOX – a new building designed by OMA, which houses the new Danish Architecture Centre, BLOXHUB along with a wide range of other creative organisations.' (DAC 2018b)

BLOX provided the overall theme for the Danish pavilion this year, perhaps no surprise given the involvement of Realdania and the Danish Architecture Centre in the pavilion. The curator of the Pavilion chose the four case studies but BLOX as a theme had been provided and could not be questioned. The decision to exhibit BLOX as a standalone project in one room and as the overall theme for the pavilion implied a claim that BLOX was a model for architecture in Denmark and its future developments. It could also be taken as a signal of the influence that Realdania wielded in the field of Danish architecture, urbanism and design.

When you entered the pavilion from its Western entrance and turned left into the smaller of the two pavilion spaces, you were presented with a model of BLOX as well as a large video screen on one side (Fig. 12). On the other side of the room, you could find tear-away sheets

with information and a large diagram on the wall (see Chapter 3).

The video showed clips and images of BLOX and short interviews. There were a few chairs in the room, where people could sit. The video presented how BLOX ought to be seen, from the standpoint of its key stakeholders, who narrated the story of BLOX in a digestible few minutes. The video began with Natalie Mossin, the curator of the Danish pavilion:

> 'The theme of this year's Danish contribution to the Venice Biennale is collaborative innovations for a sustainable future. This is exactly what BLOX is all about. That is why we have chosen BLOX as a framing case for the whole exhibition. With BLOX we hope in Denmark to create a space for collaboration, for exchange of knowledge, for inspiration. And all of that with the aim of creating more sustainable solutions.'

The video showed cinematic shots of BLOX, with footages filmed in and around the building. For a while the video then followed a girl with her family who visited BLOX. Next the video turned to Kent Martinussen, the CEO of Danish Architecture Centre, who appeared on one of the screens in BLOX.

> 'As we all know, we live in troubled times. It's obvious that we are on a burning platform that is about climate crisis and that is closely connected to a massive urbanisation on a global level. Why would anyone invest 300 million dollars in a building on the harbour front of Copenhagen? Well, to create an international platform for providing solutions for how we could create a better world, better cities, more sustainable living conditions for man.'

The video then showed more harbour scenes, the outside spaces of BLOX, its cafe and playground. Ellen van Loon, who is a Partner at OMA, and the main architect of BLOX, was interviewed inside BLOXL

> 'It's a mixed-use building, so you can imagine that we have many functions in the building, varying from parking, to fitness, to working and living. And all these ingredients are something you normally find in a little city. Of course, what was intriguing about having an architectural centre in a mixed-use program was that you could say that the architectural centre could be surrounded by their own topics of interest because an architectural centre does think about the future of housing, does thinking about the future of offices, does think about the future of infrastructure. Then that made us actually think, why don't we put DAC in the centre, and being surrounded with their subject of study.'

And, again, you could hear Kent Martinussen's voice as more images of BLOX were shown:

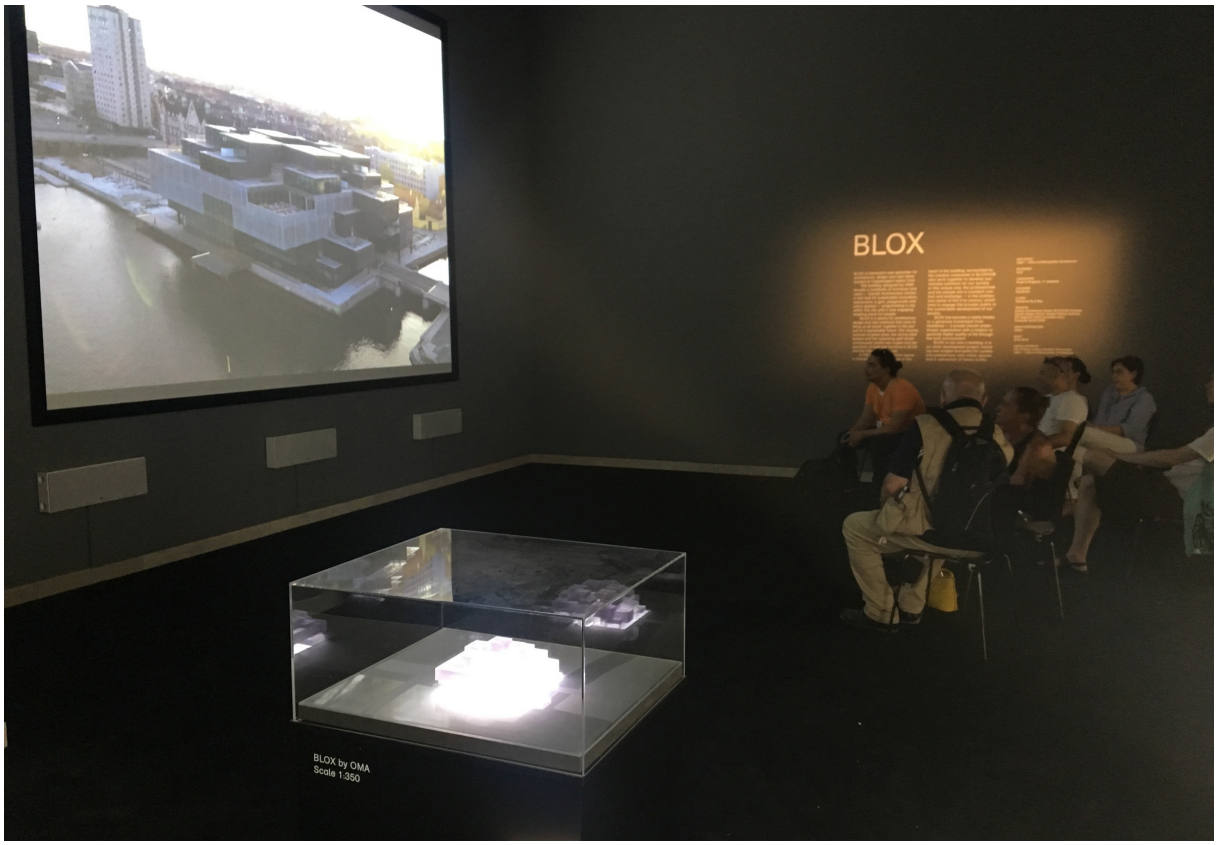

Figure 12. BLOX in Venice

> ‘In the urge to try to answer the question of how does the architecture centre of the 21st century look, Ellen van Loon and Rem Koolhaas were particularly interested in how could the physical design and the spatial layout of the DAC premises, contribute to create a very specific and unusual, and maybe kind of never seen before, answer to the question of what does it mean to be a guest in an architecture centre. So you’ll see people working, people doing research. You’ll see kids playing around. You’ll see people creating new exhibitions and you have access to contributions and culture at large.’

The video then focused on Jesper Nygård, the CEO of Realdania:

> ‘When we say it’s more than a building, it’s because it’s architecture and a great ambition in trying to link a harbour and an inner city together in a very difficult place with a very highly intense used road going right through the area. This building is combining the harbour and the inner city by making an urban connection, making it possible for the flow of people to come through the house from the harbour to the city, from the city to the harbour.’

The video showed Ellen van Loon again:

> ‘Seeing each other makes you also connect people to each other, so that is actually the reason why we decided to make all the divisions, between the different users in the building, to make that transparent. Because I think that by seeing each other, you feel the drive to connect.’

Then you could see images of people working, walking around, and contributing to meetings. It was Torben Klitgaard, the director of BLOXHUB, who spoke next.

> ‘BLOXHUB is an urban innovation hub here in BLOX. It’s a co-working space and a community, trying to cross industry and research. With stakeholders that all work with sustainable urbanisation. What we do here is to bridge architecture and design, construction, facility management and tech in order to come up with new solutions, innovative solutions to combat the ever increasing complexity of urbanisation on a global scale. Being this close to the Danish Architecture Centre gives us a synergy which is second to none. The Danish Architecture Centre and all the sixty companies that will be part of BLOXHUB will be working together closely on a daily basis.’

Finally, Natalie Mossin ended the video and the last image was a bird’s eye view of BLOX:

> ‘I hope that visitors to the Danish pavilion at this year’s Venice Biennale will be inspired to discuss how to create sustainable solutions and implement them together, and I hope the example of BLOX, the framing case of the exhibition, will inspire everybody who visits to consider whether that place exists for them where they are. It could be a meeting room in the local library, it could be anywhere where there’s a space to meet and engage, both professionals, civic society, citizens and new knowledge.’

These stories framed how BLOX and contemporary Danish architecture ought to be perceived and seen by visitors. It was played on repeat for the duration of the Biennale.

Events accompanying the preview days of the Biennale were arranged for the invited journalists, architects and designers. The national pavilion parties take place throughout the few days of the preview days and invitations are coveted – although many invitees try and go to as many as they can, even if they are not officially invited. The openings of the pavilions can be attended during the day. They are shorter events: speeches followed by free drinks next to the pavilions. I attended the opening of the Danish pavilion. A sizeable number of people – including many familiar faces from Denmark and from BLOX – gathered outside the Danish pavilion under the burning midday Venetian sun. Only few people dared to occupy the chairs

Figure 13. Danish pavilion

brought out for the occasion that were not covered by shade, instead most people withdrew to the sides, which were more covered (Fig. 13). More speeches were held for the occasion of the opening of the pavilion, including by the director of the Danish Architecture Centre who repeated the main narratives about BLOX. He also thanked Realdania and talked about the importance of the organisation for Denmark. After what felt like multiple minutes of praise with which he showered Realdania, an architect whom I had already met whispered to me and the group of people standing next to us: 'That's enough now, no? I think everyone got the message.' I smiled and the people around me laughed nervously in agreement but without wanting to attract too much attention. The speeches ended with applause and an invitation to grab a drink and visit the pavilion.

So far this chapter has highlighted some of the narratives that frame the BLOX project and how the building was presented to various publics. Versions of these narratives were repeated regularly in BLOX – for instance, when introducing events or giving tours and presentations to visiting delegation. Such narratives are performative, especially when bolstered by Realdania's substantial endowment and political support from national and local

governments. Very quickly many organisations, companies and people came to and held their meetings in BLOX, which meant that BLOX quickly seemed to 'centre' architecture and design in Denmark. Institutional visions or narratives could be dismissed as official, top-down discourses or rhetoric. Ethnographers have exposed the workings or logics of such narratives and their contradictions in practice (e.g. Holston 1989). They have pointed to their unintended effects when observing the situations to which these narratives are meant to apply. Some critics may dismiss such narratives as marketing, advertisement, or publicity. But the professionals I met in and around BLOX have been largely supportive of the presented ambitions of BLOX. Indeed, what was meant to happen and what was contained in those narratives was also what attracted them to BLOX. Criticism by those professionals was rare and voiced in ways that are reminiscent of the comment made at the opening of the Danish Pavilion: as casual comments and views exchanged over lunch or coffee. Architects elsewhere – such as in the architecture school – were more critical in words and writing: for instance, the liveability discourse in Denmark was critically examined and challenged (e.g. Simpson et al. 2018).

We will now examine one dimension of those narratives around BLOX in more detail: some of the practices and ideas around 'green' or 'sustainable' architecture.

II. Green

Building green

BLOX is presented and widely perceived as a both a 'green' and 'sustainable' building. By 2018, green has come to stand for 'sustainable' and environmental concerns and, as this chapter explores, 'the environment' has become a concern for politics and for architecture. BLOX's green material appearance does not necessarily reflect a 'green' agenda, but the activities that the building seeks to harbour are said to be aligned with it (see Chapters 2 and 3). Thus, I seek to contextualise some aspects of this agenda that frames much of contemporary Danish architecture in the second part of this chapter.

Environmental issues have been foregrounded by citizens, politicians and businesses in Denmark. Realising building takes time and the priorities of the present change. By the time that BLOX was inaugurated, green had become more than a mere colour, and the issue of 'green' as 'sustainable' (*bæredygtig*) architecture has become an indispensable characteristic and agenda by which contemporary architecture and design in Denmark defines itself and it is viewed and talked about in those terms.[4]

For instance, one of the main trade fairs for the built environment in Copenhagen is called 'Building Green' (in English) (Fig. 14). How exactly one might 'build green' or how 'sustainability' is materialised is open to vivid debate among professionals.

A profitable industry has developed in Denmark to provide products and services to address this question. BLOX is meant to be a part of this construction of a 'green economy'. This is a term that, for instance, an organisation with the English name of 'State of Green' has employed. State of Green is the 'organisation behind the official green brand for Denmark', according to its own organisational self-presentation and marketing material (e.g. State of Green 2016: 4). Like BLOX, this organisation is a public-private partnership between the Danish government and private partners. The Danish government, via State of Green, has branded Denmark as a 'green' country with relevant expertise and experience:

[4] 'Green' does not necessarily mean or signal 'sustainable' and the tensions between these terms are also some of the contemporary 'paradoxes of green' (Doherty 2017). For instance, in arid desert environments like Bahrain where Gareth Doherty (2017) did fieldwork, the creation of green landscapes cannot be said to be 'sustainable'. Anthropological literatures on colour have drawn attention to the production of colours, which cannot be taken for granted as categories (e.g. Young 2006, 2018 for an overview; cf. Taussig 2009). The history of 'green' in Europe has been explored by historians such as Michel Pastoureau (2014), who draws attention to its changing associations over time.

Figure 14. 'Building green' trade fair

> ‘Completely dependent on imported oil for decades, Denmark was severely affected by the oil crises of the 1970s. It was decided to take a new path to meet growing energy needs and, at the same time, to cater for environmental concerns. As a result, green terms such as clean air and water, renewables, intelligent energy, climate adaptation and liveable cities have become embedded in the mind-sets of the Danes. And time has shown how economic and environmental policies can be two sides of the same coin. Since 1980, Denmark has grown to become a global leader in sustainable technologies, while during the same period, the Danish economy has grown by more than 70% without increasing gross consumption.’ (State of Green 2016: 4)

Foreign companies and organisations that are interested in ‘green’ or ‘sustainable’ products and services can contact State of Green, who will propose an itinerary and arrange meetings with Danish companies and organisations, including in BLOX.

Historians such as Paul Warde (2011, 2018) have shown that the ‘modern framing of “sustainability” […] was a product of the early modern period, and only really appeared in its full-blown form in the latter part of the eighteenth century.’ (Warde 2018: 4) The modern understanding of sustainability was popularised by a report commissioned by the United Nations, the so-called Brundtland Commission report of 1987 (Warde 2011: 153). This report defined ‘sustainable development’ as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs.’ (UN 2018 [1987]).

As we will see, since then, this notion has been translated into architectural practice in various ways, e.g. as sustainability metrics or as ways to deal with a changing ‘climate’. In general, as the importance of these issues has grown, so has the ‘sustainability’ talk – and the term has, for some critics, become too broad in its usage and a catch-all term (cf. also Portney 2015).

The greenness of BLOX

‘What about this one?’ A duo of graphic designers asked this, holding a colour fan with different shades of green up in the air. We stood outside BLOX and tried to figure out what exact shade of colour, of green, BLOX was or looked like (Fig. 15). The sun was shining on the glass and metal surfaces and this task proved more difficult than we had imagined. The two designers together ran a design studio that specialised in all forms of graphic design. One of their current projects was the design of the Realdania-commissioned – in that sense, the official – book on BLOX (Weiss 2018). Some described it as the ‘coffee table book’ on BLOX

Figure 15. Matching colours

because it is meant to gather all the photographs of BLOX and all other pictures and forms of documentation of the design process in one heavy volume, interspersed with interviews with some of the key people involved in the building. The book was meant to be released in a couple of months, accompanying the opening of BLOX. On one occasion I asked the designers, whom I had met previously, how their work was progressing, and they mentioned that they wanted to try something else with some of the spare pages at the end of the BLOX book, as well as with the whole colour scheme of the book. They wanted to base it on the different colours of BLOX. BLOX is a green building. But what kind of green is BLOX? They wanted to carry out some observations to find out and I asked if I could join them.

BLOX was commonly described as a green building by Copenhageners and in the press. The green-tinted glass dominates the facade of the building. But white fritted glass and metal grills, which were dark grey, were also used. The same versions of each of those materials are used throughout, which should theoretically result in a uniform appearance and perception of the three colours: green, white and grey-ish black. But the building materials – glass, metal – reflect light: they mirror the harbour water, the sky, the buildings and everything else around

it to the extent that the colours of BLOX vary throughout the day. The graphic designers wanted to use that to their advantage and collect some colours for the book but which colours to choose? For this they wanted to do some observations and match the colours of BLOX with colours that they could specify in their design for the book. To analyse and transfer the colours that we could see, the graphic designers had brought colour charts from their office to BLOX. These charts are standardised, printed colour fans made by a company that sells these colours. They are meant to demonstrate what colours look like, on printed paper. As the paper varies – for instance, matte or glossy and the material – they tell me that colour is nonetheless difficult to specify as its precise appearance depends on many factors, including material degradation: it is recommended that the colour fans are kept in a dark and dry environment and re-purchased (the fans are not cheap, as they stressed) after a couple of months to ensure colour likeness. The final printed colour appearance, then, also depends on the printer and how it is printed. To add to this, colour representation on screen is specified in a different system than on print-based media. Achieving a certain colour result is based on a number of factors and techniques, used to stabilise and communicate a certain colour. The communication aspect is important: for the purposes of colour reproduction, it is essential that designers and printers know and use the same colour system. To ensure satisfaction with printed end results, 'proofs' – preliminary demonstrations of how something would look like printed – are necessary. As a result of the matching exercise, we ended up with a widely varying range of greens and blues and many more colours than they needed for the book. Despite knowing that the colour would vary – this was the explicit aim after all – we were nevertheless surprised to see multiple colours emerging from 'one' colour.

On a grey day, the green glass facades of BLOX reflect the cloudy skies, the harbour water and the cold weather in a deep and dark colour. On a sunny day, the building reflects the sun, the yellow buildings opposite BLOX, the harbour water and the city around it. Sometimes the facade acts like a mirror but not quite, something is always a bit off. The reflection doesn't quite match up; it is distorted as the materiality of the building mediates the image. When you stand inside the building – say, on the third floor in the office spaces of BLOXHUB – and look out onto Copenhagen on one side or onto the two bridges or the harbour on the other three sides, if you follow the windows, you can enjoy an impressive 360 degree view of Copenhagen's city centre. Yet when you look out, your view is slightly off and altered. You almost never have a clear, transparent look through pure glass onto Copenhagen as the glass is either full of small circles, or alternatively grey-tinted (Fig. 16). This might be surprising as

the resulting view is one of the key desirable characteristics of a facade made almost entirely out of glass. Yet these design interventions are done in order to fulfil the energy efficiency requirements and Danish building regulations that aim to render the building, by current regulatory standards, 'sustainable': by blocking sunlight and excess heat, the temperature inside the building can be better controlled and energy can be saved.

The 'official' reason for using the colour green in the green-tinted windows of BLOX was to establish and thereby justify a connection of the architecture of BLOX to Copenhagen, and to embed BLOX within the spatial as well as historical context of the city. Ellen van Loon, the OMA architect, talks about the colour inspirations in this way:

> 'It felt important, in designing a modern structure, to somehow connect to the context. Historic Copenhagen is a rather flat city consisting of typical regular Nordic city brick blocks in which only the green copper historic tower spikes extend above the typical height of this urban fabric. Not only the green colour of the copper roofs but also the beautiful deep green colour of the surrounding water inspired us to use the colour green. The contrasting white fritted facades enhance the brightness of the Nordic light inside as well as outside when the sky is clouded.' (Weiss 2018: 59)

Figure 16. View

The colour green is meant to establish visual and temporal continuities in the urban landscape between BLOX and its surroundings. Despite being a 'modern' building, it draws on existing, historical elements that can already be found in Copenhagen. Thus, Copenhagen's and Denmark's maritime histories are mobilised via the colour of the harbour water, which changes from deep shades of dark blues and greens, depending on the seasonal weather and time of day. The colour green is said to 'reference' the weathered copper roofs and spires that have become green through oxidation or other chemical processes, *verdigris*, that can be found in the city centre of Copenhagen. For instance, the *verdigris* bridge towers of the two bridges on either side of BLOX, called *Knippelsbro* and *Langebro* and designed in the 1930s by the Danish architect Kaj Gottlob, are important urban and national landmarks Copenhagen is situated on the eastern coast of the island of *Sjælland* and partly on the island of *Amager*, with the bridges being two of the main connectors between the islands. The current, green 200 Danish kroner banknote depicts *Knippelsbro* with one of its towers. The colour green refers back to these national pasts and mobilises existing architectural heritage.

Initial drawings and visualisations of the *Bryghus* project, the future BLOX, show the building as a white, three-dimensional line drawing, suggesting that no decision had been taken at the beginning of the design process regarding building or cladding materials and their colours. In the very beginning of the design process, the *Bryghus* project was materialised in blue – in line with many other OMA projects (cf. Yaneva 2005) – as the project started its life as blue foam cut outs in the OMA studio in Rotterdam. But, as an architect working on the BLOX project told me, this is not the entire history. The choice to use green as the colour for BLOX was a conscious design decision by the architects, and then accepted by Realdania. The publicly stated reasons for the colour green are the ones outlined above, connected to the harbour water and the green patina of the oxidised copper roofs in central Copenhagen. But the architect told me that, initially, the colour choice was an 'aesthetic' decision. There was a shortlist of multiple colours including pink and green, based on various colour studies done of Copenhagen (Fig. 17); and Rem Koolhaas and Ellen van Loon liked the green colour best. The connection of green to Copenhagen became more important over time, as support had to be garnered for BLOX, especially when faced with public and professional criticism.

Yet, as Realdania and the BLOX project team can attest, BLOX is – or is assessed to be and presented as – a 'sustainable' building. Realdania, for instance, described their sustainability strategy for BLOX in both technical and broad terms: 'BLOX has a holistic focus on sustainability and it generates life and attractions for locals and visitors in what

was once a somewhat neglected part of the city. [...] The building boasts a number of environmentally sustainable features, including the solar cells on the roof, insulating glass facades and a link-up to Copenhagen's state-of-the-art district cooling system.' (Weiss 2018). The Realdania Head of Project for BLOX outlined that the 'sustainability strategy' included also 'the quality of life of the local area', the diverse qualities of the buildings', 'sustainable solutions', 'sustainable operation' and 'forward-looking elements.' (Jastram 2018) Some of these additional, 'sustainable' features include e.g. BLOX fulfilling the 2010 Danish Building Regulations standards for low-energy, or the building components of BLOX having a projected life expectancy of 200 years. Similarly, Arup, the Anglo-Danish engineering company that served as a consultant to the BLOX project, state in their *Arup Journal* how they used one of their sustainability assessment tools called 'Sustainable Project Appraisal Routine (SPeAR)' to assess BLOX and outline key sustainability strategies with a range of technical interventions (Bradbury and Carroll 2019).

For all of intents and technical purposes, BLOX was considered and assessed to be a 'green' and 'sustainable' building. What this means exactly depends on a variety of factors, including your point of view in time and space: where you stand, what time of day or night it is, what

Figure 17. OMA presenting colour studies (in BLOX)

you are looking at and how you are looking. It also depends on what you expect 'greenness' or 'sustainability' to be.

BLOX was criticised in *Arkitekten*, the main architectural journal in Denmark, for giving a wrong impression about the priorities of Danish architecture through its choice of building materials that are not seen to be sustainable enough. *Arkitekten* is editorially independent but it is the professional magazine published by the Danish Association of Architects (*Akademisk Arkitektforening*). The journal, written in Danish, is sent to every member of *Akademisk Arkitektforening,* that is everyone who is an architect registered in Denmark. For this reason, the journal is arguably an important factor in shaping the professional discourse around architecture in Denmark. In this piece, the BLOX critic lamented, 'as the contours become clearer of what the 21st-century city will look like, it is sad that this 20th-century building [BLOX] is not part of it.' (Lowenstein 2018: 91) The author highlighted 'the building's outdated character' (ibid.: 80) and argued that BLOX is a building of an 'outdated' past, not one that materialises the present or the future. This 'is not because BLOX is not bold architecture, but it just represents an old-fashioned view of architecture.' (ibid.: 91) One of the main reasons he cites are the building's main materials that send a wrong image: 'steel, glass and concrete dominate and thus send an outdated 20th century signal' (ibid.) Using these materials is not seen to be aligned with the dominant professionals' concerns of today, especially sustainability. It is argued that the Danish Architecture Centre might host exhibitions on topics related to sustainability but it is telling that 'more natural building materials' (ibid.) don't feature in major architectural projects like BLOX. 'The message is that the Danish architecture brand is at the top of the beat and sings along to the tune of the moment.' (ibid.) But at least for this critic, BLOX is already out of tune.

What it might mean to design 'sustainable' architecture was rapidly developing as this critique highlights – even from the mid-2000s when the building was planned to 2018 when it was opened. As we will see now, one reason for this was also a changing 'green' awareness in Denmark and elsewhere. This awareness gave rise to recent political action, centring around demanding climate action; and it was seen as an opportunity for economic growth by companies and politicians.[5] All this shaped the agenda of BLOX and led to the foundation of BLOXHUB and, more generally, a 'green' industry around 'sustainability' in Copenhagen.

[5] At the same time, concerns around 'green-washing' arose in many industries. Green-washing is the label given to corporate marketing strategies that suggest that products or services are 'environmentally-friendly' when they might be not at all (e.g. Caradonna 2014).

Greening Copenhagen

'What do we want?' 'Climate action!' 'When do we want it?' 'NOW!' A group of young people chanted, some of them had green paint on their faces. In their vicinity was a father with his children. The father rode a Christiania bike, a cargo bike named after Copenhagen's 'free town' Christiania, which is popular with Copenhageners who regularly need to carry and transport things back and forth. Quite a few people with young children, or dogs, use them for that purpose and the children or animals sit in the cargo box located on top of the front wheel. This is where the two children now sat with a banner that the children had drawn of the Earth and the words 'take care of me'. Other protestors had 'STOP' signs, employing the symbology of the red traffic sign. Another banner read 'Stop growth', 'Make Earth Great Again' (playing with the slogan of the climate-sceptic US president Trump who had announced that he would withdraw the US from the 2015 Paris Climate Agreement) and another one read 'Our future in your hands' and 'All politics is climate politics'. I was here in the midst of the People's Climate March in Copenhagen, held in early September 2018. I had planned to attend in any case but a friend, studying geology at Copenhagen University, had urged me to attend. He had been active in environmental activism for a while and was now below in the harbour in a kayak, calling for a divestment from fossil fuels (Fig. 18). There were many people like him present, people who had been concerned about 'the environment'.

Historians of 'the environment' have pointed out how this notion – as a way to conceptualise what was previously called 'nature' – is, at least in a European imagination, an intellectual product of the post-war period of the twentieth century (Warde et al. 2018). Aided by scientific developments and practices, 'the environment' offered a means to conceptualise the links and interconnections between people's behaviours and a planetary condition. The idea of 'the environment' made it possible to think 'nature's end' (Sörlin and Warde 2009) and demand political action. During the protest, 'the environment' and the more recent, related notion of 'the climate' (cf. Knox 2020) were presented to be in imminent danger, requiring immediate political attention.

What was striking was the range of people attending – from families, to students, to older people. Many of these would not usually attend protests: a concern for the climate had seemingly become 'normal'. I chatted with an elderly woman who told me that she was worried about the future of her grandchildren. Shortly thereafter, one of the speakers on the stage proclaimed: 'We stand here because we believe in the future.' Instead of banners, some people carried Danish national flags, in their normal colour: white cross on a red background.

I also spotted a colour combination that I hadn't seen before: green Danish flags, that is a white cross on a green background. In this context, it seemed to signal 'greening' Denmark and calling for climate action but I was told that it was also the regional flag of Western Jutland, a region in the Western part of Denmark: regional, national and now environmental sentiments condensed in one, symbolic flag.

The media reported that around 10,000 to 15,000 people attended a march to protest for climate action in Copenhagen. According to the organisers, this had been the biggest climate protest in Denmark since COP15 (Jeppesen 2018). COP15 was the UN climate summit held in Copenhagen in 2009, which was meant to achieve a legally binding framework to reduce carbon emissions and establish commitments to combat climate change after the expiration of the 1997 Kyoto Protocol, the first international agreement to mandate country-by-country reductions in emissions. 'COP' does not refer to Copenhagen, it is merely an abbreviation for 'Conference of Parties'. However, the Copenhagen Accord, that is the final COP15 agreement, and the summit in Copenhagen became a recent symbol for political inaction and the inability to achieve effective cooperation to combat climate change on an intergovernmental and

Figure 18. Climate protest

supranational political level. Legally binding commitments to reduce emissions and to take climate action were dropped from the treaty text. For this reason, COP15 was widely regarded as a failure by climate activists. The Copenhagen Accord merely stated that climate change is 'one of the greatest challenges of our time' and 'recogniz[ed] the scientific view that the increase in global temperature should be below 2 degrees Celsius' (UNFCCC 2010). Yet, 'on the basis of equity and in the context of sustainable development' (ibid.) no common political compromise emerged between so-called developed and developing countries. Six years later, the 2015 COP21 Paris Agreement achieved a common position to limit the temperature increases to 'well below 2°C above pre-industrial levels', 'pursuing efforts to limit the temperature increase to 1.5°C'. However, no country-by-country timetable with specific goals formed part of the agreement. Since the late 1990s and early 2000s, successive Danish governments have committed to international (via the Kyoto Protocol) and EU climate goals for the reduction of CO2 emissions. Denmark has had a 'climate law' since 2014, which established a climate expert commission, advising the government and publishing reports. However, the law did not establish new national climate goals beyond already agreed aims.

The explicit purpose of the protest march was to call for more political action. For this reason, the route of the march was chosen symbolically. The march started and ended on *Bertel Thorvaldsens Plads,* just outside the Danish Parliament and Danish seat of government, marching past seven different Danish ministries in central Copenhagen. Walking down the final stretch along *Frederikholms Kanal*, people joining the march could see BLOX, at the end of the Kanal, located a mere couple of hundred metres from the centres of political power in Denmark. The existing initiatives have not, however, gone far enough for the people who took to the streets during the climate march – despite or rather because of how Denmark is portrayed as a nation by its government and businesses. One of the promotional agencies for Denmark, a public-private partnership between the Danish government and four business associations, is called 'State of Green'. And, for instance, the energy pact begins by stating: 'Over the last decades, Denmark has worked its way up to the absolute world elite within the areas of green energy and climate.' (KEFM 2018) The protesters called on the Danish government to live up to such assertions.

The protesters also called on the City of Copenhagen to take more action, which similarly sees itself as a 'green' city. Although key policies and ambitions exist, more immediate actions are demanded. Nonetheless, two of those policies are worth mentioning here. First, the revised architectural policy of Copenhagen called 'Architecture for People' (City of

Copenhagen 2017b). The responsible Mayor of Technical and Environmental Affairs in Copenhagen Municipality from 2014 to 2017, Morten Kabell (from the eco-socialist party *Enhedslisten*, Red-Green Alliance) wrote the foreword. His key points are worth highlighting, as they repeat the mantras of Copenhagen's urban and architectural development for the last decades. He commented that Copenhagen has received worldwide attention as 'one of the greenest cities' (City of Copenhagen 2017b: 5), for its bicycle infrastructure and for its 'extremely' (ibid.) high quality of life. 'But', he added, as if those qualities would make the city less attractive, 'Copenhagen is also an interesting city.' (ibid.) He affirmed that Copenhagen was diverse and 'complex' (ibid.). Yet, Copenhagen as a city faced 'several big challenges' (ibid.): population growth but a limited area, retro-fitting of the city against 'cloudbursts' and making the city CO2 neutral by 2025. These challenges should be seen 'as opportunities for creating good architectural solutions' (ibid.), and 'people' (ibid.) were to be prioritised in these developments. Several considerations needed to be balanced in this process: cost and benefit, climate and the urban environment and everyday life.

Moreover, according to the CPH 2025 Climate Plan, which was adopted by Copenhagen's City Council in August 2012, the municipality of Copenhagen sees itself as 'a green, smart and carbon neutral city' and aims to become the world's first carbon neutral capital by 2025, which has been the contemporary substantiation of a 'green' capital. This future, outlined in this plan and subsequent policies and guidance, will have become a reality in 2025 with a transformation of the city and with the participation of key actors in the generation of 'green growth' in a 'green' or 'greener' economy: 'In 2025, Copenhagen will be the world's first carbon neutral capital and the city's businesses and universities will be spearheading the development of green solutions generating employment and green growth.' (City of Copenhagen 2012: 8)

The concepts of a 'green economy' or 'green growth' have emerged recently, positing a compatibility between environmental concerns and economic benefit from such developments.[6] Underlying this is the idea that being timely pays: having (design) interventions available at the right time when they are needed was seen to be vital and economically beneficial. Yet it is important to stress that not everyone in Denmark agrees. Some of the banners during the climate march read 'Stop growth'. Economic 'growth' is here viewed to come at the expense of 'the environment' (cf. Milton 1993), especially as the former is conceptualised as a model of extraction and resource exploitation of the

[6] Cf. Knight (2017) for a critical engagement with the notion of 'green economy' in anthropology.

latter. Similarly, a 'green economy' can be seen to reinforce existing inequalities. It is richer countries and cities that have the capacities to develop products and services; these 'solutions' can then be exported and sold to other countries and cities that do not have the same means to develop responses to climatic events but are potentially even more at risk.

Nonetheless, politicians, planners and other professionals construct this 'green economy' out of seeming necessity. 'Climate change' is seen to have tangible effects on coastal towns in Denmark and what are judged to be 'extreme' climatic events have already been taking place in Copenhagen. Copenhagen's first climate adaptation plan was released in February 2011. This plan built on earlier work by the national government (e.g. Danish Energy Agency 2008). A couple of months later, an extreme weather event took place. This 'cloudburst' event, called *skybrud* in Danish, became one of the reasons for the urgency of climate adaptations in Danish cities. On 2 July 2011, heavy rains flooded Copenhagen in a few hours and caused extensive water damage and incurred massive costs. Such heavy rain events were previously thought to only occur once a century. Now their more regular past and projected future occurrences became evidence of a changing climate.

As a result, existing urban environments needed to be 'retrofitted'. In Copenhagen and by the municipal and national governments, these measures are referred to as 'climate adaptation' (*klimatilpasning*) or 'climate safeguarding' (*klimasikring*). Importantly, the necessary investments for a transformation of the whole city – in the case of Copenhagen – or the whole of Denmark are immense. What are seen as the 'politico-economic' dimensions of financing have formed part of early planning considerations: it should return 'green growth' (City of Copenhagen 2011: 6): 'Climate adaptation must be part of the green growth strategy for Copenhagen by attracting both national and international projects and investors to the development and production of climate adaptation systems. The municipality will ensure that part of the investment in climate adaptation returns in the form of growth.' (ibid.) Additionally, the planning department of the City of Copenhagen has combined the climate adaptations that they regarded as necessary and essential with general urban improvement initiatives, thereby coupling various planning agendas. This logic sees more opportunities and value than costs. These costs are 'investments' to improve the city by adapting it to future catastrophic events, that will save billions of Danish kroner of avoided damages. These adaptations are also opportunities to carry out other, regular urban improvements, such as improving bicycle lanes and adding more green spaces. And, importantly, these investments are seen as part of a 'green economy', acquiring experience and expertise in climate

adaptation strategies and implementation through developing mechanisms, technologies and processes that can be sold and exported. Importantly, it is both the public and private sectors - or, indeed, 'public-private partnerships' - that are seen to benefit. Being an early investor and having a temporal advantage is seen to bring future returns by selling and exporting what has worked in Copenhagen to other cities, thereby recuperating the present costs in the future.

Thus, several 'climate adaptation' projects were already completed or underway in Copenhagen by the time that I conducted fieldwork in 2017-8. The whole city seemed to be a construction site. The most significant urban project in central Copenhagen of the last decades, if not century, was the construction of the new loop metro line, *Cityringen,* which was under construction from 2011 to 2019. The planning for such projects already included measures against extreme climatic events. Evidently, these transformations or adaptations of the city are disruptive to everyday life. Streets and squares are dug up, traffic is diverted, and bus stops are moved. Many Copenhageners were used to their city being a *byggeplads* ('building site') and accepted the temporary disruptions, although complaining, for instance, about what was being done to the appearance of public squares such as *Kongens Nytorv.* This is the largest square in central Copenhagen close to the new harbour (*Nyhavn*) area with its colourful houses that features on most postcards of Copenhagen – but it was largely inaccessible and boarded up for a decade. Danish architects and urban professionals point typically to the redevelopment and climate adaptation of another square in central Copenhagen, *Sankt Annæ Plads*, as a successful example of a project that incorporated in its redesign the climatic threat of heavy rainfalls, future 'cloudburst' events, by being able to absorb high volumes of rainwater with pipes hidden underground.

Yet, not all such projects happen as planned. Other consideration, including more short-term, economic concerns and potentially lengthy disruptions to key commercial streets, can stall climate adaptation projects. One of the streets that I lived on in Copenhagen, *Amagerbrogade*, is the main throughfare and commercial street of the part of Copenhagen that is situated on the island of *Amager.* Amagerbrogade leads directly, via *Christianshavn,* to central Copenhagen and was subject to re-development the whole time that I lived there, from October 2017 to October 2018 (Fig. 19). My flatmate was a Danish architect in her late twenties who, like many other recently graduated architects in Denmark, was looking for a permanent job after a series of short-term contracts with smaller architecture firms. She complained about the construction only when drilling works started early in the morning right outside her bedroom window. Even then, she added that they were right to start early and

that they were doing necessary improvement works. The Amagerbrogade project aimed to turn it into a more attractive shopping street with improved cycle paths, bus stops, and newly planted trees. In line with city hall strategies, it was decided in 2016 that the Amagerbrogade redevelopment should include cloudburst protection. Yet it was announced in 2017 that, due to unforeseen costs and potential further delays, 'the cloudburst solutions, both financially, legally and constructionally, were virtually impossible to implement' (City of Copenhagen 2017a). Instead, conventional rainwater drainage systems were to be included and cloudburst-adaptations were to be planned 'at a later point' (ibid.).

Greening a national economy

BLOX has come to play a key role in this planned 'green' and decisively urban future, aiming to become, literally, the central 'hub' in Scandinavia and Europe where these urban futures are imagined, designed, carried out and sold. This is not merely a vision or aspiration of Realdania – as a private organisation – but BLOX has become part of the Danish government's economic strategy to position Denmark as a 'design nation' and drive 'urban solutions' as export products: 'the purpose of the building has to do with nothing less than Denmark's future growth and prosperity.' (Bason 2018) This is how the CEO of the Danish Design Centre, an organisation based in BLOX, described what he called 'the hidden agenda of BLOX' (ibid.) in a blogpost on the website of the Danish Design Centre:

> 'We strive to make design a resource that Danish companies can draw on to develop solutions that match the global challenges faced by cities, thus supporting economic growth and job creation in Denmark. [...] In Denmark, design is a part of society's DNA. We are not always aware of it, but the development of our furniture, buildings, public infrastructure, even our new digital companies, has always been guided by design. And now, in the BLOX building and in the new community it houses, we can nurture the generation of new ideas and promote Denmark's strong position in the field of design.' (ibid.)

Branding Denmark as a 'design nation' and using BLOX and BLOXHUB as a platform, for shopping and window shopping, to display Danish design products and services: this is in line with the economic strategies of the Danish Ministry of Business, going back to the establishment of a 'growth team' for creative industries and design in 2012. Building on the advice by 'the growth team', the Danish Ministry of Business identified BLOX, which was initially called 'the Bryghus project', as a place to present Danish design and

Figure 19. Amagerbrogade

architecture to the world. In their 2012 recommendations, the growth team saw an opportunity to establish ‘an international lighthouse for Danish architecture and design – e.g. with the Bryghus project’. In what then resulted in the foundation of BLOXHUB, the growth team recommended that

> ‘ministries should, in collaboration with Realdania, initiate an investigation into the possibilities of concentrating key institutions and organisations in the fields of architecture and design – including the Danish Architecture Centre, Danish Design Centre, Design Museum Denmark and INDEX: – in the Bryghus project with a view to create an international lighthouse, where both businesses and tourists can see the best that Danish design and architecture can do.’ (Vækstteamet 2012)

These recommendations become Danish governmental policy through the ‘Growth plan for creative industries’ published in 2013 with the central economic vision that ‘Denmark must become a powerhouse for creative industries with a focus on sustainable solutions and new digital opportunities’ (Regeringen 2013). The Bryghus project (i.e. BLOX) was identified as a place where such design can be visited because ‘what is missing is one place in Denmark where foreign tourists, companies and business delegations can see the best that Danish architecture and design can offer.’ (Regeringen 2013)

The result was not only that the Danish Architecture Centre was to host varying exhibitions in its BLOX spaces showcasing Danish architecture, design, engineering and urban design but also that BLOX received business delegations and had become an official stop on the tours of foreign economic visits to Copenhagen and Denmark, organised by the promotional agencies of the Danish local, regional and national governments, such as State of Green.

The next chapter explores the co-working space and urban innovation hub in BLOX that is called BLOXHUB in more detail.

Figure 20. Screen in BLOXHUB

Chapter 2 Co-working

This second chapter examines everyday practices in the co-working space and urban innovation hub that is located within BLOX (Fig. 20). This organisation is called BLOXHUB and manages office space on the second and third floors of the BLOX building and in the building that is located next to BLOX called *Fæstningens Materialgård* (FMG).

We will examine here how co-working was envisioned and enacted by BLOXHUB. The first part of the chapter explores how BLOXHUB aims to be 'the office of the future' and what co-working in BLOXHUB was like. In the second part, we explore the production of meetings in BLOXHUB in more detail: in addition to the spatial aspects that were explored in the first part and that were meant to increase the likelihood of spontaneous encounters, BLOXHUB as an organisation also actively facilitates encounters, especially through a practice that it called matching, and through the organisation of events.

We will be looking, therefore, at how co-working was put into practice by BLOXHUB. Some of those practices that were meant to constitute the future of architecture involved making connections, 'networking'. None of these are new business practices; rather, what is suggested by BLOXHUB is that they need to be intensified. Self-promotion in presentations, in print and in other media such as videos are important dimensions of the professional work enacted in BLOXHUB's own practices.

A special emphasis is placed by BLOXHUB on spatial, affective and conceptual proximities, on what could be called 'propinquity', to borrow a concept from the anthropologist Victor Buchli (2015). Architectural and urban professionals usually describe these proximities as 'density' and its effects. BLOXHUB proposes that nearness in its various dimensions, including spatial and thematic nearness as well as a sense of familiarity, is a key condition for productive encounters between professionals, for the cross-disciplinary collaborations that BLOXHUB wants to encourage. These encounters are in turn seen as essential in generating valuable outputs – 'new ideas', 'innovations, 'solutions' – that are all, as we will see in later chapters, meant to assure continued economic growth, national and professional relevance and planetary survival.

I. Community and communicating

Promoting and presenting BLOXHUB

The months after the opening of BLOX saw a constant stream of visitors and delegations coming through the glass doors that lead to BLOXHUB on the third floor of the BLOX building. I wasn't the only one who found the number of delegations and visitors surprising; I was told that the BLOXHUB team had expected a couple of delegations a week but instead it turned out to be multiple delegations every day. The range of visiting delegations was diverse: from Danish companies and BLOXHUB's own members who finally wanted to see the building for themselves to delegations of French mayors, Chinese businessmen or urban planners from Switzerland or Belgium, and many more. As more and more delegations were welcomed, these meetings came to follow a certain standardised form. Usually, it was someone from the BLOXHUB leadership team who greeted and presented themselves, BLOXHUB and the building to the delegations; when they were busy, one of the other team members took over. Then whoever hosted the visit arrived and led the group past a long, black wooden table to the presentation space that boasted a large screen and seating opportunities and some high tables. The wooden table was one of the first things you saw along with a computer screen that welcomed you to BLOXHUB. The BLOXHUB reception team led by the community manager sat at the black wooden table at the end closest to the door and welcomed visitors (Fig. 21). Other BLOXHUB employees sometimes sat here, too, although some desks in one of the corners nearby was reserved for them, when they needed to be 'free from distractions'. But often the whole team sat at the long table, along with BLOXHUB members working away on their laptops. This was also where I often positioned myself, observing what was going on around me in the hub and in the building.

Once seated in the presentation space, the visitors were officially welcomed and the promotional video of BLOXHUB was played. This promotional video also became part of the visual backdrop of BLOXHUB when no visits took place. Usually, it was left to be played all day without sounds, only with subtitles. After the video, a short presentation was given that provided additional information about BLOXHUB as well as the opportunity to pose questions. Delegations were then shown around the co-working space. The furniture attracted most comments and questions by visitors, often commented on as 'expensive'. Design classics were often pointed out during tours, for instance, the so-called Egg chair by Arne Jacobsen,

Figure 21. Main table in BLOXHUB

Figure 22. Designer furniture in BLOXHUB

one of the mid-century icons of Danish architecture and design (Fig. 22).

These material reminders are dotted around BLOXHUB, including other designs that are deemed ‘sustainable’ and work by emerging Scandinavian designers. They effectively serve as both a materialisation and demonstration of Danish design expertise. As part of such tours, delegations could see people working at their desks or at the shared furniture that is for everyone to use. The tour either ended after this walk-about or, depending on the visitors and their schedules, concluded with drinks inside or on the outside terrace with the ‘fantastic’ (as it was stressed) view overlooking Copenhagen and the harbour.

During the welcome, connections were made between the presenter and the group. For instance, when the hub director welcomed a British delegation, he started off his presentation by making a reference to a recent cricket match series that had ended a couple of days before. The English cricket team had played the Indian team. He mentioned the ‘4-1 win in the Test series’ of the English team and that he was ‘one of the few’ in Denmark who watched cricket. The audience laughed and appeared surprised. He laughed, too. These kind of delegation visits might include references to current events or to potentially shared interests. Such an exchange of national stereotypes, British cricket and Danish design, is a display of mutually defining images of difference that can also suggest commonalities (cf. McDonald 1993). It can be the basis for establishing familiarity based on what the anthropologist Michael Herzfeld described as ‘cultural intimacy’ in another context, namely ‘the recognition of those aspects of a cultural identity that [...] provide insiders with their assurance of common sociality’ (Herzfeld 1997: 3). On their own such statements cannot turn visitors into insiders; but they can lay some of the affective foundations to turn visitors into potential collaborators after the visits. The director continued by saying: ‘Welcome to this place, the name of this building is BLOX and we are in BLOXHUB.’ He explained that BLOX and BLOXHUB existed ‘to really boost the marketing of Danish architectural and design solutions to the world’ and ‘to bring international companies onboard, to collaborate and to introduce them to the Nordic region’. They ‘collaborate on creating solutions focusing on the challenges of urbanisation and we are an urban innovation hub for a wide variety of stakeholders in the built environment.’ He then asked if they had a tour of the building yet, the audience replied ‘no’ and he presented BLOX in ‘a few words’ and then played the promotional video.

This video was used to represent BLOXHUB, presenting how BLOXHUB saw itself and wanted to be seen as an organisation to outsiders, potential collaborators or clients. The video was recorded in English, for international reach, and a male voice-over narrated the

context with a British accent. It was three-and-a-half minutes long and was entitled ‘Our Urban Future. Co-Created.’ (BLOXHUB 2018) It began with an aerial shot of BLOX and the Copenhagen harbour, and cut to images of cyclists in Copenhagen, cars, pedestrians and runners. Everyone was seemingly on the move. ‘Our future is urban. Every week, three million people move to cities around the world. By 2050, two-thirds of the world’s population will live in cities.’ The video cut back to BLOX and the famous Copenhagen harbour bath. ‘At BLOXHUB, we want to meet the urban challenge – creating better cities for all.’ Now it was the director of BLOXHUB speaking on the video, interspersed with images of BLOX and the Copenhagen harbour: ‘The challenges that our cities are facing are becoming more and more complex. Think of climate adaptation and energy transformation, urban infrastructure and resilience. Those are all factors that are crying out for new ways of solving the challenges of cities.’ From aerial shots of cities, the video now zoomed inside BLOX, with footage from inside BLOXHUB: people working on their laptops, in meetings, talking and greeting each other. ‘BLOXHUB is the innovation hub for future cities founded on the belief that the challenges of global urbanisation and climate change require new ways of collaboration

Figure 23. Promotional video

between architecture, engineering, design thinking, construction, facility management and tech.' (Fig. 23) The video then showed drones and other technologies at work, including data visualisations, and showed the courtyard with its magnolia trees of the old buildings that are also part of BLOXHUB and located next to BLOX. The narrator continued: 'But also between research and practice. And between start-ups and corporates. Breaking down the silos. Bringing together the brightest minds. Co-creating better cities.' The 'labs' inside BLOXHUB were shown: 'Access to state-of-the-art technology for all. Small fab labs with 3D printing and scanning. A data lab, a living lab and a VR studio.' A BLOXHUB member explained what the VR (virtual reality) studio was: it consisted of a special projection wall. 'In our VR studio, you can take a virtual reality tour. It could be a model of an apartment, a building, a hospital or even a cityscape. And in this way you can make very crucial decisions even before you build your solution.' The video cut to a visualisation of transportation data in Copenhagen installed in BLOXHUB and someone from Copenhagen Solutions Lab, a special municipal unit that is also a BLOXHUB Member and resident, explained: 'Big data will change the way that we design, build and think about our future and in the City of Copenhagen we gather, analyse and visualise data across different sectors and across different cities to improve sustainability.' The voice-over continued: 'An international community. A launchpad for new Nordic solutions with a global outlook and a gateway to the Nordic countries. At BLOXHUB, companies can connect, share and scale.'

Two more short statements followed from two larger companies. A managing director for a large multi-national engineering firm said: 'As a large global company, collaboration is really important to us. Being part of BLOXHUB is a fantastic opportunity and being able to make innovative solutions with architectural firms, IT firms, city planners, other engineers and being able to bring those out to our global network.' Next a partner at Gehl, a well-known Danish urban planning company, explained: 'At Gehl, we have a 'people first' approach to solving urban issues. And by that, we mean putting people at the centre by ensuring transparent planning processes and having a co-creative approach to problem-solving.'

The video ended with various shots from within BLOXHUB and outside BLOX and in Copenhagen and with the narrator announcing: 'We believe that great minds think together. Tailored workshops and accelerator programs. Match-making and go-to-market strategies. We match you with the right people. We help mature ideas, explore opportunities and make new solutions. We believe in curiosity. We believe in knowledge. We believe in co-creation. Our urban future. Co-Created.'

The video was made by a professional video-production company and aimed to impress the visitors, condensing all that BLOXHUB had to offer. It presented its main selling points. It gave an overview over the ambitions of BLOXHUB and impressions of everyday life in BLOX and Copenhagen, and what one's professional life in BLOXHUB could be, if one joined the 'network'. The British accent of the voice-over contrasted with the Danish accents of those featured and interviewed in the video. The working language in BLOXHUB alternated between Danish and English, depending on the language capacities of those present. The video showed a lot of people engaging in all kinds of different activities. The video associated BLOXHUB with motion and flows, a place where things happen, a 'meeting place'. The selection showcased the best bits of Copenhagen and highlighted what are seen as the most important, desirable features of BLOXHUB: it is a sales video, aiming to persuade whoever was visiting to either do more business with companies and organisations or to collaborate further, or even to rent office space in BLOXHUB. For instance, after one successful encounter with an international delegation that was particularly impressed and keen to rent office space straight away, the BLOXHUB team member who gave the presentation just commented that 'this could be one of my easiest sells.'

After the video, another short presentation was usually given with the help of PowerPoint slides, providing additional information about BLOXHUB. The hub director went on to say that the idea behind BLOX was to have a 'hybrid of functions' within one building. 'In the middle we have the Danish Architecture Centre to highlight Danish solutions', then there is a fitness centre, restaurant and cafe, a playground, parking beneath and rented apartments on top. It is 'not just a closed office building' but an 'active dynamic house 24/7'. He explained that BLOXHUB consisted of the second and third floor of BLOX plus the listed buildings next to BLOX. That space amounts to 10,000 square meters roughly, which corresponded to 550 desks. He said that almost 80 percent of the desks and space had been let. The purpose of it all was 'to have one place with loads of diverse stakeholders in one field, that of sustainable urbanisation.' The founders included the Danish government, the City of Copenhagen and Realdania. 'We are trying to create a new platform for companies, to actually be physically together, to meet another and collaborate. It's not just an office, it's not just being part of an ecosystem, but also a place where match-making is a hand-held process.' Match-making refers to a process by which companies come to the BLOXHUB team and tell them about their business challenges and needs. It's about 'being close to stakeholders that you as a company are not really aware of' and, for international companies, 'having the Danish

and Nordic market on a silver plate'. 'This model is new on an international level.' And he stressed that already more than 200 companies were part of the BLOXHUB network, as of summer 2018, and were 'part of the ecosystem'. The hub director pointed out that it consisted of a diverse range of companies which all had the built environment or 'sustainable urbanisation' as their business area. 'The DNA of being part of BLOXHUB is "connect, share, scale".' The important question was 'how can you add value. It's not just about having a cool space and an interior design that supports knowledge-sharing. It's about your mindset.'

These business visits hold the prospects of sales, business collaborations, or foreign investment in Denmark. Often meetings and workshops with BLOXHUB residents and members were organised. The difficulty for the BLOXHUB team was to gain an overview of the relationships and potential impact that they initiated, gauged so far from conversations and feedback from their residents and members. The importance and the frequency of these visits increased rapidly: after I had left the field, BLOXHUB hired a new employee whose job it was to coordinate and make the most of the many business visits to BLOXHUB.

Establishing the BLOXHUB community

BLOXHUB was officially established on June 3, 2016 by its founding partners, which were Realdania, the City of Copenhagen and the Danish Ministry of Industry, Business and Financial Affairs. The financial investment by Realdania made the project possible, and the institutional and political support had been key to BLOXHUB's success so far.

BLOXHUB in its current form was not part of the original designs for BLOX in 2006. BLOX was explicitly designed to house the Danish Architecture Centre. The initial proposals included office space, which was to be occupied by Realdania or to be let out. This corporate office space was intended to be open-plan and flexible in order to be easily sub-dividable if necessary. For this reason, after it was decided that BLOXHUB was to occupy the office space, a Danish interior design firm was hired to design this space as an innovation and growth hub. BLOXHUB was conceived as a space that could have certain effects, such as facilitating encounters and interactions. The space planners were hired to turn these ideas and ambitions into suggestions for furniture, spatial arrangements and other designs that could help achieve these aims. They designed BLOXHUB as a mixture of fixed desks that could be rented permanently (Fig. 24) and a variety of shared furniture (Fig. 25).

The size of the BLOXHUB community grew steadily, to more than 60 residents and more than 230 members in September 2018. To become a member of BLOXHUB, interested

Figure 24. Desk unit

Figure 25. ‘Informal’ meeting areas

professionals, organisations or companies needed to get in touch with the BLOXHUB team and apply. One important requirement includes working in an area or industry related to 'sustainable urbanisation'. A perceived rapidly 'urbanisation' of the world, usually evidenced by numbers such as in the BLOXHUB video, was imagined as an increase in existing and future demand. The notion of 'sustainability' has come to pervade architectural discourse and practice since the 1990s and this discourse builds on earlier architectural concerns with e.g. the 'local' 'environment' or 'nature' (see, for instance, Tabb and Deviren 2014, Baweja 2018 for histories of 'sustainable architecture'). Contemporary buildings need to become 'sustainable' according to now well-established metrics. The built environment is now conceptualised as being intimately connected to 'global' ecological developments – both as a source of carbon emissions and potential environmental destruction as well as a resource for safeguarding a common future. Finding new or alternative 'sustainable' modes of habitation had become an urgent agenda for many architects in Denmark.

When I asked about the strategic directions for BLOXHUB when I first started my fieldwork, I was referred to a specific image, a diagram, that they had recently come up with to define BLOXHUB's themes (Fig. 26). Anthropologists have pointed out how diagrams as modes of representing and seeing can suggest authoritatively detached perspectives, offering an overview or oversight, often bound up with questions of power or governance (cf. McDonald 2014; see also Candea 2019, Englemann et al. 2019a, Englemann et al. 2019b). For BLOXHUB, I was told that coming up with the diagram helped them gain an overview, too, over their thematic priorities – over BLOXHUB's own understanding of 'sustainable urbanisation'. The diagram sets out the BLOXHUB themes for the years 2017 to 2020 and includes eight different dimensions. In the diagram, the towering, overarching and engulfing theme, represented through text, is 'liveability', all other themes contributing to this goal. From top to bottom, the diagram depicts three layers that, the diagram suggests, feed into each other. 'Urban resilience', 'urban mobility', 'sustainable buildings' are labelled as 'drivers' that lead to 'enablers', namely 'digitalisation', 'design DNA', 'sharing and circular economy'; this is underpinned or generative of the last dimension: the 'framework' of 'urban governance and finance'. I was pointed to this diagram again a week or so later, when I was asked to find relevant research, news and trends in the field of 'sustainable urbanisation'. I was shown the diagram to define and narrow down the scope of the task. As it turned out, it was easy to find all sorts of information that could be related to this topic. But that was exactly the point, as I was told a couple of months later. 'Sustainable urbanisation' was both full of meaning and

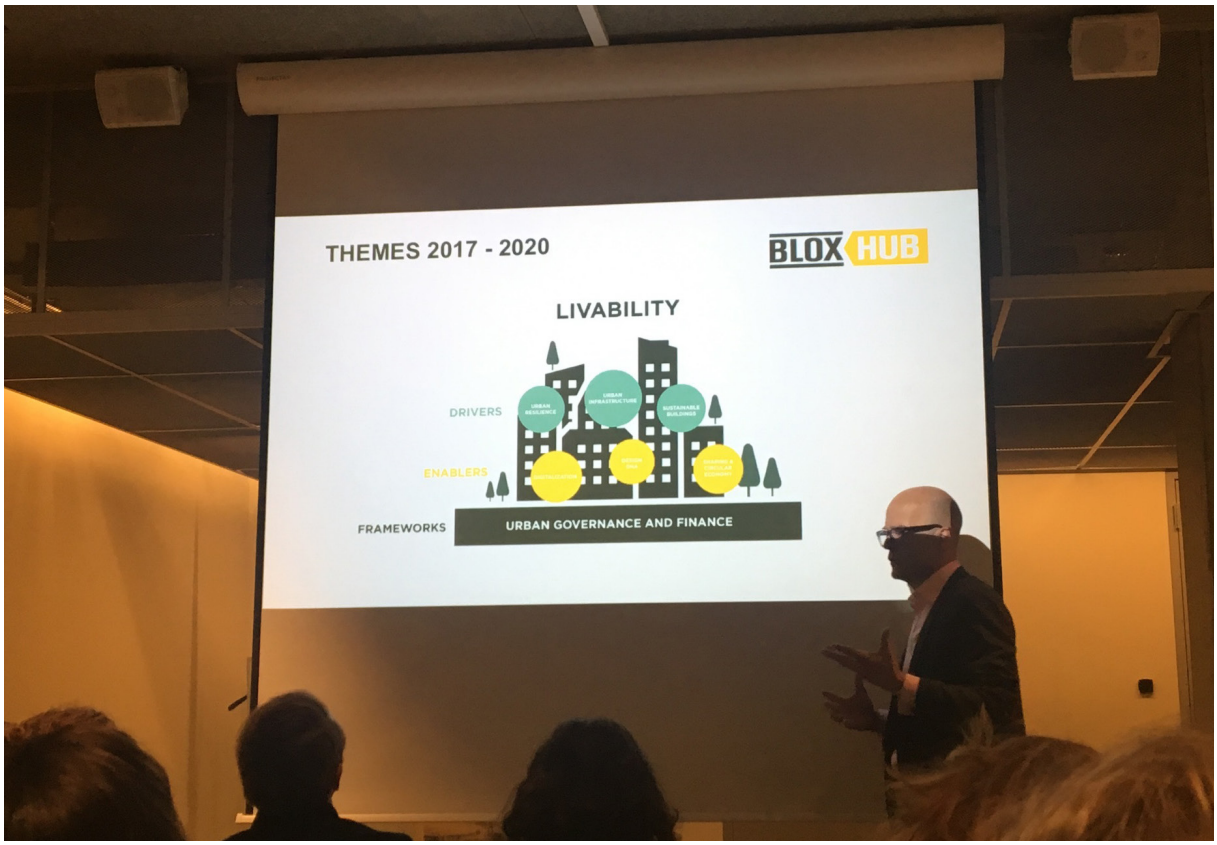

Figure 26. BLOXHUB diagram (presented at an event in BLOX)

what could be described as a 'boundary object' (Leigh Star and Griesemer 1989) enabling a common focus for a variety of disciplines and professions.[1]

In the worlds of business, competition among companies is usually seen as one of the default organising principles. BLOXHUB encourages and facilitates collaboration among its community. Collaboration emerges as a complementary practice to gaining a competitive advantage over those who are not part of a collaborative community. Taking political shape in the nationalist movements of the 18th century, 'community' as a notion has assumed various forms in much of Europe over the past century, from political ideals and policy programmes rooted in 'social democracy' or the 'welfare state' in Scandinavia to a recent rise in 'populism' in much of Europe. Notions of 'community' establish boundaries between those who belong and those who do not belong and regulate access to, for instance, political goods and services. In BLOXHUB, collaboration is premised on perceived similarities in terms of a common thematic focus and shared interests. But differences in terms of knowledge and skills are

[1] For the past decades, the subjects of 'cities', 'urbanisation' and 'globalisation' have, of course, attracted much attention by practitioners and researchers – also by anthropologists (e.g. Smart and Smart 2013, Rademacher 2015) – which is part of the appeal of the concept here, too.

expected, if not required to enable productive collaboration.

Anthropologists of kinship (such as Carsten 2011, Sahlins 2011) have pointed out that familiarity, connectedness or relatedness can arise in situations of interactions that involve sharing – substances, time, space, etc. The Danish concept of 'hygge' as a value-cum-affect in Denmark relies on familiarity and intimacy and is often produced or proclaimed in specific settings: around a table with a candle or dimmed lighting in someone's home (cf. Bille 2015a, 2015b, 2019). In BLOXHUB, one could hear exchanges after meetings, that stressed that 'it was *hyggeligt*', as guests were accompanied to the elevator. When meeting or saying goodbye to guests, the BLOXHUB team often shook hands with their visitors but also often hugged them. It was a general atmosphere that was felt to be friendly and seemed to be based on and productive of specific kinds of familiarities.[2]

The anthropologist Victor Buchli (2015) has referred to such reinforced overlapping of conceptual and spatial nearness as 'propinquity'; architects and urban designers usually refer to these effects as 'density' and associate positive effects with it.

In a Danish press release, Realdania explained briefly their intentions behind establishing a 'hub' within BLOX. 'The English term "hub" directs towards the core or central part of something and is often used for digital communities either on the Internet or physically in a building. The purpose of a hub can be to promote innovation, technology and knowledge-sharing and to be a meeting place for industry actors.' (Realdania 2015) The term 'hub' is here a metaphor taken from the world of transport, evoking the significance of connectedness and connectivity. The density of relations generated by bringing stakeholders together under one roof, in a hub, establishes an important centralised meeting point as well as the conditions for what is then called 'co-working'.

BLOXHUB is meant to be a 'growth hub' (*væksthub*), as Realdania has also called it. The everyday practices that happen in the hub – from desk-based work to conversations over coffee or lunch, meetings, giving presentations as part of guided tours and visits, and attending talks and other events – are meant to contribute to the production of 'economic growth'. Over the past decade, 'sharing' has become an economic paradigm with economists and related professionals who have proclaimed the rise of a 'sharing economy' or 'collaborative economy' (e.g. Bozek 2018, Belk et al. 2019), driven by a perceived rapid

[2] The general lack of a formal business dress code in Denmark might also contribute to this feeling. In BLOX-HUB and elsewhere in the professional spaces of design and architecture, it was mostly a question of T-shirts mixed with jeans and suit jackets or dresses.

increase of tech companies that provide ‘platforms’ that then allow people to ‘share’ goods or services. These tech platforms typically charge a specific amount or demand a percentage of the selling price as a fee. Such companies include AirBnb, which provides a platform through which people can ‘share’, meaning rent out, their rooms to other people; or Uber, which provides a platform for drivers who can offer rides to customers via the Uber mobile app.

As part of these developments, co-working offices have appeared in various American and European capitals (cf. Gill et al. 2019), including Copenhagen. Comparisons with other co-working spaces elsewhere in the world were made by the BLOXHUB team: especially with an American company called WeWork, one of the biggest and fastest-growing provider of shared office spaces at the time of fieldwork. [3] The BLOXHUB team differentiated themselves from providers like WeWork by stressing that WeWork lacks a ‘community’ and a common focus of those working in the co-working space through shared broad interests. The model proposed by WeWork and others is, in the BLOXHUB analysis, merely selling shared office space, where all the amenities, overhead costs or related services for running an office space are also shared. This is not ‘co-working’ in the understanding of BLOXHUB; it is merely ‘working side by side’ in the same office space. By contrast, ‘the future is co’, as the hub director regularly stressed.

Materialising the office of the future

In addition to presentations given to delegations and other visitors through which BLOXHUB promoted itself, the organisation also self-consciously represented itself through other print media and online media, as well as through events.

One member of the BLOXHUB team drew attention to a new article that was pinned to the noticeboard next to the main entrance to BLOXHUB. The notice board generally featured event announcements as well as anything else that might be worth communicating, including information from outside BLOX and BLOXHUB. Some event announcements were also made via a social media app called ‘Mighty Networks’, which BLOXHUB residents and tenants were encouraged to use. Posters were hung up in BLOXHUB, reminding residents to sign up. On the other side of the main entrance, photos of every resident in BLOXHUB were hung up with their names and a short description of who they are. The app and the photo

[3] Comparisons were also made by the BLOXHUB residents. The proliferation of ‘co-working’ spaces led to certain expectations by new BLOXHUB residents. One entrepreneur, for instance, commented shortly after the opening of BLOX that there was no free food in the fridge - which is what some other shared office spaces were imagined to offer.

wall were complementary efforts to visualise and represent the BLOXHUB 'community' in BLOX. The article to which particular attention was drawn formed part of a newspaper supplement and was pinned next to the invitation to the housewarming event on the notice board. The frontpage of the supplement was entitled *Fremtidens arbejsplads* ('The workplace of the future') and showed a photo of BLOXHUB's semi-private meeting and workspaces (Fig. 27). In line with the mixture of Danish and English that could be encountered in many Danish business environments, the article about BLOXHUB was called *Kontoret er ikke et 'one size fits all*' ('The office is not a "one size fits all"'). It was based on a conversation with BLOXHUB's 'space planners' who designed the co-working environment. In the article, the space planners draw a distinction between open plan offices on the one hand and closed offices where you can shut your door or semi-closed 'cell offices' on the other hand. They argue that you don't need to make an 'either-or' choice: humans have different ways of working and the office designs should satisfy as many ways of working as possible. BLOXHUB is presented as an example where this approach has been implemented. In the top right-hand corner, the supplement was marked as an *annoncetillæg* ('advertising supplement'). This supplement was part of a wider strategy to promote BLOXHUB. In January 2018, an event on the 'office of the future' was held in the event room in FMG and then a different discussion with the same topic took place in BLOXHUB in BLOX after BLOX reopened.

Discussing how – and thereby also asserting that – BLOXHUB was an 'office of the future' is both a research or discussion topic that seems interesting to a wider professional or general audience. It is an advertisement for BLOXHUB that serves its own organisational interests, attracting potential new members who pay membership fees and participate in the 'community' of potential new residents who can rent desks in its co-working space.

What the 'office of the future' is or should be is said to be a product of the perceived failures of current or past office environments and how they support or hinder current or projected future ways of working. Past offices are seen to be standardised ('one-size-fits-all') and do not match contemporary or future work patterns that are less rigid. BLOXHUB 'embraces diversity' (*favner mangfoldigheden*), as the article put it. This does not seem to be contradicted by the fact that the standard rental unit in BLOX is a desk with a chair. A large part of what constitutes 'work' is assumed to take place at a desk and on a computer or laptop. Much contemporary 'work' has seemingly taken similar, standardised forms. 'Desks' are also a standardised unit that can be rented and sold easily as a product for BLOXHUB.

Figure 27. Housewarming and ‘office of the future’

The invention of ‘offices’ as dedicated or separate spaces or buildings for a specific type of work is closely connected to the development of ‘administrative’ or ’bureaucratic’ modes of governance. The etymological root of the word ‘office’ – the Latin word ‘officium’ – has been cited by scholars to highlight the conceptual shifts that have taken place over time from denoting the people that support an ‘office’ or social position towards the place where this type of work takes place: architectural histories and social scientific analyses of ‘offices’ (e.g. Haigh 2012, Nag 2019, Saval 2014) locate the beginnings of ‘purpose-built office buildings’ in the early 18th century with buildings in London that are connected to the British empire such as the Ripley Building, as part of the Old Admiralty, or East India House. It is the development of large-scale administrative modes of governance that relied on the handling, processing and archiving of records and documents that have shaped the development of the architectural forms that we call ‘office’ spaces today. Related historical developments, such as an increasing ‘division of labour’ aided by technological advances, made it possible that the management or administration of imperial, colonial or other political and industrial processes took place in a separate location from places of production and extraction. Over time, and

especially since the end of the second World War, these 'offices' have taken the forms and the various configurations of what are usually referred to as 'modern offices': from cellular or individual offices to open-plan, shared workspaces. In much architectural discourse, modern glass towers with open-plan floor plans have become the symbolic representations of standard 'offices' as well as of 'neoliberal capitalism' (cf. Spencer 2016 for an architectural analysis of these developments). Two key architectural inventions made the development of this architectural form possible. First, the development towards an inner load-bearing structure made of steel or reinforced concrete that eliminated the need for load-bearing exterior walls of buildings; the walls can now become so-called curtain walls made of glass. Secondly, the invention of elevators made it possible to build high. BLOX is a mixed-use building with six floors above ground and five floors below ground and therefore not an office tower. However, for its everyday functioning, BLOX relied on elevators, too. BLOX's exterior facade made of glass as well as its relative size for Copenhagen regularly sparked comments from passers-by, visitors and critics that compared BLOX to modern glass office towers.

Doing co-working

At least in BLOXHUB, co-working was put forward to be as much a 'mindset' as it was about the way office space was arranged. Looking through his signature black-rimmed glasses, the hub director told me during one of our conversations that they tried to design the co-working space to encourage interactions to happen. But he added that they 'have to create interiors and offices that are born with the same mindset.' This was seen to be encapsulated by the BLOXHUB motto of 'connect, share, scale', which he said was the foundation for the 'co-working' that needed to happen within BLOXHUB. Not wanting to participate could eventually result in having to leave the co-working space, as he stressed:

> 'The mindset is very much focusing on the idea that in order to create something you have to relate to your surroundings. You have to co-create rather than create yourself. The second you have an idea, blow it out rather than the opposite. If you don't blow it out, you will never attract additional and diverse competencies as prerequisites for scaling your ideas. That's been the mindset for me. That's been the mindset with our team. But that's first and foremost the mindset of the companies working here. You might find a company or two that don't think along those lines but in the long run, they will. Or they'll leave. It's that simple. We don't nudge anything else than this.'

He continued to elaborate what he means by this mindset.

> ‘Most of the companies here have this mindset. If they don’t, they wouldn’t have come. So they are very much attracted to a place, not just the physics of BLOXHUB, not just the location of BLOX, but also the mindset that this is truly about swimming upstream, going upstream and sharing those ideas to the point that is relevant for you. Because I’m not to decide the extent of the collaboration you’re going to do. That’s entirely up to you. You share what you want but you have to share in order to grow. So that’s the very basic mindset.’

This type of thinking, he insisted, was underlined by the interior design and architecture of the building:

> ‘Going back to the interior design. We tried to create something that underlines that mindset. You have your office or your desk, but it is minimised as much as possible in terms of square meters, but then we have maximised the amount of community space. Roughly, as a rule of thumb, it would be that somewhere in-between two thirds or three quarters of the office – the entire 10,000 square meters – are community space, if not more. The rest is occupied by traditional offices and desks. We don’t have one single office which is fully lockable. We have semi-open rooms, semi-open offices. And then every wall is a glass wall apart from only a handful of walls. So the transparency is very important for us. That’s very much in parallel with the entire building, because being here, the outer walls are glass walls. There is a tremendous amount of glass in this building: glass and steel traditional in a modern building you might say. The notion of looking through and not concealing is very important for us and being here on an everyday basis, you feel the transparency of the building on a horizontal plane, on a vertical plane and also diagonally. That underlines the transparency which is eminent and needed in order to create real innovative thinking. So that goes very much hand in hand.’

The idea of transparency is closely connected to contemporary auditing practices or forms of accountability (cf. Ballestero 2012, Strathern 2000). For many architectural practitioners in Europe, glass and transparent building materials as well as visual connections are seen to materialise ideas and ideals of ‘transparency’. This has been given symbolic representation in modern governmental buildings but also in the glass towers of financial or multinational companies. In BLOXHUB, being able to see and contact your potential collaborators directly due to a lack of doors is a slightly different kind of transparency. It is the openness to collaborate by sharing your business ideas or other kinds of knowledges that are not usually

shared between companies and other organisations and remain internal to that organisation. Not sharing and not being 'transparent' is seen as a hindrance to achieving 'co-working' and the hoped-for products of co-working, including new solutions, innovations and economic growth.

The design interventions that cater to 'diverse' working practices are the 'community' space that the hub director mentioned: all the potential places to work that are not the 'traditional' desks. Yet it is important to mention that those 'traditional' desks are exactly what BLOXHUB residents who rent a 'fixed' space in BLOXHUB pay for in the first instance. The other potential workspaces can in this sense be regarded as 'extras'. These other workplaces range from a variety of meeting and seating spaces to ventilated and sound-proof 'telephone boxes' that can be used for private or confidential calls or confidential, temporary work. Other design interventions include customised so-called 'print cafe kitchens', where you can make your coffee and pick up your printed documents (Fig. 28). The idea is that if everyday office activities such as printing, and drinking coffee or eating are clustered together, then the chances of bumping into someone and striking up a conversation are increased, too (Fig. 29). In some of the business and innovation magazines and literature for management practitioners, the 'water cooler' or the 'coffee machine' was identified as one place and way to stimulate conversations, which might lead to 'collaboration' and 'innovation': a translation of business insights into designs. The space planner envisioned creating different areas for different types of work and meeting, as well as adding plants and what has been described as 'playful' elements. Some of these ideas were changed or reduced as the business demands of BLOXHUB became apparent. The Chief Commercial Officer of BLOXHUB, laid out how, for instance, some areas in FMG were 'maximised' to include more desks after the renovation, or how some of the more 'playful' elements such as three meeting boxes with swings were reduced to three meeting boxes but only one with a fixed swing. When we walked around BLOXHUB on the third floor (Fig. 30), he told me that:

> 'Of course, we were able to do some stuff which normally you wouldn't be able to do because this is not a developer case. BLOXHUB is not like a traditional private developer case. Then we would have had so many more desks. All this space is basically just a waste from the perspective of a developer. But because we are a non-profit and this is Realdania, this is part of something much bigger than just maximising the profit of this place. That's why we can kind of afford the luxury of having so much space where nothing happens.'

Figure 28. ‘Print kitchen’ and meeting spaces

Figure 29. Lunch on BLOXHUB’s terrace

I asked him to specify what he meant. ‘Nothing’ points to an assumed evaluation from the figure of ‘the developer’, who is characterised as embodying an ‘economic perspective’. Realdania as a ‘philanthropic’ organisation, by contrast, does not have solely those ‘economic’ considerations but others too, including valuing what is usually called ‘the social’, in this case those relational factors and potential ‘collaborations’. He tried to summarise for me:

> ‘Nothing happens in terms of being able to rent anything out. You are not getting money. A lot of other stuff is happening and that’s actually the key point, and for the other stuff to happen you need to have these areas. Otherwise it’ll just be a packed office where it’s maximised in terms of meeting rooms and desks and small hallways and all that. So that’s actually why there is so much space left over.’

The design in BLOXHUB is meant to increase probabilities that certain connections between people happen. Designed spaces are supposed to facilitate social encounters. But other kinds of facilitation are necessary, too. He argued that a designed environment can only do some part of this work: it is only one aspect that could produce their vision of ‘co-working’:

Figure 30. Third floor of BLOXHUB

> ‘It’s extremely important to have your focus on this triangle: being a common mindset of all the stakeholders taking part in the community. Being part of fantastic physical environment which we have achieved now. But within a facilitated environment! Without the facilitation, I think, it will not work in the long run. Without the interior design, it will not work. Without the common mindset, it will not work. So you have to those three elements in the golden triangle in place.’

These ‘facilitated’ interactions were an important dimension of the work happening in BLOXHUB, as we see in the second part of the chapter now.

II. Connecting

A meeting place

BLOX was to be a new 'meeting place' (*mødested*) in Copenhagen; and BLOXHUB was meant to host some of those meetings and facilitate 'cross-disciplinary collaborations'. In BLOXHUB, meetings could be held in designated 'meeting rooms' (Fig. 31), which had to be reserved. Held behind glass doors, these meetings were felt to be more formal and more private, meaning that the conversations could not be overheard. Additionally, the interior designers had created other kinds of spaces that could be used both as temporary workplaces and as places to hold unscheduled, impromptu meetings that did not have to be booked in advance. The BLOXHUB team highlighted that the different kinds of work environments were one of the key benefits of being part of BLOXHUB, in addition to being part of 'the BLOXHUB community'.

'Meetings' as particular organisational forms have been linked to what historians such as Wilbert van Vree (1999, 2011) have called the 'meetingization of society' since the 18th century: 'meetings' increasingly emerged as the framework for making decisions in Europe and concepts such as 'society' were imagined through such gatherings (see Brown et al. 2017). Building on such studies, anthropologists have recently turned to studying meetings and highlighted, amongst other aspects, 'how relationships "within" these spaces are linked to transformations beyond them' (Brown et al. 2017: 15). Similarly, the range of meetings to take place in BLOX were seen as part of the steps necessary to bring about desired transformations elsewhere. Meetings were the basis for 'cross-disciplinary collaborations' and, with them, for new products and services. At the same time, meetings have become part and parcel, almost taken-for-granted dimensions, of corporate lives in Europe. Some professionals I met even expressed worries that spending too much time in meetings is not productive, because not all meetings lead to outcomes; they wanted BLOXHUB to be 'not just a talking shop'. The second part of this chapter now turns to the production or 'facilitation' of the right kind of meetings, especially through 'match-making' and organising events.

Networking

Whenever the hub director described BLOXHUB to visitors or delegations, he said that it was 'many things: big companies, small companies, organisations and a network.' He specified

Figure 31. Meeting in meeting room

Figure 32. Event with ‘networking’

that it was a ‘network of networks’. Especially since the 1990s, the idea of ‘networks’ (e.g. Castells 1996) has made its ways from the domain of transport into the spaces of business, academia and elsewhere, and the necessity to network, as a professional activity, seems to have grown in importance. The hub director made his comment to emphasise that network organisations – such as specific interest organisations who represent their own members – were also part of BLOXHUB. But this was also how BLOXHUB seemed to conceptualise its members more generally: each member – be they an organisation or individual – was seen to bring with them their own networks. These networks were seen offer additional connections and partnerships that could be forged, or mobilised for someone else. ‘Networking’ was usually scheduled explicitly as an item on the event agenda before and after talks and other events. It was encouraged by leaving enough time for conversations and social interactions to take place. Food and drink were typically provided, either coffee, tea, orange juice, croissants for morning events or wine, champagne and nibbles for events in the afternoon and evening (Fig. 32). Eating and drinking together – commensality – is an important dimension of generating forms of kinship (e.g. Mintz and Du Bois 2002). More generally, ‘hospitality’ is a way of managing relations (Candea and da Col 2012). What was also meant to generate a sense of familiarity, create the ‘BLOXHUB community’, was shared interests and shared spaces. Everyone had to express an interest in ‘sustainable urbanisation’ in order to become a BLOXHUB member. Based on this shared, broad focus, it was also assumed that one might share more specific interests and find it beneficial to talk, always with the potential that collaborations could arise.

The open-space floor plan of BLOXHUB meant that, at least theoretically, you could go up to any member or resident present or working in BLOXHUB and start a conversation with them. This advantage was also something that was pointed out to visitors and potential residents, and to me multiple times. Such prompts also sought to normalise these kinds of ‘spontaneous’ encounters that were seen to be an essential part of ‘networking’ and entrepreneurial sociality in a country like Denmark, where striking up such conversations with strangers was not thought to happen often. A member of the BLOXHUB team highlighted to me, when we were sitting at the long black table, that the person making a coffee ‘just over there’ was the CEO of a multi-million company whom I could approach and talk to if I wanted to. I was assured then that the CEO – like everyone else who was a member – was ‘nice’, approachable, and always interested to hear about new ideas and developments. These kinds of conversations could happen when people were walking around in BLOX, joining

others at a communal table, going to the kitchen to make a coffee, waiting at the printer or when attending events. But this rarely seemed to happen when people were working at their dedicated, permanent desks, unless people already knew each other or were introduced by someone else.

In addition to these impromptu 'networking opportunities', BLOXHUB engaged in more active 'facilitation'– to use the hub director's expression – of such encounters.

Events, events, events

> 'We love every single opportunity for drinks and socializing with the BLOXHUB Community. And here's a special occasion: we have now taken over the last building in *Fæstningens Materialgård* (FMG) and BLOXHUB now consists of almost 10,000m^2. Come celebrate with us and not least get to know the community even better.' (BLOXHUB invitation to FMG housewarming event, September 2018)

Figure 33. 'Housewarming'

The director of BLOXHUB welcomed everyone. He stood on a bench in the middle of a courtyard that is at the centre of a building complex called *Fæstningens Materialgård* (Fig. 33). *Fæstningens Materialgård* means 'the material yard of the fortress' and is the building complex opposite BLOX. Its name reveals an aspect of its former history as a military storage facility. The four buildings, the oldest dating to 1740, have yellow facades with white window frames, green doors, and red tiled roofs. The buildings are arranged around a central courtyard with magnolia trees. This was also where people working in BLOXHUB often had lunch in the warmer months of the year and whenever the weather allowed it. *Fæstningens Materialgård* was now usually referred to as 'FMG' in both Danish and English. FMG was acquired by Realdania in 2007. FMG is directly adjacent to BLOX and for this reason, Realdania included it as part of the broader BLOX masterplan. BLOXHUB as an organisation is located across the two buildings, FMG and BLOX, with BLOXHUB managing the space in FMG and the space on the second and third floor of BLOX. About a hundred people were in the courtyard around the BLOXHUB director. It was early October 2018 and the BLOXHUB director announced that this was 'the fourth opening' in a relatively short time. The first opening was the opening of BLOXHUB in FMG in June 2016. The second opening was in April 2018. That was the moving-in date of a majority of BLOXHUB tenants into BLOXHUB's space on the second and third floors of BLOX. The third opening was the grand opening weekend of BLOX from May 4th to 6th, 2018. At this fourth opening, the BLOXHUB director said that he was 'proud' to welcome everyone. He was proud because much had been achieved already. The last few months had been 'busy' and running and building up BLOXHUB had been, as one BLOXHUB team member put it, a 'steep learning curve' for the steadily growing BLOXHUB team. This had entailed building an organisation from the ground up with the added practical dimension of running a co-working space. This work of establishing a new institution not only involved practical dimensions such as making sure that the Internet or printing worked or that there was enough milk every day in the coffee machine. It also included finding appropriate work routines, standardised formats (e.g. for events) or consistent ways of communicating with tenants and members. During the time that I followed BLOXHUB, the team put in a lot of work and hours to get BLOXHUB up and running. This wasn't an easy task, and a sense of 'pressure' manifested itself in perceived 'stress', short lunch breaks and longer working hours than usual.

BLOXHUB members and residents were invited to the FMG housewarming. The director was speaking in Danish but the event invitation had been circulated in English. BLOXHUB

saw itself as an 'international' organisation and the working languages in BLOXHUB switched between Danish and English. Sometimes it was specified in which language an event would be held but often it depended on who was present or who was speaking. If the event description was circulated only in Danish, it was also usually held in Danish. If an international, visiting guest was speaking or part of a panel, it was certain to be in English. Often event invitations were circulated in both languages. The fact that the 'housewarming' among the BLOXHUB community was held in Danish indicates that it was assumed that most people that formed part of this community could understand Danish to varying degrees, even if some of the non-Danes could not necessarily express themselves in Danish. The Danish notion of *hygge*, conveying cosiness, intimacy, familiarity, and related values should not be overlooked here – although, of course, Danish sociality should not be reduced to *hygge* (cf. Bruun et al. 2011). Speaking Danish certainly establishes more familiarity. Yet speaking English is essential in the world of business. The promotional sales video that was used to introduce BLOXHUB and was, for instance, played to visiting delegations (on which more below) is completely in English. The narrator in the video was even chosen to be a native English speaker, rather than someone who spoke English with a distinct Danish accent. When a new BLOXHUB employee was hired who, whilst being able to understand Danish, was not completely fluent, the BLOXHUB team meetings were held entirely in English whenever that employee was present.

The BLOXHUB director welcomed everyone and used the opportunity to explain why everyone was gathered there. Now, he said, BLOXHUB is fully operational. This, he said, was the 'housewarming' of FMG and the opening of 'BLOXHUB campus'. 'Campus' is often the name now for the co-working space in FMG for 'start-up companies'.[4] The name 'campus' here also alluded to the aspirations of BLOXHUB to 'bridge research and practice'.

Before BLOX was opened, the BLOXHUB team and other companies and organisations used FMG as a 'testbed' for how a 'co-working space' might work. When I first started doing fieldwork with BLOXHUB, in July 2017, the BLOXHUB team was situated on the first floor of one of the yellow buildings of FMG, just above the event space.[5] The doors to the floors

[4] See Fisher and Downey (2006) for anthropological reflections on 'the new economy', 'entrepreneurs' and 'start-ups'.

[5] The BLOXHUB team floor in FMG was shared with other companies and organisations (who were BLOXHUB members) such as the smart city and innovation unit within the municipality of Copenhagen, Copenhagen Solutions Lab. Other organisations and companies in the FMG buildings at that time included the Danish Design Centre, Index: Design to Improve Life, the Danish Fashion Institute, Copenhagen Fashion Week, the Danish Architecture Centre, Hitachi, Kraks Fond, C40 Cities, LinKS, and IFHP.

in FMG could also be locked. This contrasted with the available space in BLOX when the building opened a couple of months later: a vast open-floor office space on the second and third floor with very few doors and with transparent glass on the inside of the building and on its facade.[6] The atmosphere in those workspace areas of FMG was typically quite quiet. This behaviour created an atmosphere that was described by one BLOXHUB resident in FMG as a 'typical work environment'. People went outside or into the hallway to make or take calls. 'Meetings' took place in the meeting rooms. Longer conversations were typically held there or in the kitchen area, across the hallway or over lunch in the canteen. Once BLOX opened, many of the companies who were in FMG moved their offices into BLOXHUB's spaces in BLOX. After those companies moved, the spaces in FMG were renovated. This was done so that those spaces could then be rented out again to other companies. In this renovation process, some other changes happened. The BLOXHUB director commented that the meeting space that was previously called *eventrummet* (event space) is now called 'Los Angeles'. The crowd laughed briefly at this transformation: all of the meeting rooms across the BLOXHUB spaces, that is in FMG and in BLOX, were now named after cities. He also announced some other things, including that they would select a 'BLOXHUBer of the month'. This award would go to someone who had been particularly active in the BLOXHUB 'community' and would be announced at the following Thursday bar (*Torsdagsbar*), which is the regular drinks event for BLOXHUB residents. He summarised the programme for the rest of the evening and reassured the assembled crowd that there would be food and drink shortly. He ended his short speech by joking that there might be a fifth opening 'next year'. For the rest of the evening, people were chatting to each other over wine and food, with some organised entertainment and music.

Events such as this form an important aspect of the work of BLOXHUB, in addition to running the co-working space practically. Regular and occasional events aim to disturb the rhythm of everyday office life and engineer situations for discussions and encounters. In addition to talks and events, regular social events, such as the Thursday bar once a month, or occasional ones, such as impromptu drink receptions after presentations where residents who were nearby in the Members' Lounge were invited to join in, offered opportunities to extend one's 'network'. Occasional events are also organised to respond to the demands of

[6] Some companies were allowed to install some doors 'temporarily' in order to entice them to move their office space into BLOXHUB. The BLOXHUB team assumed that these companies would eventually ask to have their doors removed again after spending enough time in the BLOXHUB environment.

the BLOXHUB community. After seeing a Facebook disagreement online between several architects about the future direction of student housing in Copenhagen, the BLOXHUB events manager contacted the architects, who were BLOXHUB members. Within two weeks, she organised a debate in the old premises of DAC with the key participants. The events manager highlighted how that offered an opportunity to rapidly respond to, and showcase, some of the current and changing concerns of BLOXHUB members.

The events drew attention to BLOXHUB as a centre of expertise for 'sustainable urbanisation' and its manifold themes. It also generated an opportunity and potential value for members by promoting themselves and their work. An organisation such as BLOXHUB had to be busy, and seen to be busy with a full agenda of events and important speakers. After a couple of months in BLOXHUB, I had already attended dozens of events at BLOXHUB – on anything from the future of Copenhagen, various aspects of urban development, and export strategies, to the role of big data and emerging technologies for the built environment. The range of topics seemed to serve as attractors to bring people to BLOXHUB and to define it at as a locus of knowledge and debate for these agendas. However, not all members and residents, could socialise at all the occasions that BLOXHUB offered. There were other commitments, such as family or other activities and events. People are 'busy' in other ways, too. This was recognised and the number of events and opportunities to socialise were, if not maximised, then at least multiplied. This was especially true in the weeks between the official move-in date for BLOXHUB residents in April 2018 and until shortly after the opening of BLOX in May 2018: a *Torsdagsbar*, a Thursday bar, was held every week, where the new residents and members could meet each other over drinks. Additionally, other introductory events and other occasions to socialise were organised.[7]

Events aimed to attract a range of people to BLOXHUB: multinational companies in the same space as research organisations, including PhD students and post-docs, start-ups and representatives of smaller firms. These could then interact with each other, visitors and invited speakers. It was not an exception that you could find a government minister, ambassador, mayor, architects, the CEO of Realdania or another influential actor in the world of Danish architecture and design at a BLOXHUB event, either as a speaker or sometimes just present in the audience. These kinds of encounters – be they at events held by BLOXHUB or chance

[7] Yet, of course, not all of these opportunities were actively taken up. Some of the introductory events – explanations by the BLOXHUB team on e.g. how to set up the printer or how to book meeting rooms – were cancelled due to either poor attendance or because too many introductions or events were scheduled. Instead, those who needed help eventually sought out individual tutorials from the BLOXHUB team once they ran into difficulties.

meetings in BLOXHUB – were one dimension of the sociality that BLOXHUB attempted to foster, and which BLOXHUB called 'community'.

But BLOXHUB is not the only organisation in BLOX that carries out this kind of connecting work. One does not need to look far for others. The research team within OMA, the architectural firm that designed BLOX, carried out a research study in 2006 for Realdania to understand the work of the Danish Architecture Centre. In their report, they likened the Danish Architecture Centre to an octopus, and literally depicted it as such: as an entity with figurative tentacles that reached into many different areas of the architecture, design and built environment disciplines, professions and activities. In this report, the Danish Architecture Centre was shown to be connecting but also reaching across a range of other institutions, companies and institutions. Next to this image of the octopus, they wrote that the Danish Architecture Centre's 'network activities serve to connect many parts of Danish civic, cultural and commercial life.' (AMO 2006) The image of the octopus serves as another visualisation for the notion of the 'network' that the Danish Architecture Centre was said to constitute. This study was done in 2006. Ten years later, BLOXHUB was founded. Both the Danish Architecture Centre and BLOXHUB are funded by Realdania, and by 2018 both were located in BLOX. BLOXHUB had not been described as an octopus but quickly established itself as a second octopus in 'the house' (*huset*) that is BLOX through its own 'networking' practices.[8]

Match-making

To generate even more productive meetings, it was emphasised that BLOXHUB offered a special service of introducing and connecting potential collaborators. This was called 'match-making' by the BLOXHUB team (Fig. 34). The hub director also described BLOXHUB as a 'professional dating bureau' for this reason. The term 'match-making' was borrowed from

[8] Although such relations were said to be identified to be 'synergetic' by the BLOXHUB employees, there were pressures. The main distinguishing factor between the Danish Architecture Centre and BLOXHUB was said to be that BLOXHUB was an organisation that was focused on 'business-to-business' interactions, whereas the Danish Architecture Centre had a strong business-to-consumers' aspect. In practice, the distinction was not as clear-cut: in 2017/2018, the Danish Architecture Centre also still worked with companies. Many BLOXHUB tenants were also surprised that they could not go down to the exhibition whenever they wanted: their key fob did not open these doors. Access to the Danish Architecture Centre and its exhibitions (beyond the design shop) required a ticket for adults that cost 110 DKK (around £13). This was, they were told, because after its move to BLOX, the Danish Architecture Centre had been under financial pressure and to boost visitor numbers and ticket sales to live up to being a 'architectural centre of the 21st century' financnially, too. For this reason, doors were locked and BLOXHUB tenants – like other visitors – had to enter via the main entrance and were advised, until free access was negotiated, to buy an annual card, that would give them access to the Danish Architecture Centre for 390 DKK (around £45) per year.

Figure 34. 'Match' workshop

the world of relationships and dating.[9] In the world of contemporary mobile technologies, the term 'matching' was popularised through dating applications such as Tinder (e.g. David and Cambre 2016). An app is a 'platform' accessible via mobile phones and in the case of Tinder, people sign up to the app and create a profile. An algorithm chooses a selection of people that one can either pick or dismiss, a potential match, by swiping right or left respectively on a mobile phone application. If two people choose each other by swiping right, a 'match' happens. After a 'match', they can write to each other directly via the application. If the people so desire, they can then also arrange to meet up in person for a 'date'.

Essential to the BLOXHUB 'matching' process were the opportunities for introductions that BLOXHUB created – either directly by making personal introductions or indirectly by organising events and publicising members to people, organisations and companies who shared similar or related interests. To make this work possible, the BLOXHUB team, and especially the hub director, needed to have an overview of current plans and future strategies

[9] Practices of matching have also been analysed anthropologically in the context of matching organ transplant donors and receivers. Here matching enacts ideas around kinship and legal relations as understood through bureaucratic practices such as consent forms and related paperwork (Jacob 2012).

of the BLOXHUB members.

BLOXHUB acted as a professional match-maker – the Roman god Cupid was evoked multiple times to take the pairing analogy further. This 'matching' might happen informally in the co-working spaces through quick introductions. These introductions involved an exchange of email addresses, business cards and contact details that could be followed up by more meetings. 'Matching' here was based on initial assessments by the BLOXHUB team that two or more organisations could benefit from talking to each other. If the matches met, then these assessments were either affirmed or not by the subsequent activities of those who had been 'matched': success of a kind was exemplified by their own organisation of future meetings and perhaps other collaborations. If these conversations were not deemed useful by either party, then any matching process would stop for the time being.

In addition to these matching processes, more formalised events were held in order to provide a separate environment for arranged and planned encounters. These events were called 'Match! Co-Create' events. As formal events, these events are organised by a 'built environment' consultancy on behalf of BLOXHUB and they took place about once a month. Attendees and potential matches were selected and invited by the consultancy but one could also apply to attend by expressing an interest to BLOXHUB, when the workshop was announced. A theme was chosen – often based on the interests of a main organisation that had proposed the session – and this theme was then generalised or made less specific in order to transcend individual interests. For instance, in October 2017, BLOXHUB hosted a series of 'Match! Co-Create' sessions which were followed by two workshops, two and four weeks later. The topic was 'What is the future market for building material producers?'. This Match session was initiated by *Dansk Byggeindustri,* the interest organisation for the Danish building industry, and was intended for companies who saw themselves working in this sector, now or in the future. One focus was on discussing how the 'traditional value chain' could be 'disrupted' and what 'new business models' could look like (cf. Chapter 5).

BLOXHUB aimed also to match businesses and research organisations, to 'bridge practice and research'. Such encounters were envisaged as productive since 'research' was increasingly demanded in architectural and design practice (cf. Chapter 4). BLOXHUB saw itself as a place of and for research, which was perhaps also why my own research was welcomed there. The organisation was aware that it was itself a research object, in addition to being a place where research ought to be carried out. When I began my fieldwork, there was already one other PhD student in BLOXHUB and the Danish Architecture Centre, who

was funded by Realdania and was doing a PhD at Copenhagen Business School in the field of Organisation Studies. He used BLOXHUB and especially the 'Match! Co-Create' events that BLOXHUB organised as a way to interrogate 'social networks' present at those events and their role in producing 'innovations' (see Feddersen 2020). In order to connect, to match, researchers and business, BLOXHUB initiated what it called a 'Science Forum' that consisted of regular events and a network of PhD students, postdoctoral researchers and researchers who met regularly over talks and later in the year, informally over drinks. Later, BLOXHUB launched a call for a 'research cluster' on 'smart buildings and smart cities', funded by Realdania and the Danish Government's Innovation Fund. They recruited nine researchers – PhD students and postdoctoral researchers – who formed part of the Science Forum. These so-called 'industrial researchers' (*erhvervsforskere*) had an institutional affiliation with a university and a company. Prior to this process, BLOXHUB also established links between potential researchers and researchers who had contacted BLOXHUB looking for possible collaboration partners. Their research projects were typically meant to contribute directly in one way or another to the productive output of the company. These types of collaborations were to provide one possible answer to how knowledge could be produced in architectural and design settings. Disciplines that were funded ranged from architects to engineers, designers and even an anthropologist and one possible form of what 'research' in architectural practice could look like. But different understandings of 'research' were at play in universities and in corporate workplaces, manifest in differing time pressures and expectations placed upon the industrial researchers.[10]

For BLOXHUB, one of the unresolved organisational questions was how to track the outcomes of these events and the explicit match-making efforts. So far, they had relied on hearing back from members or participants directly; but it was felt that more needed to be done to establish what had been achieved already and what new ideas, products or services existed as a result of the relations that BLOXHUB enabled.

As we see in the next chapter now, the production of 'solutions' has become an important dimension of, an important summary metaphor for, professional work in architecture and related built environment professions.

[10] Being able to navigate these conflicting demands seemed to constitute, at least partly, what it meant to be an 'industrial researcher'.

Figure 35. *Løsninger* (‘solutions’) exhibition poster at KADK

Chapter 3 Solutions in Copenhagen

In this chapter, we examine the production of 'solutions' that the architectural profession and the wider building industry in Denmark are asked to – or claim to – generate. We have seen in previous chapters that BLOX is meant to play an important part in this process. Amongst other things, we will engage with the work of one resident in BLOX, an organisation called Copenhagen Solutions Lab, and one BLOXHUB member, the architecture school in Copenhagen.

First, we turn briefly to what has been called the Danish model, the image that is being produced for architecture in Denmark. The production and marketing of the 'solutions' does not only draw on the legacy and reputation of Danish design but also on the branded image of Copenhagen, reified as a certain kind of city that has been constructed over the past decades. Copenhagen is said to be characterised by desirable urban qualities – from high quality of life, smart urban services to sustainability. Those in the business of the built environment mobilise this image of Copenhagen and seek to sell products and services associated with those qualities. In the context of an anthropology of branding, marketing and selling (e.g. Applbaum 2004; Cross and Heslop 2019; Foster 2007, 2008, 2013; Mazzarella 2003a, 2003b), I consider some of 'the styles, strategies and techniques with which people attempt to make themselves persuasive' (Cross and Heslop 2019: 375).

In this chapter, we also encounter a form of techno-optimism in action, some of the hope that is placed on new technologies: 'global challenges' are turned into 'opportunities' through solutions (Fig. 35). This also means that, with the help of new technologies, some of the eco-pessimism surrounding the state of the planet, which we already encountered in Chapter 1, is addressed. What is produced and tested here are also ideas about possible futures. 'Let's co-create our urban future', as BLOXHUB phrased it in their publications and website.

Much of the language and imagery – solutions, labs – is borrowed from the natural sciences (cf. Picon and Ponte 2003). Due to their crafting of apparently 'hard facts' (Latour and Woolgar 1979) and the perception of numbers and quantitative knowledge as objective (Porter 1995), the sciences are often seen as more persuasive, more real: similar to ideas surrounding 'the economic' (cf. McDonald 2012). The places where some of these solutions, future technologies, were tested in Copenhagen were referred to as urban 'labs', ranging in area size from streets in central Copenhagen (the 'StreetLab' managed by Copenhagen Solutions

Lab, a unit within Copenhagen municipality), to suburban industrial parks to a whole, new city district. Rather than analysing these urban labs as novel modes of urban governance (e.g. Evans et al. 2016, Karvonen and van Heur 2014), this chapter examines what it is that they are producing, as solutions. As the project manager of one of the labs said, they were both testing new technologies in what they saw as their field, 'the city', but they were also importantly 'show rooms'. Here, visiting delegations and potential clients could see those solutions in action. In all the labs examined here, new relations were tested alongside new technologies: municipalities and research organisations collaborating with companies to find 'local solutions' to 'global challenges' that could be 'scaled' to other places.

The developments that took place in the architecture school highlight in particular how the architectural profession was asked to adapt to specific 'political' and 'economic' demands. The need to come up with new ideas is something that has been said to characterise the architectural profession more generally. For instance, the anthropologist Tom Yarrow wrote in his ethnography *Architects: Portrait of a Practice* that '[a]rchitects share a broader modern obsession with novelty, arguably in a particularly acute form.' (Yarrow 2019: 240) In this chapter, we start to see some of the pressures that contribute to this professional pursuit of novelty and that are placed on those working in the design professions. The science and technologies scholar and architectural theorist Albena Yaneva has referred to this broadly as the 'challenges of architectural practice as it is torn between market and creativity' (Yaneva 2018a: 23). In the next chapters, we will encounter these efforts and pressures to demonstrate 'impact' in more detail.

I. Made in Denmark

What if (Danish) architecture could change the world?

'What if architecture could change the world?' I came across this sentence, written in English, for the first time in the old premises of the Danish Architecture Centre in Copenhagen during the summer of 2017, before their move into the BLOX building. They had occupied a renovated warehouse on the harbourfront in Copenhagen, not far from the new location of BLOX. Here employees of the Danish Architecture Centre wore T-shirts with this statement printed on them. You could also buy the T-shirt from the shop downstairs.

A couple of months later, I saw the sentence and the T-shirt again: at a Copenhagen trade fair for the built environment called 'Building Green'. This time it was the then city architect of Copenhagen, Tina Saaby, who wore the T-shirt. The municipality of Copenhagen employs a city architect (*stadsarkitekt*), who is appointed as a consultant to the municipality on architectural questions and is the person who represents the city on architectural issues. The city architect wore the T-shirt with the question during a conference presentation she was giving on stage, in Danish, to an audience of mainly Danish and Scandinavian professionals working in the building sector. In the presentation, she demanded better cooperation and knowledge-sharing between all professionals working in the building industry: what was needed to build the future, she urged, was a 'holistic' approach to create places 'for people'.

The approach to architecture and urbanism that the city architect proposed – 'people-centred', 'holistic', 'sustainable' – had been the reason I had come to Denmark. Danish architecture has been branded and promoted in a particular way inside and outside Denmark: you come across this people-centred approach to architecture in books, magazine, talks, posters and exhibitions (Fig. 36) but most importantly, you are meant to see and experience it in person when you visit Denmark and Copenhagen: a general feeling, an 'affect' (cf. Navaro-Yashin 2009), that many residents and visitors seem to sense when walking around in Copenhagen. But at least for many architectural practitioners, recognising and knowing what such an approach entails in more detail and being able to reproduce its dimensions involves a process of learning to be affected (Latour 2004a; McDonald 2014, 2018a): an engagement with existing architectures, relevant technologies, other professionals, and with such representations of Danish architecture, representations of Copenhagen articulated at professional events and encountered elsewhere, including exhibitions at the Danish

Figure 36. 'Made in Denmark' exhibition panel in BLOX

Figure 37. Gehl in BLOX: Copenhagen as 'world's most livable?' 'Actually YES'

Architecture Centre. As the presentation of the city architect made clear, it was easier to claim to practise such an approach than to put it into practice; it was an on-going project rather than a finished product. Nonetheless, such an apparent consensus around 'architectural humanism' (Jensen and Weiss 2016) among professionals in Denmark was promoted and exported; but many events that took place in Copenhagen were elaborations on and debates over the contents of such an approach and what this looked like in practice (Fig. 37).

Such proclamations and claims about 'Danish architecture' were not isolated statements but were materialised or articulated regularly: at events and presentations but also in newspapers, magazines, books and exhibitions. This is also because, in architectural contexts, there is a tendency to gather and coordinate contemporary architectural developments with categories such as 'trends' or national characteristics, such as 'Danish design' or 'Danish architecture'. Such categories are established through such work, which also flattens differences between the architects, buildings and designs that are thereby grouped together. At the same time, emerging, alternative histories of Scandinavian and Danish design (such as Fallan 2012, Fallan and Lees-Maffei 2016, Teilmann-Lock 2016) have also commented on the mythical portrayals of conventional design histories and certain designers, amounting to heroic or hagiographic accounts (cf. Fallan et al. 2012). Writing about the construction of 'Danish design' and its connection to a process of nation-building, the design historian Stina Teilmann-Lock (2016) comments that

> 'the first myth of "Danish Design" – "Danish Design" as "Made in Denmark" – had made its contribution to Danish national identity. […] Today, "Danish Design" has changed its denotation. It is no longer an endorsement of the idea of cultural origins. Rather, the designation has become a "brand", a sign with a somewhat contingent relationship to the design to which it refers.' (ibid.: 165)

In other words, aided by intellectual property laws that protect ideas, the manufacturing of 'Danish design' goods (such as furniture) can happen anywhere in the world as long as the intellectual conception of design is somehow connected to Denmark. But in relation to Danish architecture, we will see in this chapter how the example of Copenhagen – and being able to visit architecture and designs in Copenhagen – still constitutes an important dimension.

Displaying solutions

Anthropologists have examined the production of representations in relation to the anthropology of art and media (e.g. Ginsburg et al. 2002, Boyer 2012, Clifford 1988,

Morphy and Perkins 2006, Spitulnik 1993, Stasch 2014); anthropologists have, of course, also examined their own forms of representing (especially after Clifford and Marcus 1986). Sharon Macdonald (1998) wrote long ago about the 'politics of display' in the context of science exhibitions and that 'displays are never, and have never been, just representations of uncontestable facts. They always involve the culturally, socially and politically saturated business of negotiation and value-judgment; and they always have cultural, social and political implications.' (ibid.: 1) This does not mean that some displays do not attempt to eclipse some of these processes. On the contrary, certain forms of representing are mobilised to achieve this. The previous chapter discussed how BLOX was exhibited in the Danish pavilion during the Architecture Biennale in Venice from May to November 2018: one room was dedicated solely to BLOX. A model of BLOX as well as video interviews with the key people behind BLOX filled one side of the room. On the other side, visitors were presented with tear-away sheets full of information as well as a large diagram printed onto one of the walls (Fig. 38). The directional arrows conveyed a simple input and output relation, as the accompanying text explained. A simple arrow line with the text 'complex challenges' led into a circle. Another arrow exited the circle again, leaving with and pointing to the text 'sustainable solutions'. The circle itself contained the key elements that seemed to make this transformation possible: 'institutions', 'people', 'companies' and 'new knowledge' together producing 'innovation'. The tear-away sheets explained that this diagram represented the 'Danish model for collaborative innovation' and provided more information. It stated that 'Denmark has a long tradition of public-private-civic partnerships and of collaboration across disciplines within the built environment.' Building on this, the BLOX building was presented as 'an invitation to everyone to engage in the development of new sustainable solutions'. This seemingly simple diagram condensed what architecture in Denmark was meant to be about: 'the Danish model'.

The notion of solutions, *løsninger* in Danish, was evoked and talked about not only in Venice but also back in Denmark, in BLOX and elsewhere in Copenhagen. The term was employed so frequently by professionals working in the building industry that its usage puzzled me. The way that solutions were talked about were both precise and concrete as well as indeterminate and potentially open-ended; as if almost anything could be a solution as long as it had an intended, positive outcome, an 'impact'. But I was also told that there had to be some kind of 'need' that the solution was responding to, for instance, needs that people or businesses have, or needs felt by 'the city'. Typically, the solutions were seen to be specific

Figure 38. Solutions diagram

technologies, products, services, inventions, ideas but could also be policies and much more, such as a general call for urgent action ('solutions are needed'). These claims were attached to ideas about value: this was not only 'economic' value – although 'business' was crucially important – but also other forms of values; in the next chapters, we will see how architects need to demonstrate 'impact' and add value. It mattered, too, where and by whom these solutions were seemingly produced.

Design solutions made in Denmark have become a symbol for quality in the worlds of architecture, design and urbanism. This can partly be explained with reference to the history of architecture, design and urbanism in Denmark (cf. Keiding et al. 2007). Since the mid-20th century, Danish design has often regarded as an ally of 'social democratic' ideals and the historical developments that have been summarised as the Danish 'welfare state' (more on this in Chapter 5); Danish designers' high-quality, well-designed everyday items for a reasonable price entered the homes and institutions of many Danes. This idealism arguably lives on in transformed versions: today, form follows impact. A recent architectural publication, for instance, extends this towards Nordic architects as its title, 'Nordic Architects: Global

Impacts' (Weiss 2017), summarises.

If 'impact' is the contemporary equivalent of modernist 'function', then 'form' is still usually assumed to be a beautifully designed, simple yet elegant aesthetics that extends the heritage of Danish modernism. In a history published on the occasion of the 250th anniversary of the architectural school, the Royal Danish Academy of Fine Arts remarked that 'one of Danish design's special features is an inner cohesion between content and expression.' (Dirckinck-Holmfeld 2007: 197) 'Danish design' has transformed (perhaps, redeemed) its modernisms through such acts of balancing, of achieving 'inner cohesion'. Representatives of Danish architecture became famous internationally, with names such as Arne Jacobsen or, later, Jørn Utzon, who spread the message. Today, this success continues, especially with names such as BIG and Gehl but also with the work of 3XN, Henning Larsen, Dorte Mandrup, COBE, NORD or EFFEKT, to name just a few firms. Through the collective efforts of many professionals working in the building industry in Denmark, contemporary architecture and urbanism in Denmark has become known for being 'liveable' and 'sustainable'.

This perception of 'Danish design' has also been constituted in contrast to the failures of modernisms elsewhere – some of which have been described as 'solutionist' (cf. Murphy 2012 for a critique of British and American twentieth century architecture as solutionist, embodied especially by Buckminster Fuller). But Danish 'solutions' are not the 'solutionism' apparently found elsewhere. Highlighted in such critical accounts of architectural 'solutionism' is what is described as an uncritical stance and a naive belief in the power of 'technology' and a denial of 'politics'. Similarly, critics of contemporary 'technological solutionism' (Morozov 2013) condemn technology companies for promoting too simplistic, and what they see as ultimately harmful, technological solutions. Such critics trace back this reductionist version of 'solutionism' to architecture and urban planning.[1] Much modernist architecture has been criticised inside and outside architecture for exactly this tendency: to unleash unexpected, negative consequences through large-scale interventions that undermine modernism's lofty ambitions to raise the quality of life for city dwellers. Thus, whereas modernist architectures

[1] Cf. 'Recasting all complex social situations either as neatly defined problems with definite, computable solutions or as transparent and self-evident processes that can be easily optimized – if only the right algorithms are in place! – this quest is likely to have unexpected consequences that could eventually cause more damage than the problems they seek to address. I call the ideology that legitimizes and sanctions such aspirations "solutionism." I borrow this unabashedly pejorative term from the world of architecture and urban planning, where it has come to refer to an unhealthy preoccupation with sexy, monumental, and narrow-minded solutions – the kind of stuff that wows audiences at TED Conferences – to problems that are extremely complex, fluid, and contentious.' (Morozov 2013: 5-6)

elsewhere have been criticised as decontextualised impositions, this cannot be said, it seems, of modernist 'Danish design'. On the contrary, its legacy lives on.

The ambition to 'solve' issues through (broadly conceived) design interventions, and thereby to create better cities, 'a better Copenhagen', or to increase 'liveability' is both a pragmatic task as well as a pressing concern for many of the built environment professionals and designers I met. 'Our incentive is to solve problems that we can't solve today', as one urban planner working for an organisation that is a BLOXHUB resident said to me when he explained the work that he did. Similarly, to identify 'design to improve life' is the mission and motto of another design organisation with their offices in BLOX. In Copenhagen, these ambitions to come up with proposals to improve life in cities are shared by a diverse set of people – not just architects but also designers, bureaucrats, specialists in tech and many other professions working in 'private' companies and 'public' institutions. The desire to find solutions and thereby to improve living conditions for people in cities in Denmark is a profession, as well as a business project. In her ethnographic study of the 'will to improve', the anthropologist Tania Murray Li (2007) writes that 'the rush to identify hidden motives of profit or domination narrows analysis unnecessarily, making much of what happens in the name of improvement obscure.' (ibid.: 9) Similarly, any analysis that tried to 'reveal' hidden motives would do injustice to the people I met, their desire to help and create better cities and environments appeared undoubtedly genuine. It would also completely miss the point: the motive of profit is not hidden, rather it is openly spoken about as a necessary vehicle to realise and 'scale' solutions. There needed to be a 'business case', otherwise the solutions would fail.

Looking to Copenhagen

What was shared amongst the designers, planners and professionals I met in Copenhagen who were looking for 'solutions', was the ambition to find ways to improve the condition and state of contemporary cities, and even the world in general. Expectations and ambitions were certainly high, but for them the example of Copenhagen and its urban development served as an example; it constituted a confirmation that this was a feasible project. Copenhagen became the model where those desirable urban qualities that came to be summarised as 'livability' could be seen and experienced. But this was not to suggest that all cities should become clones of Copenhagen. Rather, it was felt that other cities elsewhere could 'learn' something from Copenhagen, and benefit from a 'solution' inspired by or developed with Danish partners and their help and expertise.

To give just an example, ‘getting to Denmark’ was an idea I heard referenced in Copenhagen by professionals. It was the American political theorist Francis Fukuyama (2011) who, in his work on how to build stable and successful political institutions, took up the notion of ‘getting to Denmark’ .[2] Fukuyama writes that for ‘people in developed countries, “Denmark” is a mythical place that is known to have good political and economic institutions: it is stable, democratic, peaceful, prosperous, inclusive and has extremely low levels of political corruption.’ (ibid.:14) In the context of BLOX, I would argue that ‘looking to Denmark’ or ‘looking to Copenhagen’ might be a more appropriate expression. In rankings and other measures of (positive) urban qualities, ‘Copenhagen’ was imagined as offering a very high standard of living with well-paid jobs, well-functioning infrastructures, low rates of crime, and a ‘sustainable’ and ‘healthy’ lifestyle focused on cycling as its primary mode of transport.

In this context, ‘Copenhagen’ and ‘Denmark’ were regarded as symbolic places that functioned as they should and that could offer lessons for other places. These versions were sanitised to the extent that contemporary issues that many people in Copenhagen and Denmark faced were excluded from the picture: for instance, the increasing lack of affordable housing options in Copenhagen or the increasingly hostile political climate and decisions concerning people who are seen as ‘foreigners’ and ‘migrants’. There are multiple Copenhagens (see Simpson et al. 2018 for an architectural approach to this point).

For the planners in the city municipality and designers and architects elsewhere in the city, Copenhagen itself is an ‘object’. There was a ‘Copenhagen’ – made visible through, for instance, plans – that needed to be worked upon and improved, and that was, as yet, far from the perfect model that it might have reached as a symbol. Having said that, Copenhagen might also be deemed to have become too comfortable, safe and ‘liveable’ to the extent that the planners in their vision for 2025, entitled ‘Co-Create Copenhagen’, made it their explicit aim to turn Copenhagen again into a city ‘with an edge’ (City of Copenhagen 2015).

The failure narrative of certain cities and types of urban planning – especially modernist planning and post-Soviet cities (Murawksi 2018, cf. Humphrey 2005) – goes hand in hand with a narrative that portrays and constitutes other cities such as those in Scandinavian or Northern European cities as ‘successes’ and contemporary models to emulate. This does

[2] Fukuyama (2014: 487) notes that ‘getting to Denmark’ was the original title of a paper by two social scientists at the World Bank, subsequently entitled ‘Solutions When the Solution Is the Problem: Arraying the Disarray in Development’ (Pritchett and Woolcock 2002).

not mean that these cities have always been successes. Rather, part of this narrative of achievement is the point that Copenhagen municipality, for instance, almost failed, that it was almost bankrupt in the early 1990s, but then turned around and took steps ('lessons') which can be copied. This narrative of Scandinavian triumph has led to anthropologists like Henrietta Moore to assert that 'Scandinavia is not the model for global prosperity we should all pursue' (Moore 2014). Whilst this may well be the case, it points to the impact that Danish and Scandinavian models of urban life are imagined to have, or imagined to have already had, in other places. It is then unsurprising that opportunity-minded people in Denmark – like many of the professionals I encountered in BLOX – and elsewhere in Scandinavia have seized on this opportunity and are capitalising on this image. Whether Copenhagen *should* be a model is a distinctly different question. The hundreds, if not thousands of delegations that visit Copenhagen every year as part of business and other kinds of organised trips, for example, seem to suggest that, in practice, Copenhagen has long become a model.

Concretising solutions

The architecture and design school in Copenhagen was completely deserted when I first visited it.[3] It was during the summer holidays and the only building that was open hosted the exhibition space. It was visibly promoted with large banners and posters, advertising the 2017 degree show inside. The show was called *løsninger* ('solutions') (Fig. 39). I found out inside the exhibition that the project of every graduating student had to respond to one or more of the categories of the UN Sustainable Development Goals (SDGs); this was the first year that this had been the case. The SDGs had been launched after the eight UN Millennium Development Goals had failed to achieve many of their ambitions by the end of 2015.[4] A couple of weeks later, I attended the welcome programme of the school where the director of the school reflected on this decision to orientate the school towards these objectives:

> 'Last year we decided to dedicate three years to work with the United Nation's 17 sustainable development goals: 17 goals that paint another picture of the world; a better future for the planet and the people who live on it. Our work with the 17 sustainable development goals is not an ideological or philanthropic project – we

[3] It was usually referred to as KADK during fieldwork, but the school has since changed its identity and calls itself *Det Kongelige Akademi* (literally 'The Royal Academy' but the official English name is: 'Royal Danish Academy').
[4] See UN (2021) for the 'official' history of the SDGs. Cf. Mosse (2013), Venkatesan and Yarrow (2012) for recent anthropological engagements with 'development'.

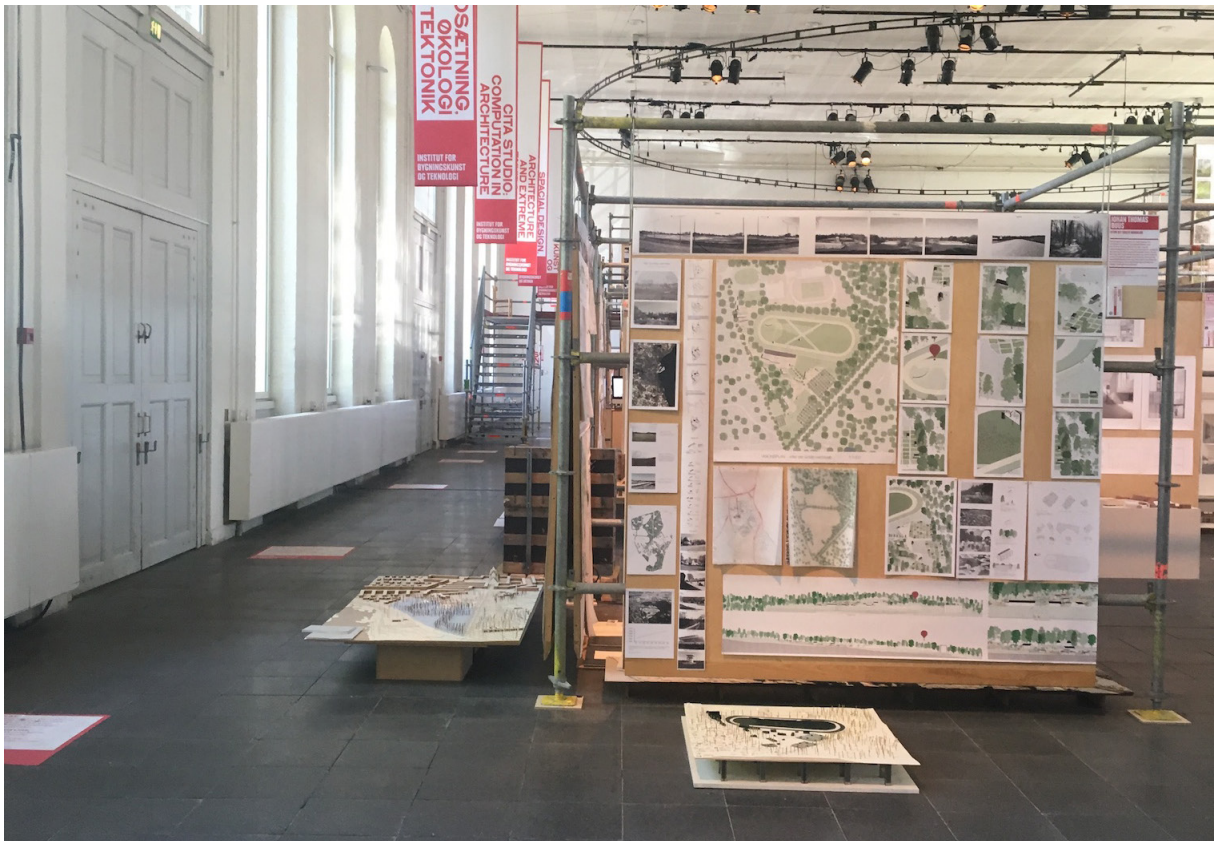

Figure 39. KADK degree show

> expect first of all that staff and students are critical of the goals – and also we have a sound expectation that tomorrow's labour market will demand skills, knowledge and solutions that support the goals, and we believe that they will become a part of tomorrow's economic yardstick.'

The director evoked 'the market' as an entity that articulates demands but also wields the power to safeguard a 'future' for students, 'society' and ultimately, the planet. This speech reminded me of a panel discussion on why the Sustainable Development Goals 'make good business sense', which had been held at BLOXHUB. In the case of the architectural school, the goals made business sense, too. They made sense for students who would be looking for employment. With the SDGs, they could show that they and their final projects addressed relevant 'problems', illustrating usefulness for any future employer. I was later told by an architect working for the school that this decision was a 'political' one insofar architectural education had been under (financial) pressure from consecutive Danish governments. The Danish government questioned the 'competitiveness' of the school in terms of its research output and a high unemployment rate among its graduates. Because of this, the Danish

government decided, already in 2011, that *Kunstakademiets Arkitektskole* (the 'Academy of Fine Arts, School of Architecture') was to merge with the 'Schools of Design and the School of Conservation' to become a combined architecture and design school that was to be abbreviated as KADK, which was short for *Det Kongelige Danske Kunstakademis Skoler for Arkitektur, Design og Konservering* ('The Royal Danish Academy of Fine Arts Schools of Architecture, Design and Conservation'). At the same time, the ministerial responsibility for the school switched from the Ministry of Culture (*Kulturministeriet*) to the Ministry of Higher Education and Science (*Uddannelses- og Forskningsministeriet*)[5]. This meant, I was told, that new demands were placed on the school to become more research-focused and more 'scientific', in line with other institutions of higher education in Denmark that are under the supervision of the Ministry of Higher Education and Science. This decision went hand in hand with and resulted in progressive budget cuts, culminating in mass redundancies in 2016 (FAOD 2016). 'A new focus' was subsequently announced by the school to 'ensure that the architects and designers of tomorrow will be better equipped to meet the demand for technological and vocational skills, and that even during their time at college they will establish professional networks to help them find jobs more quickly.' (KADK 2016a) Despite these developments, the influence of Copenhagen's architecture school on architecture in Denmark cannot be underestimated.[6] Most architects working in Denmark probably had been educated in some way at the architectural school.

Practitioners both inside and outside of the architectural school in Copenhagen commented to me that this control had established a specific approach to doing architecture but that this was rapidly changing now. At one extreme, this had meant a focus on drawing and traditional architectural methods; one architect who was employed by the school as a teacher commented on this: 'most of the time drawing is seen as the right way of resolving design challenges - which is not scientific'. The school's origins as an academy of fine arts (*kunstakademi)* were argued to underpin this approach. The administration of the school had attempted to change this, also as a result of the need to restructure. The then most recent strategy stressed that the 'DNA' of the school was at the intersection of 'science, art, and practice' (*videnskab*, *kunst*, *praksis*) (KADK 2014): The current focus on the SDGs and a thematic focus on 'solutions'

[5] Note the conflation of research (*forskning*) and science (*videnskab*) in the official translation for the *Uddannelses- og Forskningsministeriet* as 'Ministry of Higher Education and Science'. The literal translation would be 'Education and Research Ministry'.

[6] See the next chapters for more information on architectural education and regulation. There are only two architecture schools in Denmark, the second one is in Aarhus. When I mention 'the architectural school' throughout the thesis, I am always referring to the one in Copenhagen, then called KADK.

attempted to bridge a perceived gap between scientific or artistic research and practice. Architectural education was put under governmental scrutiny and the architectural school was required to clearly state what it saw as its contribution to Denmark as a nation state and economy. The director of the school said elsewhere that,

> 'the common focus on the UN development goals is a way to further develop and systematise the work that already goes on at KADK and show how our education can help to create a sustainable society through very concrete solutions.' (KADK 2017)

By responding to the UN goals and framing the output of the school as 'concrete solutions' that contribute to a 'sustainable society' the school and, by extension, design can demonstrate its added value and justify its cost (see also Chapter 5); all this is presented as a form of 'accountability' to 'society' (cf. Strathern 2000), in the face of institutional budget cuts, even in Denmark. Such statements point to 'the complex challenges' and pressures that design education in Denmark was confronted with; at the same time, it conveyed, too, what design as a profession more generally was meant to respond to. The Danish word for 'design', *formgivning*, literally translates as 'giving form', and if design means giving form to and finding an expression for something, then a design solution gives form to something that, at least conceptually, aims to make the problem disappear. Depending on the issues at hand and their characteristics, this might not be possible to achieve at all. Yet, the language of 'solutions' claims epistemic power to make this happen, or at least the power to attempt to achieve this. Being able to solve a problem supposes an understanding of what the problem is and a view that this problem can be eliminated through a designed intervention. But even identifying the problem is not necessarily a straightforward task. For instance, the manager of a project called StreetLab that we encounter in the next section evoked the idea of 'wicked problems' to describe the kinds of problems that they encountered as part of their work within Copenhagen municipality:

> 'We usually work with quite complex problems, almost wicked problems you could say. Because if it is not really a wicked problem then you could just go onto the marketplace and do a tender and then you'd have the stuff in place you need.'

He is not only evoking 'the market' here but also the concept of 'wicked problems' coined by the academics Rittel and Webber (1973). This notion points to issues in planning and policy for which there are no easy, obvious or, indeed, possible answers. 'Wicked problems' resist definitive description, with any such descriptive attempt pointing to further problems. Wicked problems 'rely upon elusive political judgment for resolution. (Not "solution." Social

problems are never solved. At best they are only re-solved – over and over again.)' (ibid.: 160) In this sense, solutions are part of a political economy of solutions.

This does not mean, however, that such problems are not made 'solvable'. Tania Murray Li's (2007) analysis of how 'improvement' works provides a framework for comparison, although her context is a completely different one: Li writes about the 'will to improve' amongst development workers and bureaucrats in Indonesia. In her analysis, 'improvement' cannot happen on its own, it needs to be materialised and turned into actionable programmes. Two linked transformative processes are at work, one is 'problematisation' and the other one is a process of 'rendering technical' (ibid.: 7) First, problems need to be identified. Typically, they are only diagnosed by experts with specialist knowledge and tools. In Li's context of experts and development schemes, the 'identification of a problem is intimately linked to the availability of a solution.' (ibid.) She points out that these problems need to be 'rendered technical', that is methods and ways of resolving them need to be established. By rendering them technical – and, thereby, usually 'non-political' (Ferguson 1994) – they are defined and thereby turned into entities that are amenable to specific (expert) interventions. In this process of rendering technical, many aspects are left out or are 'externalised' (Strathern 2002). Referencing Nikolas Rose's analysis of Foucauldian governmentality, Li conceptualises this process along the lines of practices representing 'the domain to be governed as an intelligible field with specifiable limits and particular characteristics […] defining boundaries, rendering that within them visible, assembling information about that which is included and devising techniques to mobilize the forces and entities thus revealed.' (Rose 1999: 33; cf. Li 2007: 7) The issue of establishing an 'intelligible field' (via Rose 1999) is, of course, well known to anthropologists who are required to construct their own 'fields' in order to approach the anthropological questions that interest them. Anthropologists have become self-reflective about their own field-making practices. But the people whom anthropologists study engage in similar practices. The architects, designers and others that I met are equally trying to define and specify their fields: what are solutions? But also what is 'people-centred' architecture or 'sustainable urbanisation'? Who defines these terms and categories as fields and for what purposes is important.

The UN Sustainable Development Goals served not just for the architectural school as a means to circumscribe what constitutes problems and frames for possible fields of action. The SDGs were noticeably visible in the worlds of architecture and design in Copenhagen in 2017-8. The SDGs were mentioned regularly by architects, designers and other urban

practitioners in conversations, on posters, and in talks and events. The SDGs are ambitious in their scope but also vague and the results of political compromises. Most topics could somehow be subsumed under one of the boxed categories, ranging from 'No Poverty' (SDG 1) to 'Sustainable Cities and Communities' (SDG 11) and 'Partnerships for the goals' (SDG 17). To make the themes more specific, various UN expert groups are developing indicators for each goal to establish measurable objectives to assess the progress and establish means of accountability.

The SDGs offer a predefined, internationally approved set of challenges that need solving. With their help, it was possible to claim to find, as one architect I met said, 'local solutions to global problems'. The SDGs provided a focus for action with reference to a self-avowedly 'global' agenda. For a small country like Denmark, the SDGs provided an opportunity to showcase its expertise. Promoting such knowledge is hoped to translate into export opportunities, business and money and the Danish government was explicit about this. For instance, the Danish Foreign Ministry wrote in its Strategy Document for the SDGs that:

> 'Through partnership instruments, Denmark will contribute to finding new business and market opportunities based on the Sustainable Development Goals and build sustainable markets. The goal is to pave the way for market-based, sustainable solutions to play an effective part in realising the Sustainable Development Goals locally. The starting point is a business idea driven by one or more businesses or investors where we can help bring relevant knowledge and resources into play.' (UM 2017: 31)

Organisations such as the architectural school, plus BLOXHUB, other organisations and companies were to carry out this undertaking. For instance, BLOXHUB saw itself as contributing to the field defined by SDG 11: 'Make cities and human settlements inclusive, safe, resilient and sustainable'. When I initially asked the BLOXHUB team how and why that focus on the SDG arose, I was told that the focus on urbanisation was a strategic decision that was made for the organisation. I was told that it 'made sense' to orientate the focus of the organisation and its programming towards the SDGs. The Danish Ministry of Business was also one of the founding partners of BLOXHUB. Now the focus of BLOXHUB was more on 'innovating urbanisation' and, in particular, 'sustainable urbanisation'. Working within the field of 'sustainable urbanisation' makes business sense: it is believed that as cities grow and become much more common, a huge business opportunity arises for anyone addressing such 'problems' and selling urban 'solutions'.

Or, coming back to the architectural school: this focus on solutions was to make business sense, too. In a press release from 2016 that announced the school's focus on the UN Sustainable Development Goals, the director of the school, Lene Dammand Lund, was cited as declaring that: 'KADK must be a laboratory for the development of new sustainable solutions and products, and in doing so we will hopefully also inspire business.' (KADK 2016b) In the second part of this chapter, we now turn to the idea of the 'urban labs' in more detail and see how and where some of these solutions were being tested.

II. Urban labs

Making visible

Urban labs can be visited by anyone at any time. They are not usually within a building. But in practice most visitors have a guide who takes them on a tour. A guide is necessary to point out and, in many cases, not only to see the 'lab' but also to recognise solutions. The solutions are meant to become part of, or to blend into, the already existing infrastructures of built environments, especially streets. But they also need to be able to be seen and shown, during tours and visits.

Anthropologists have examined 'infrastructures' in their various forms (e.g. Dalakoglou 2017, Harvey and Knox 2015, Harvey et al. 2017, Jiménez 2014, Larkin 2013), thereby also challenging earlier assertations, for instance, that infrastructures are largely invisible unless they break (Star 1999: 382). This led Brian Larkin (2013) to summarise that '[i]nvisibility is certainly one aspect of infrastructure, but it is only one and at the extreme edge of a range of visibilities that move from unseen to grand spectacles and everything in between.' (ibid.: 336) Similarly, the guide of a lab renders solutions visible, especially those that are 'in between', situated between mundane daily life and potential technological spectacle. Infrastructures are closely connected to ideas around producing or rather 'promising' certain kinds of futures (cf. Anand et al. 2018, Abram and Weszkalnys 2013); this is seen to be to 'conceptual roots in the Enlightenment idea of a world in movement and … the possibility of progress' (Larkin 2013: 332). Many ethnographic accounts have highlighted 'how the material and political lives of infrastructure frequently undermine narratives of technological or social progress, drawing attention instead to the shifting terrain of modernity, distribution, inclusion, and exclusion in most of the world.' (Appel et al. 2018: 26-7) In other words, the promises do not necessarily materialise as intended or as hoped.

This ambiguity was also one of the reasons why municipalities such as Copenhagen decided to trial new technologies in urban labs, seen to provide more 'realistic' conditions, before potentially rolling them out all over the city. In the so-called Street Lab, a techno-optimist sales rhetoric was met with the 'reality' of Copenhagen but, as we will see now, if successful, this can substantially strengthen the sales rhetoric of the involved 'partners'. Moreover, possible trajectories of certain kinds of Copenhagens were enacted and tested in some of the urban labs I visited. For instance, the register of a 'smart city' was still present.

Figure 40. Vester Voldgade ‘Street Lab’

Figure 41. ‘Street lab’ installation

Tours play an important part in seeing much of the physical aspects as well as in hearing about the relational components of such labs, so I present an account of a tour of the so-called StreetLab in central Copenhagen.[7] The Street Lab was managed by a unit called Copenhagen Solutions Lab, a specialist team of around ten people dealing with ‘smart city’ topics within the Technical and Environmental Administration of Copenhagen Municipality. The Street Lab was run in conjunction with three corporate ‘partners’. The Street Lab was, like BLOX, a public-private partnership, which is a legal construct and contract between Copenhagen Municipality and three private companies: an American IT company, a Danish telecommunications company and a French lighting company.

[7] This was not the only urban lab in Copenhagen but there were others, such as DOLL, the Danish Outdoor Lighting Lab, located in suburban Copenhagen. DOLL was also a ‘partnership’ between the City of Albertslund (where the lab is located, including its office and presentation spaces), the Technical University of Denmark and the organisation Gate 21, which is itself a partnership consisting of public municipalities, private companies, and research institutions. And for instance, a whole city district, Nordhavn, was declared to be an ‘EnergyLab’.

Urban showrooms

I had asked one of the project managers of the Street Lab for a tour of the Street Lab. Some of the BLOXHUB team joined, too. The project manager – a Dane in his 30s, originally trained as an urban planner – explained that the 'Street Lab is a living lab which means it is a lab where the City of Copenhagen can test different smart city solutions in a real-life setting in the street.' The Street Lab was opened in June 2016 but was preceded by around two years of negotiation: 'writing the contracts took a long time', especially in relation to 'intellectual property' (e.g. Strathern 1996b, 1999; cf. Dent 2016). Intellectual property often, and perhaps necessarily, causes divisions or rifts since '[w]hat is attributed to the thing in question (design, invention, resource) will be used to drive divisions between people (authors or resource holders against the rest of the world).' (Strathern 1999: 170)

The physical space of the 'lab' was two parallel streets in central Copenhagen, close to the City Hall: H.C. Andersen Boulevard, one of the main thoroughfares through the inner city and Vester Voldgade, a quieter, more pedestrian street located next to BLOX (Fig. 40). We walked down Vester Voldgade and stopped after a short while. Our guide urged us to have a look at a small, rugged box attached to the streetlight. I had walked down this street many times. I had been told it was a 'street lab' but, like most people, hadn't noticed this box before. It blended into the normal clutter of street equipment, high above eye level. Through this tour, we were learning to be affected by the streets of Copenhagen in a new way, rendering new streets and new affects (cf. Latour 2004a, McDonald 2018a).

The guide told us that this box was a Wi-Fi router that illustrated some of their early learnings and insights (Fig. 41). Wi-Fi seemed like the perfect technology but then turned out to be too expensive to install all over Copenhagen.

> 'The idea was that you cover this area, this street, Vester Voldgade and the next street, H.C. Andersen Boulevard, and all the streets in-between with Wi-Fi and then you can connect any kind of sensor you want in this area and then you have a living lab and that's the lab basically.'

The BLOXHUB group joked: 'That's the central bit.' 'That's the tour.' 'That's the infrastructure of the lab.'

Our Street Lab guide continued to explain, as if justifying the apparent simplicity of this 'lab': 'The idea was to have a lab where you could just test all kinds of smart solutions that would come on the market and then you would know if they made sense to roll out across all over CPH. But since then, we have changed the mindset from this test for the sake of testing

and, you know, piloting endless pilots that never scale up into being a lot more focused on real challenges for Copenhagen that we can solve with some kind of technology. So, we are spending a lot of time finding and defining challenges where it looks like there is a business case and then less time testing or only actually testing the technology once we have very clearly defined the problem.' Someone in the group added, 'you had solutions looking for a problem, and now you have problems looking for solutions.'

Our guide pointed at another pole mounted to the streetlight and said that 'this over here shows the beta version of a smart city'. It was an additional steel pole mounted to the light pole in order to fit all their equipment. We were told that once they had decided that the street lab should be in the middle of Copenhagen, they had found that it was one of the most challenging places they could have picked. All the buildings were listed here, which meant that nothing could be attached to the facades of the buildings. The steel pole contained a camera to count bikes, a Wi-Fi router, an air quality sensor and another box processing this data. One of the challenges was powering the devices. Cables had to be routed to the equipment, along the street because nothing could be added to the facades. Normally streetlights could supply the power. But, our guide explained, because Copenhagen Municipality wanted to be CO2-neutral by 2025, the streetlights are not powered during the day. Placing and powering devices 'made stuff very complicated on a very concrete, hands-on level.' The biggest understanding they gained was that, as he put it, 'all the solutions look so great on a PowerPoint and were thoroughly tested in a lab – the technology works, it is not that – but once you install it in a city, all these problems emerge.' 'What do you do when a building is listed? What do you do when Copenhagen has a very strict design policy? You can't just mount stuff like that, it looks ugly. We were just allowed to do it because it is a lab but we wouldn't be allowed to do it if it is across the whole city. Then there's lots of other problems, legal problems, business cases … How much should it cost? Who should own the data?' Some of these issues can be negotiated, for instance around the treatment of 'sensitive' data and how it should be 'owned'. For instance, we walked a bit further down the street to some parking spaces and were shown another box on top of the light bulb (Fig. 42). It was a camera, they called it a 'sensor'. This was because even though it took photos, those photos were processed 'in the box', thereby dealing with some of the 'intellectual property' issues, because sensitive information (the images) would not be saved. They would not be owned by anyone. Thus, the box took images of the parking spaces, processed the image and then sent back a number to indicate how many free parking spaces there were. If rolled out all over

Figure 42. Parking ‘solution’

Figure 43. Waste ‘solution’

the city, car owners could more easily find free parking spaces – ‘an easy use case for many cities’. But a problem emerged in the Street Lab: trees. In the summer months, trees have leaves. This means that, for instance, due to the tree near this prototype, the camera can only see 16 out of the 50 parking spots, rendering the technology more or less futile. This testing made them go for another, software-based approach to predicting free parking spaces.

The guide showed us another air quality sensor and then led us to the city hall. We went inside but instead of looking at the interior of the building, he took us to the courtyard of the building and opened one of the waste bins: a small sensor was located there on the inside of the bin lid. (Fig. 43).

This little sensor was, essentially, a distance measuring device. It measured how full the bin was and sends out a notification to the waste collection company and then the most efficient route to collect and empty bins is calculated. We were told that this was one of the most well-known smart city solutions and it was very easy to make a business case here, as it reduced the number of times that you had to empty the bins: ‘by almost 50 percent’. This could translate into a lot of money and time that cities can save. Now there’ll be a larger scale test.

It was not quite as easy as that, however:

> 'One thing is building the gadget that can measure waste, that's not that complicated. But then you have to implement it into a whole waste collection system and then it becomes complicated. And it's different for every city and different for every country. And then you begin to have problems about unions, work, those kinds of questions pop up, all kinds of work hour regulations – all kinds of stuff. It's more complicated than making a sensor that can tell you when a bin is full. A lot more complicated than that. So that's probably where the most work is to be done. When you do innovation, you have to prepared to also innovate your organisation or change your organisation.'

One implication – although it wouldn't have to be – could be that some jobs might be lost in this process of innovating waste collection. But the focus for the City of Copenhagen, the guide said, was not to reduce the number of employees – 'a no go' – but rather the aim was to provide better services to citizens of Copenhagen. 'You can deliver a better service, so a cleaner city basically. That's usually how we tell the story.'

We walked back to BLOXHUB, where the offices of Copenhagen Solutions Lab were located and I asked about the kinds of values and relations that are generated. 'The street lab, where it is a physical lab, works really well when you want to show others what you're doing. But at least 50% of the lab is a cognitive thing between the city and the partners.' It was a process of exchange between the partners. But there were also limitations, it was not 'open innovation' as they had expected. 'The biggest value for the companies is that it is basically a sales window for them.' Based on the work they are doing in Copenhagen, the partners can show potential customers what they are doing and that they are in this kind of business, which leads to bids and new contracts in cities elsewhere. It is 'less innovation and more advertising basically. That's the reality of business.'

Producing solutions

Urban labs in Copenhagen then were areas in cities that acted as both test beds and show rooms. Anything from a couple of streets, an industrial estate to whole neighbourhoods could, in theory, become a lab.

Anthropologists and other science studies scholars have drawn attention to the production of knowledge in laboratories as well as the production of laboratories. For instance, Bruno Latour (1999) has pointed out, in his analysis of a scientific field trip in the Amazon to sample soil: 'For the world to become knowable, it must become a laboratory. If virgin forest is to be

transformed into a laboratory, the forest must be prepared to be rendered as a diagram' (ibid.: 43). Laboratories with their scientific practices and instruments – including drawings and diagrams – help produce scientific texts and 'facts'. 'Laboratories are excellent sites in which to study the production of certainty' (ibid.: 30).

The science studies scholar Thomas Gieryn (2006, 2018) has written about the role of places in the generation of knowledge, what he calls 'truth-spots'. The laboratory and the field-site are two such places from which knowledge is derived, where it is produced and legitimised; 'lab and field are understood to lend a special credibility […] to scientific claims' (Gieryn 2006: 5). Gieryn uses the example of sociologists and urbanists of the so-called Chicago School of the early 20th century to show how claims about cities were made, by mobilizing the logics and legitimising languages of the lab and the field.

> 'Chicago is naturalized to become the kind of analytical object studied by those in both categories of "real" science: observers in the field, experimentalists in the laboratory. The city also oscillates between a given thing found in "nature" and a manipulated artifact of laboratory metrology.' (ibid.: 12)

In urban labs such as the Street Lab, the city is seemingly turned into a lab. Yet it is the technologies, produced under 'lab' conditions, that are tested in 'the field'. This urban field test is meant to offer certainty about whether any particular conditions of the specific city need to be taken into account, whether 'the lab' needs to be adapted. But as we already heard, what was tested and produced in this lab were also new forms of 'partnerships'. The manager of Copenhagen Solutions Lab gave the following commentary:

> 'Now for me, the lab it can be and it is still a physical place but the value is – I wouldn't say more – but the value is almost the same when you look into the partnership side of it. So it's not just having the physical lab, it is having this ecosystem of suppliers and large companies that can actually guide us and we can go into dialogue in order to find the way to pursue these different types of use-case scenarios. It's not just the physical infrastructure or the lab in itself. It is the ecosystem of partners that is really starting to pay off. We can get a lot of advice working with these companies and at the same time these companies get much more focused on solving real challenges instead of guessing what could be a problem for a city they actually get access to a lot of inside knowledge on how city officials think and what kind of problems we are struggling with.'

The lab establishes the 'ecosystem' for new relations between the municipality and

companies, between public and private. Crossing these domains means gaining access to 'advice' or 'insight knowledge', which translates into value. Not every partner necessarily benefits equally. It also happened, for instance, that employees changed employer and moved between domains, from public to private.

These relations, this 'ecosystem', can sometimes be visualised through presentation slides or in publications. But they cannot necessarily be seen during a tour unless they are made visible through the guide. The 'solutions' were here and there: integrated into the pavements as sensors, on light posts, in apps and other forms of technologies; but also in the presentations, reports, in numbers and percentages, in costs and money saved, and in explanations and recounted experiences; in the overall experience of being there. The solutions weren't just singular technologies. They aim at materialising a 'smart city', 'greater sustainability', 'improved city services', 'better quality of life', and so on. It is difficult to replicate, purchase and sell these urban qualities. At the same time, these qualities could be materially and relationally produced. The qualities could be 'presenced' through a variety of 'solutions' of 'material registers' (Buchli 2010b, 2015; cf. Thrift 2005). Copenhagen as a showroom becomes a model where such desirable qualities have been demonstrated and presenced. The urban lab produced certainty for potential clients that a solution was possible and that the partner likely has the capacities to replicate results in another location, in another city. It establishes the partner – company, person, place or institution – as a provider of 'solutions'. When a solution supplied by a partner is then bought by a client, the specific solution will be tailored. Its value stems from the fact that it is not off-the-shelf but localised.

In that sense, solutions are meant to 'scale' from Copenhagen to other places. However, some things are more easily 'scaled' than others and often this process fails - and of course, there are internal and external critics who suggest that this is perhaps not always the best approach or appropriate idiom to pursue. I end on a short encounter from a conference on 'experimental cities' that I attended in Copenhagen. Building on analyses of 'urban experiments' and 'urban labs' (one of the keynote speakers was the urbanist Andrew Karvonen who has published extensively on this topic, cf. Evans, Karvonen and Raven 2016, Karvonen and van Heur 2014), the conference explored 'experiments' in contemporary cities - ranging from 'top-down' 'smart city' planning initiatives to 'bottom-up' citizen-led initiatives. During one of the keynote sessions, I sat next to a senior civil servant working as an urban planner for the City of Copenhagen. We chatted briefly before the session and in the short break between speakers, I asked her what she thought about the conference. She replied that it was inspiring.

‘But I think that when you want the results to spread - not scale - the stories that are told are very important. We want to change things in Sydhavnen [the area of Copenhagen where the conference was held and which is undergoing re-development], and it’s only possible if we are able to create a new story for the place, a new image. It’s how that story has been told by people. I think that the whole focus on data collection and assessment, well, that focus is important but that’s not what changes things.’

This thesis explores some of the key ‘stories’ that were told about Copenhagen and how and where they were told. This chapter explored some of the ambition shaping Danish design and architecture that is constituted through addressing complex challenges with ‘sustainable solutions’. This has become both a policy demand as well as a business opportunity, and for many practitioners a genuine concern to create ‘better cities’ and a ‘better world’. This is one of the impacts that ‘Danish architecture’ is meant to generate. Furthermore, I have sought to illustrate what might be meant by a ‘Danish model’ as it was called in the Danish Pavilion at the Venice Biennale 2018. This involves the forging of relations in the form of ‘public-private partnerships’ as much as the testing of new ‘innovations’ and technologies. Examples of such partnerships explored in this chapter are ‘urban labs’, which are physical places as well as relational and contractual arrangements. They can be visited but there’s only so much of a ‘solution’ that can, with guidance, be ‘seen’. The effects of ‘solutions’ are meant to institute or refine many of the urban qualities associated with Copenhagen, especially a ‘high quality of life’, ‘smart urban services’ and ‘liveability’. These qualities are desirable and have value; exactly for this reason, they need to be presenced as ‘solutions’ (typically today in the form of technologies) that can be presented to delegations and sold by those working in the ‘business’ of the built environment in Denmark.

In the following chapters, we turn to the discipline and profession of architecture, as architecture adapts and reacts to the ‘reality of business’, as the tour guide put it.

Figure 44. Tour of BLOXHUB with ‘data visualisations’

Chapter 4 Impact

This chapter examines how ideas around demonstrating the 'impact' of architecture have had an effect on architecture as a professional practice. I contextualise some of the developments explored in the previous and followings chapters – such as, an insistence on interdisciplinary collaborations – by focusing on some of architecture's own disciplinary foundations.

Generating and proving 'impact' has become a subject for many professions and disciplines, particularly in Higher Education: developments in the architectural school in Copenhagen were mentioned in the last chapter, and we will encounter the related notions of 'usefulness' and 'relevance' in the next chapter. In the UK, anthropology and other academic disciplines have had to prove their own impact as part of the Research Excellence Framework, in which peer assessments determine funding allocations (Stein 2017). The 'impact agenda' (Smith et al. 2020) has had its own impact on UK universities – but has taken hold in many contexts beyond this, in Europe and elsewhere (e.g. Shore and Wright 1999, 2004, 2015). The 1980s are now looked back to as a starting point for the proliferation of such audit practices, characterised as 'rituals of verification' (Power 1997). As the subsequent anthropological literature on audit cultures highlighted (Strathern 1996a, 2000), relations that might once have been based on trust were reformulated in the language of accountability. Managerial logics went hand in hand with monitoring practices that demanded a type of measurable 'impact', which often had to conform to specific guidelines: not everything counts as 'impact' (cf. Page and Strathern 2016; Strathern 2006a, 2006b). Architecture has experienced similar developments. As we will see, 'data' and certain forms of knowledge – sometimes formulated in the language of 'evidence' – are now seen to be able to produce credible accounts of 'impact', including future impact, in the world of architecture and design; by contrast, typical architectural trademarks, based on learning and experience, such as having an architectural 'intuition' or 'creativity', are seemingly less trusted.

In what follows, I first present one interaction between an architect and other professionals that took place during an event in BLOXHUB. Here and elsewhere, many of the practitioners I met were trying to figure out how to apply knowledge and how to generate impact, in this case by employing technology that utilises 'data'.

Many of the disciplinary histories of architecture present architecture as a process of coordinating knowledges that otherwise span disciplinary divides. The practitioners I met also

evoked knowledge in multiple forms – for instance, as data, as knowledge, as experience, as intuition, as creativity. Architectural 'research' carried out in professional architectural practices is typically produced under perceived time pressure and for a specific purpose, for a project: it is not the same as research carried out by other disciplines or research carried out in architectural schools. Some architectural firms in Copenhagen have started to build multi-disciplinary teams that support architectural projects, each with their specialist expertise. One firm in Copenhagen with a multi-disciplinary team refers to this way of designing as knowledge-based design. 'Evidence-based design' is also used to describe designing with the right data and implies working with 'data' from scientifically established evidence.

Designing with the right 'data' would mean being able to predict impacts and could potentially be employed by architects therefore to argue for specific design options. However, the right data for any specific design scenario often does not readily exist. Especially in Europe and America, research that seeks to demonstrate measurable impacts of spatial designs, particularly in relation to the healthcare sector, has been assembled under the category of 'evidence-based design'. The description and apparent credibility are borrowed from 'evidence-based medicine' (cf. Lambert 2006). To search for 'evidence' means looking for relevant information that demonstrates that certain design choices result in specific effects and outcomes. Yet the implications of what it might mean to be truly 'evidence-based' are too far-reaching for many of the architectural professionals whom I met in Denmark: many would rather speak of 'knowledge-based' design. This leaves space for what are seen as more 'intuitive' design interventions that might summon up 'scientific' knowledge in support, but which might also claim to be based on a wide range of other kinds of knowledges including professional experiences and sensibilities that cannot easily be formatted as 'evidence' or 'data'.

I. Architectural knowledge

‘Sometimes we need data ...’

Even before BLOX opened, BLOXHUB tried to establish itself and the future BLOX building as one of the go-to venues where architects and designers met to discuss current developments. Such events could be described as informal professional development opportunities. But rather than providing training within the disciplinary confines of architecture, such activities provided opportunities for exchanges across professional boundaries.

For instance, BLOXHUB hosted a talk and panel discussion entitled ‘Making cities resilient through technology and data’ in November 2017. Closely connected to notions such as sustainability, ‘resilience’ has become another, almost essential design aspiration for urban environments and buildings (cf. Barrios 2016). In the face of climate change and other ‘urban challenges’, to use the terminology prevalent in BLOXHUB (see Chapter 2), cities are conceptualised as systems (e.g. Batty 2013) that can be made resilient. In this context, resilience was seen to be a system’s capacity to recover quickly from adverse events, that is from ‘shocks to the system’. These topics were regularly discussed. Further encouraging such discussions was the fact that Copenhagen had recently experienced unexpected climatic events and some areas of Copenhagen, including the one that I lived in, had been partially redesigned and rebuilt to make the city more resilient (see Chapter 1). ‘Data’ was another recurring topic, not only in architecture.[1] Data has become a resource that should be used (e.g. Gitelman 2013). Inspired by the success of American companies such as Google, Facebook, Airbnb and others – by Internet platforms (e.g. Srnicek 2016) that use information generated by and about their own users, information that becomes ‘data’ – companies in other sectors tried to figure out how this might be a template that could be followed. What data could do in a built environment context was discussed at events for practitioners in BLOXHUB and elsewhere in Copenhagen (Fig. 44).

The main speaker at the November 2017 event on data and technology was an American businessman who is a well-known figure in the world of mapping and urban technologies. He did not speak Danish, so the event was held in English. He was the CEO of a company that is one of the main providers of GIS software and tools. GIS stands for ‘geographic

[1] See Walford (2012, 2017, 2019), Boellstorff and Maurer (2015), Douglas-Jones, Walford and Seaver (2021), for recent anthropological treatments of ‘data’.

information system' and is a computer software that can analyse and visualise geotagged databases as maps. The event started a couple of minutes after 8:30am and ended at 10am, so that professionals who attended the event could listen to the talk and then go to work afterwards. Visitors and participants could help themselves to coffee and croissants, provided by BLOXHUB. I had arrived early to assist the BLOXHUB event manager in preparing for the event.

The event started on time and, as usual, started with one senior BLOXHUB employee who introduced BLOXHUB and highlighted its facilities and activities from 'labs, fab labs, video labs, showcasing big data, smart city solutions' to 'programmes for tech start ups'. This introduction was intended to advertise BLOXHUB and its co-working space: 'We still have offices and desks available. If anyone is interested, they can contact me.' Then the moderator introduced the main speaker and the panellists. The moderator was the managing director of a Danish technology company that belongs to the BLOXHUB community. He commented that he saw BLOXHUB as 'a very important platform for engaging with a wider audience around technologies in the future' and for 'how we can address all these challenges.'

The main speaker spoke for about half an hour with the help of a PowerPoint presentation. This was followed by a panel discussion with five built environment professionals. The American speaker promoted the technologies and software that his company sells as a tool to understand the effects of climate change and other disasters – for instance, by analysing and visualising climate data or by real-time mapping in case of disasters. This software was part of a broader trend in architecture and urban planning, which he called the 'Science of Where'. It was a promise of 'data' and 'technologies' to provide contextual information, whenever needed. The views expressed by the businessman, trained as a landscape architect, were typical of those enthusiastic practitioners who pushed 'technologies'.

The panellists responded by talking about their own experiences with location-based data, and used this as a way to introduce themselves and their organisations (Fig. 45). One of the panellists was an architect who was the CEO of a Danish architecture firm that is well-known for integrating landscaping features centrally into their designs. She presented her architectural firm as a 'multi-disciplinary team' that designs 'with a nature-based approach'. A notion of 'nature' (cf. Tabb and Deviren 2014) was crucial to branding her practice and differentiating it from other architects, especially as 'nature is a threatened value in our societies globally'. The architect then talked about the need for technological tools but confessed she was 'a little bit afraid' that those technologies and consequent decisions might

Figure 45. Panel discussion

be ‘only based on quantified knowledge’. ‘But what about our intuition?’, the architect asked. The two related notions of ‘intuition’ and ‘creativity’ are central to many architects’ self-understanding of their discipline as an artistic practice that relies on aesthetic sensibilities that cannot necessarily be computed or quantified.[2] These concepts and their distinction are evocative of a well-established division of knowledge into ‘arts’ and ‘sciences’.[3] The architect tacitly mobilises this distinction to draw attention to an embodied architectural expertise acquired through education and years of training that is seemingly threatened by a ‘quantified knowledge’ of ever-greater dominance.

The kind of knowledges that architecture is seen to assemble, knowledges here glossed as intuition, are not easily translatable into ‘data’ that could fit into a spreadsheet or database. Nonetheless, panellists claimed that architects were looking for a compromise between these kinds of knowledges, acknowledging the usefulness of data-driven technologies, such as GIS, for their projects but in ways that did not undermine their architectural expertise. The architect

[2] See, for instance, Leach (2003), Yarrow (2019: 107-9); Chumley (2016); Hallam and Ingold (2007) for anthropological analyses of ‘creativity’.
[3] See McDonald (1993, 2012, 2014).

on the panel whose intervention I cited earlier asked if it was possible to 'impose design' on GIS; she evoked the kinds of tools that architects would want as part of their design processes: analytical tools that evaluated intuitive design proposals – she called them 'scenarios' – and she then gave an idea of the impact and the value that those designs might create. She exemplified this by designing a scenario, a thought experiment. She imagined a situation in which all green spaces in Copenhagen could be transformed into more diverse ecosystems: would analytical tools like GIS be able to help capture and communicate the impact created through such design proposals?

> 'For example, take all the City of Copenhagen, take all their lawns: half of them change them into new nature. You can do that for the same maintenance cost that it costs per year. You cut a lawn twenty-five times a year, it costs quite a lot. Would we then really improve the biodiversity level of the city? You know, you make those scenarios and then put that information into new data, do you understand what I mean? I mean that would be amazing. We have quite a hard time in talking to the cities. You see there are the 17 United Nations Sustainable Development Goals and Number 15 is called "life on land" and this country is doing really badly on that, it's in the red. You're better off if you're in the green scale of evaluating the different goals. If we could have data, we could push the agenda much faster.'

The impact would be a matter of proving that such a design proposal would contribute to achieving the Sustainable Development Goals. As we saw in the previous chapter, satisfying the UN Sustainable Development Goals became a political objective in Denmark, and architects and designers saw an opportunity in the framing of their design proposals in line with the Goals. However, it was often difficult for architects to measure exactly, in precise numbers, how their design proposals would help achieve the different Goals, or indeed how their designs might achieve any other policy objective. From an architect's perspective, having the kind of data that would show that certain design proposals make a measurable impact would make architectural work easier. It would make it easier to persuade clients (in this scenario, the City of Copenhagen) to choose the design proposal that is most favoured by architects, but which might be more expensive or complicated to realise – and therefore not necessarily the first choice of clients.

The architect just cited went on to summarise that design was concerned with possible futures, not just an analysis of the current situation, and that much architectural work was a matter of following one's 'intuition'. 'But it's not just real time…it's also the future, so it is

the scenarios, it is not only real-time right now, e.g. we have this, we are doing red on this, we are doing green on that and so forth, but what you could achieve by design. We are doing that all the time, we do it by intuition, we know if you overlay this and this, then you get this. But how can we actually impose future scenarios into GIS – I don't know if that's possible – to actually say, if we do this developer or city...' The moderator ended her sentence, '... then this would happen.' The architect agreed and continued: 'Yeah. How do we then inspire new ways of doing things? Because I think that is what we need to do. That's the plan of action, we need the sense of urgency ... Sometimes we need data to actually tell the client that we need to do a project like this.' One of the other panellists, a representative from a major developer, responded, before changing the topic to talk about her own work and projects in more detail: 'In my line of industry, we don't do intuition, we do data.' The developer laughed. 'And the data actually supports our intuition, so I think it's a great partnership.' The conversation continued. The format of the event, a panel, meant that each panellist was given time to speak in turn. After a full turn for each panellist, the architect was able to respond to the developer: 'You are saying that you're only data-driven and then you say that you don't like high buildings, that's not so data-driven and then you talk about atmosphere, that's not so data-driven either.' She gave the example of her brother who, as a jazz musician, improvised all the time but who had received the necessary musical training and was therefore trusted with his musical 'intuition' when he played. She implied that architects similarly should be trusted with their intuition based on their training and qualifications but acknowledged that this was no longer always the case: more and more clients needed to be persuaded with 'data'. This data was thought to be numerical data but not everything could be quantified: 'We cannot only quantify. We cannot only do quantification in order to push the agenda and to feel the sense of urgency, you know.' Appealing to the validity of other forms of knowledge, the architect stressed that some decisions needed to be made urgently – and waiting for the right data, for the appropriate form of knowledge, might take too much time: 'When I see these maps because I am aware of how to use your knowledge and the maps and GIS, then I feel a sense of urgency. But not a lot of people do that, not a lot of decision-makers feel the sense of urgency for actually changing and doing things differently.'

In everyday professional interactions, expectations are articulated ('In my line of industry, we don't do intuition, we do data!') that have an impact on architecture as a professional practice. Data could emerge as a means to strengthen an architectural position: possessing the right data is desirable as it can be used as a persuasive factor in decision-making

processes. Inversely, a lack of data could undermine one's position. Yet 'data' can clearly raise alarm bells for an architect: architecture is much more than being simply data-driven and quantitative. Having certain data or other forms of knowledge can appear to deal with uncertainties and appear to remove doubts or economic anxieties that clients and others might have about a project. But as one of the architects pointed out, this might merely eclipse issues that cannot be captured as 'data'. Data might have been one of the explicitly discussed topics here but what was negotiated and defended in the panel were also disciplinary and professional viewpoints. An architect is left to make – and did make here – a case for architecture's own methods and judgments and, ultimately, for trusting the architectural profession.

The next section outlines how architecture has emerged as a separate profession with its own disciplinary standards for evaluating architectural knowledge.

Disciplining architecture

Disciplines tell specific disciplinary histories about themselves (cf. Barry and Born 2013, Schaffer 2013). Architecture, which has emerged as a separate field of knowledge, as a discipline, tells its own disciplinary histories. For instance, most conventional European architectural histories and theory locate their foundations in one of the early texts written on architecture (e.g. Mallgrave 2005).

One of those texts is *De architectura* ('On architecture', usually translated as 'Ten Books on Architecture') by the Roman author Vitruvius, held up as one of the only written ancient texts on architecture that have survived until today.[4] In this book, said to date from the first century BC, good architecture is seen to be a result of attending to three main architectural principles: *firmitas* (durability), *utilitas* (usefulness), and *venustas* (beauty). What follows suggests that a good architect needs to be well-versed in all aspects of architectural design and construction. The image of the architect is one of a skilled craft worker, who progresses from apprentice to master builder, who supervises the building from inception and design to construction. Here and elsewhere, the disciplinary stories that architects tell about themselves is one of being able to coordinate various kinds of knowledges, beyond quantitative or qualitative. The nineteenth century is typically seen as the time period when knowledge was increasingly parsed into disciplines, when knowledge started to be distributed along axes of 'objective' and

[4] For similar reasons, this text was chosen to be the basis for the Diamond evaluation system by Danske Ark, see Chapter 5.

'subjective' and when categories such as 'art' and 'science' began to take on distinct meanings (cf. McDonald 2014). However, the histories of disciplinary formations are not as clear-cut as might appear from contemporary discourses around interdisciplinarity: disciplines have interdisciplinary and indisciplined pasts (Schaffer 2013). Epistemic divisions went hand in hand with spatial separations and the institution of increasingly distinct disciplines in separate departments and faculties of universities. As disciplines took on discrete identities, education as the reproduction of disciples became crucial in sanctioning what might count as appropriate disciplinary practices and modes of knowing. In the case of architecture in Europe, the late 18th and 19th centuries saw various developments initiated by processes of industrialisation and its consequences. Changes in construction techniques and increasing technical complexity as well as the rise of specialist expertise meant that building became the domain of non-architects, too. Architecture and engineering became increasingly distinct fields of knowledge and professionalised disciplines. The role of the master builder, the architect who was responsible for the design, implementation and construction, was transformed and divided up into specialisms. In the 18th century, architectural education was consolidated in architectural schools, which marked another transition towards the specialisation and professionalisation of architecture: the architecture school in Copenhagen was founded in 1754 as *Det Kongelige Danske Skildre-, Billedhugger- og Bygnings-Academie i Kiøbenhavn* ('The Royal Danish Painting, Sculpture and Building Academy of Copenhagen'). To summarise centuries of subsequent development in Western Europe, decision-making processes about architecture were increasingly distributed across distinct professions, which each became responsible for specific aspects of building. Architecture became instituted and regulated as a profession, often with the need to be recognised by and registered with an authorised regulatory body. Increasingly, buildings and architecture became subject to rules and regulations, like other professions and associated 'policy' fields. The professional domain of the architect became that of 'designing', in particular making plans and producing drawings. The translation of designs into the construction of buildings became the work and responsibility of other professions. Architecture as a profession was required to collaborate in an emerging construction industry. The translations that happen when translating architectural ideas from sketches and drawings into buildings are compromises between architects, the client and those other professions, from engineers, real estate consultants, construction specialists, to contractors and all other experts who are consulted during the development phases.

Depending on how decision-making capacities are contractually defined, these professional

encounters can undermine architectural ideas and control over the final building. These concessions can be perceived as being so unacceptable to the extent that architects might renounce authorship over the building – such as the Danish architect Henning Larsen in relation to the Royal Opera in Copenhagen, who then published a critical book about the building process and the building's client (Larsen 2009).

Architects have disciplinary independence and, therefore, untarnished control as long as they draw or design only, but when they design or draw for somebody and when the design is translated into buildable plans, this control is lost. Yet these disciplinary encounters, especially with the natural sciences, have historically also been a source of inspiration for architecture. More recently, especially in the Danish context, the social sciences have become increasingly important and recognised. Architectural theorists and historians have, for example, traced the dynamics between architecture and the natural sciences.[5] These disciplines have provided architects with tools, technologies, and conceptual frameworks by which architecture itself and its disciplinary boundaries can be rethought or expanded. As part of these 'exchanges' (Picon and Ponte 2003), architecture has drawn on scientific disciplines in three broad ways: firstly, by incorporating or interpreting scientific references or knowledge, secondly, by employing scientific methodologies and thirdly, as more poetic inspiration, by borrowing images or metaphors (cf. Picon 2008: 63). In his book *Words and Buildings*, the architectural historian Adrian Forty (2004) asks why scientific metaphors were not used and employed in architecture until the second half of the nineteenth century. Other pieces of writing, for instance, economic writing, had used them much earlier. Forty suggests, based on the observation that architecture and science were not conceptually distinct before the late 18th century (Pérez-Gómez 1983), that it was only when architecture and science became separate fields of knowledge that such metaphors started to make sense. Since then, scientific metaphors have served as means to imagine and expand the boundaries of architectural practice (Galison and Thompson 1999, Picon and Ponte 2003).

At the same time, the notion of creativity and producing innovation continue to influence how architects think about and differentiate themselves from other professions. Anthropologists Penny Harvey and Marilyn Strathern (2005) comment on the notion of 'time'

[5] See Forty (2004), Galison and Thompson (1999), Moravánszky and Fischer (2008), Moravánszky and Kirchengast (2011), Picon and Ponte (2003), Picon (2008).

as conceived in Europe.[6] They argue that 'time itself for Euro-Americans changes things: it creates the world anew. […] But where Euro-Americans do focus intense concern is in how they will get into the future' (ibid.: 108-9) Creativity emerges as a distinguishing factor. 'One of the things, then, that the Euro-American concept of creativity has done – ever since the industrial revolution – is to interpret people's handling of time into an evaluation about the nature of their societies and the kind of agency they award themselves.' (ibid.: 110) Creativity is valued; and architects' claim to be creative is a claim to be able to produce certain kinds of futures, and thereby to produce value (see also next chapter), and draws on the way that creativity is conceptualised.

Producing architectural knowledge

The disciplinary narrative of architecture as historically spanning disciplinary divides continues to resonate today, with implications on how to carry out architectural research. At the same time, contemporary architectural research is something that takes specific disciplinary forms, with its own methodologies and ways of producing and assessing knowledge. For this reason, what counts as research in architecture won't necessarily be readily recognised as research of the same kind by other disciplines.

During my fieldwork, architects insisted that architecture could be considered rigorous on its own terms but that it is methodologically prolific – meaning that, generally speaking, there is no established or dominant research methodology and no single way of generating architectural knowledge. This was attributed to the characteristics of design as an iterative, 'creative' process involving both trial and error and planned processes. The anthropologist Thomas Yarrow comes to similar conclusions in his work with architects in the UK, when he describes

> 'how ideas of creative individuality remain central to architects' own understandings [...]. While the ideal is not always – or even ever – fully realized, it nonetheless shapes the practices in which architects engage, and the terms in which they understand these practices. These understandings set actions in motion and are integral to architects' experience of work.' (Yarrow 2019: 154)

What shapes how architectural creativity is understood is precisely here, too – an open

[6] The anthropological literature on time and temporalities (e.g. Bear 2016, Gell 1992, Moroşanu and Ringel 2016, Munn 1992, Ringel 2016) has demonstrated, more generally, that 'time' is not a dimension of life that can be taken for granted.

disposition on the part of the architect, being open to new inspirations and stimuli: 'Creativity, as these architects see it, involves an openness to forces, actions, and ideas that are other than themselves' (ibid.: 155).

Recent architectural literature has interrogated what 'research' means in architecture (for instance, Fraser 2013, Groat and Wang 2013, Lucas 2016, Till 2007). Similarly, the topic had been discussed in Copenhagen. One architectural interlocutor pointed me towards a publication entitled *The Role of Material Evidence in Architectural Research. Drawings. Models. Experiments* (Beim and Thomsen 2011), which had its origins in a seminar taught at Copenhagen's architectural school. In their introduction, the two architects, Anne Beim and Mette Ramsgaard Thomsen (2011), raised the issue of '[w]hat is regarded as valid evidence in architectural research and how we evaluate this material' (ibid. 3). Defining architectural research and how it should be carried out was of contemporary importance to the architecture school, which was being required by the government to prove its relevance. Architects now emphasise that architecture as a discipline is a 'practice' that utilises a wide range of methods that are not disciplinarily prescribed. They write that,

> 'We have seen a need to discuss the understanding of architectural research and to embrace the analytic processes and abductive nature of architectural reasoning and practice. This includes practice-related theory, methods and experimental traditions. It involves investigations into (new) methodologies and experimental procedures through theoretical studies, the use of digital technologies, analogue material experiments, and interdisciplinary methods of transferring technological and conceptual practices from related research fields.' (ibid.)

The statement that architectural research is 'abductive' points to the uncertainty associated with the outcome of design. Abductive inference aims to best explain observations or premises. Abduction is a form of reasoning that reaches conclusions that go beyond what is contained in the premises; in other words, such conclusions are not necessarily 'true' (cf. Douven 2017). Therefore, if architectural reasoning is 'abductive', this means that architectural reasoning comes up with or selects the best explanation for a set of premises or statements. It also acknowledges that there are multiple other, possible explanations, and therefore possible design responses. This is further complicated by the sheer range of methods listed in this same text (these being themselves just a selection) by which architectural 'evidence' is produced. What is clear is that architectural research is practice-based or design-based research, which in turn, the authors argue, shapes architectural reasoning. They ask

Figure 46. Architecture school in Copenhagen

'how the practices of architectural design, drawing, modelling, prototyping and building embody a particular set of knowledge types that inform architectural thinking. Architectural reflection is allied with its media.' (Beim and Ramsgard Thomsen 2011: 9). These practices emerge as the disciplinary modes of assessing evidence for architecture. They are the disciplinary 'yardsticks' that Marilyn Strathern discusses elsewhere:

> 'I propose taking "evidence" as a construct pointing to practices – whether undertaken by an anthropologist or his or her subjects – that imply the ability to reduce, digest and otherwise summarise information in such a way as to yield a yardstick or a measure by which other information can be judged, proved or verified.' (Strathern 2008: 22)

In the case of architecture, its practices are said to point to 'evidence'. In designing and doing architecture – here summarised as 'drawing', 'modelling', 'prototyping' and 'building' – information is revealed to be 'valid' and 'evidence'.

This might be why for many practitioners there has been more focus on doing architecture, doing architectural research, rather than interrogating its foundations. Contemporary architecture in Denmark is both an academic and a professional discipline. The two main sites

where architectural research ordinarily happens are in architectural schools and architectural firms. The two architectural schools in Denmark are the two primary seats of the academic discipline of architecture in Denmark (Fig. 46). Those schools produce and reproduce architects, who upon graduation are expected to join the professional world of architectural studios. Some architects return to an architectural school to pursue an academic career in architecture. It is common practice that professional architects are invited for one-off talks or to evaluate design projects and give feedback to architects-in-training as part of reviews, also called 'crits', in architectural schools. But only a few practitioners manage to divide their time regularly and to move between both professional practice and teaching or researching in an architectural school.

The bigger, internationalised architectural firms in Copenhagen have established specialist multi-disciplinary teams that work on projects across the practice as consultants, providing targeted advice or knowledge whenever a project team might require such a service. Many of these teams included industrial researchers, which are both located in a university or architectural school and within an architectural business.

Yet at the same time, many of the architects that I have met have been open about their frustration with the expectations of what counts as 'research' in academia and in architectural practice. In architectural practice, due to limited time and money, what seems to matter most is the outcome rather than how it came about, i.e. the process or through what means. In conversation with architectural interlocutors in Copenhagen, it was suggested that doing architecture is not about following a scientific method, not about following a series of steps. 'This is not how design works, it should probably work like that but in practice, with time pressures, and so on, that's not how it usually works.' As a result, a specific order is not necessarily followed. For instance, finding explanatory information to justify an already existing design was referred to as 'post-rationalisation', said with a sigh by this architect. Based on other disciplines' expectations, an expected order would be to base the design on this information, rather than to find the right information to fit the design. The sigh seemed to signal a frustration with the pressures that lead to such situations as well as a shortfall between what architects are taught in architecture school and what they practise in a business setting. This situation is usually taken for granted: the architects I met usually drew a clear distinction between studying in architectural school and actually working in an architectural firm: doing architecture in a firm is a business endeavour and therefore operates under different kinds of constraints. I encountered more frustration among younger architects, who hadn't left

architecture school too long ago. Older architects seemed to have accepted these constraints as design factors: time and money are usually limited. In such settings, extensive research needs to show its worth immediately and be directly applicable to the project at hand.

In addition to these spaces of architectural exchanges (cf. Galison and Thompson 1999, Picon and Ponte 2003), there are other places that act as meeting points for architects and other professions outside of the architectural school or studio. One such place in Copenhagen is BLOX. More specifically, BLOXHUB attempted to overcome a perceived lack of exchanges between academia and private practice by launching initiatives that sought to forge new 'collaborations', effectively 'bridging research and practice'. Echoing logics in other research contexts (e.g. Strathern 2006a, 2006b), the assumption is that research that leaves its disciplinary boundaries and the university and that is 'applied' in a business setting produces more 'impact'.

One initiative that seemed to do this was the 'BLOXHUB Science Forum', an 'industrial research network' consisting of a series of events that present regular meet-up opportunities with those interested in creating links between business and academic research. According to the BLOXHUB flyer that advertised the four afternoon sessions in 2017, the 'purpose is to strengthen Danish researchers' ability to innovate and bridge newest research across science institutions with leading Danish businesses.' In line with BLOXHUB's focus on sustainable urbanisation, this engagement was meant to be 'transdisciplinary' or 'cross-sectoral'. This initiative was also to be the home of industrial PhD students and postdoctoral researchers in BLOXHUB. The category of industrial researchers (*erhvervsforskere*) was officially established in Denmark in 1971 through the Industrial Researcher Scheme (*Erhvervsforskerordningen*). This education is overseen by the Danish Ministry for Education and Research, today in the form of an organisation called *Innovationsfonden,* the Danish Innovation Fund. I was surprised by the number of Danish industrial PhD students that I met in my first couple of months in Copenhagen. Industrial PhD students or industrial postdoctoral researchers are supervised by one industrial supervisor and one academic supervisor and have certain time commitments to each institution or organisation. This set-up is explicitly aimed at producing more practitioners who are able to navigate both academia and business. As they are literally able to move between private practice and academia, typically with office space in both, industrial PhD students are the manifestation of attempts to produce research that is valuable to both private practice and academia. In an important sense, they are to embody 'impact' ideals. Some architectural firms seem to have taken advantage of this possibility.

In contrast to fully employed researchers, industrial PhD students produce research at a comparatively cheap cost to the firms, due to tax cuts and due to many costs being borne by the *Innovationsfonden*, the Danish Innovation Fund, a policy instrument established by the Danish government in 2014. In 2017, BLOXHUB – together with Realdania and the Innovation Fund – publicised a call for ten funded, industrial PhD and post-doc positions around the 'Science Forum'. The research projects were to be related to the themes of smart cities and sustainable urbanisation. The scope of the projects was both to interrogate those concepts as well as to fill them with meaning: most of the projects had an 'applied' component, a specific output for the business partners.

II. Evidence

Designing with data

Demands to be data-driven might appear innocuous and self-evident: why shouldn't design be driven by data? But particular epistemic demands are placed on design practices when they are to be based on data, evidence or knowledge. These epistemic demands seem to make some architects uncomfortable. Just to give one example: I had approached the interior designers of BLOXHUB to try to understand on what basis and with what knowledge they had designed and planned the office environment in BLOXHUB. I went to their offices and talked to the lead designer. We had been emailing back and forth and, understandably, she wanted to know what I was interested in and why I had approached them. I explained my academic interests and affiliation and proceeded to explain my interests, including that I found 'evidence-based' approaches to design intriguing. At this point in the conversation, she felt the need to emphasise that 'BLOXHUB is not an evidence-based project'. She wouldn't know how to justify such a claim. Later, she mentioned that her director used the phrase 'evidence-based' sometimes in presentations but that she told the director that it wasn't accurate. The project was based on architectural research, on knowledge, but she insisted that one could not say that it was 'evidence-based'. Nonetheless, she showed me hundreds of pages of collected documentation in relation to the designing of BLOXHUB: the collected work and the architectural knowledge that went into the project.

These demands – demands such as being evidence-based – may be perceived by architectural practitioners as administrative burdens and distracting forms of accountability and audit (cf. McDonald 2000, Strathern 2000), or as an erosion of authority and control by architects over the design process. At the same time, claiming to be data-driven or evidence-based can, for architects, be an opportunity to brand and distinguish their architectural designs or their companies from competing architectural firms.

Evidence-based design

We consider in this section the approach to designing with data that is 'evidence-based design'. Evidence-based design exemplifies trends beyond architecture and design and thereby highlights what is at stake, positively and negatively, for practitioners confronted with such epistemic demands. The field where the need for evidence-based architecture has arisen

particularly, and has persisted, is in medical and healthcare architecture.

Evidence-based design attempts to make architecture more scientific by basing design decisions on reliable information and data (e.g. Brandt et al. 2010, Evans 2009, O'Brien 2015, Sailer et al. 2007). Evidence-based design was initially centred around psychological studies conducted from the 1980s onwards that have assessed the impact of healthcare environments on patient outcomes. This version of evidence-based design is closely aligned to the design of healthcare facilities and models itself on evidence-based medicine (Cama 2009, Hamilton and Watkins 2009, McCullough 2010; cf. Lambert 2006, Timmermans and Berg 2003).

Evidence-based design is a diverse set of practices and methodologies, based on diverse studies and papers. The organisation that has attempted to consolidate 'evidence-based design' into a set of guidelines and established an assessment programme is the Center for Health Design, based in the USA. This organisation sees evidence-based design as the 'process of basing decisions about the built environment on credible research to achieve the best possible outcomes' (CHD 2018). The Center for Health Design has instituted itself as a private, regulatory body, producing certified practitioners of evidence-based design.

Architectural proponents of evidence-based approaches highlight how such approaches have become necessary in order to be 'able to predict design outcomes' (Brandt et al. 2010: 2): this is what is claimed by the authors of the book *Design Informed: Driving Innovation with Evidence-Based Design,* written for the American Institute of Architects. Evidence is manifold but also misunderstood, they write: '[t]here are many sources of data that might serve as evidence of design impacts. Post-occupancy evaluation surveys, often cited in discussions of EBD [evidence-based design], is only one method for seeking evidence. Computational, social and natural sciences are rich resources.' (ibid.: viii) As advocates of evidence-based design, they lament that this approach is 'often misunderstood' (ibid.: 2) and seen as 'overly prescriptive, rather than informative'. Evidence-based design is not only misunderstood by critics but also by some supporters: 'Others who like the notion don't fully grasp how to assess if evidence is strong or weak, and in what contexts the evidence is valid.' (ibid.: viii) Unlike other disciplines such as medicine, what is lacking in design practice are 'the research standards and protocols necessary for widespread development, application, and dissemination of research that could serve as evidence.' (ibid.: viii)

In Denmark, I encountered only a few practitioners who would call themselves explicitly 'evidence-based'. One of the few explicitly evidence-based design practitioners was an 'evidence-based design consultant' who ran her own built environment consultancy firm.

She was not educated as an architect. Instead, she was a healthcare worker who had changed careers by drawing on her practical experience and who then retrained in evidence-based design, via the American evidence-based design programme mentioned above. Before starting her own company, she had been in charge of healthcare projects at a big Danish architectural firm. In our conversation, she complained that she 'experiences architects claiming that they have used evidence-based design – but it is a claim more than a fact.' She said that her previous experience of working in an architectural company helped her realise that not being a trained architect in an architectural firm is a difficult starting point. 'It is kind of difficult to work as a non-architect in an architectural company because it is a very mono-disciplinary world.' Evidence-based design served as a means to establish herself and her expertise in the built environment industry, especially as an 'expert' in relation to healthcare architecture. 'I didn't want to position myself either as an architect or an engineer or a part of the health-care system itself. I wanted to be neutral and able to build bridges in-between the different parts of this very complex system.' As a practitioner, she uses evidence in her work and for this reason, for her, the evidence in evidence-based design is unlike, for instance, evidence in evidence-based medicine. In her view, evidence is project-dependent and its localised, direct relevance is negotiated in conversation and established in dialogue with project partners. For her, 'evidence is not only research, not only peer-reviewed research papers. Evidence is actually knowledge. Data. It is available data about a system. It can be project data, it can be reference data, it can be experience data. So there are multiple ways of understanding evidence.' Despite being qualified through the 'official' evidence-based design certification, she said that she created her own approach. She had her 'own kind of method that is adjusted from the EDAC-certification because that is too linear, too stiff when you work with a very complex system such as the healthcare business.' Here as elsewhere, evidence-based practices cannot easily be applied to any situation; the application of standards, protocols and guidelines always require 'local' interpretation (cf. Timmermans and Berg 1997).

Basing design on knowledge

This professional was one of the few self-professed 'evidence-based design' practitioners. Instead, this phenomenon seemed to be articulated in another register in Denmark: in the register of knowledge-based design (*vidensbaseret design)*. Conveniently, one might say, the only thing that needs to be dropped here for this to happen in Danish is to drop the 'e': *evidensbaseret design* (evidence-based design) becomes *vidensbaseret design* (knowledge-

based design). Before starting my fieldwork in Copenhagen, I thought I would observe 'evidence-based design' in action in one of the research teams in an architectural firm. This didn't prove as straightforward as I had imagined and constitutes one of the unexpectedly productive failures of fieldwork (cf. Carroll et al. 2017). Whilst architectural work in the studio has been documented ethnographically elsewhere (e.g. Yaneva 2009a, 2009b; Yarrow 2019), I intended to observe specifically dedicated 'research' groups across architectural studios. But I did not manage to negotiate prolonged 'access' to these studio spaces.[7] I found myself in email exchanges spanning many months. I was engaged in a particularly lengthy and promising exchange with one firm, but after many written exchanges and meetings, I was told that there was no space to accommodate me in the practice. But the process of negotiation revealed something else. I was asked many times what it was that I was after and what exactly I would observe. It seemed as if there was reluctance for me to see, or not see, certain aspects. I was told that it would be difficult to conduct 'research' in the practice. Everyone was 'very busy'. The official reason that was given to me in a meeting with one of the heads of those research group was a lack of 'space' and 'time' within the studio: I would surely require my own desk space alongside the team and I would need time from the team, both of which were currently not available within the business context of this architectural firm.

This doesn't mean that the language of 'evidence' was not evoked in Copenhagen. On the contrary, it was. One can read in many self-presentations, on websites or publications, of Danish architectural practices that their 'approach is scientific and evidence-based' or that their design is 'informed by evidence'. There was no lack of willingness to talk to me over coffee or over lunch, presenting to me through language what it meant to base design on research or evidence. In such meetings, architects talked to me about projects that they had completed, resembling the kinds of presentations that I regularly saw in BLOXHUB and elsewhere. These professionals were busy people and there seemed to be other 'economic' interests at stake. An architect in BLOXHUB with whom I talked about research access over lunch one day afterwards commented that such-and-such a firm probably did not want an outsider, from outside of the firm and outside of the profession, to evaluate their research practices, and wanted to avoid any potential problems for the business: 'There is a fine line between research and PR. And they might not want to risk bad PR.' It seemed that having me

[7] This does not mean that it is or was not possible. But rather that my initial focus of wanting to observe architectural research in practice proved to be difficult. Indeed, other anthropologists with a different research focus have managed to get access to such architectural studio spaces.

in the studio interrogating design practices posed a risk not worth taking. This was despite no intention on my side to evaluate or 'audit' their research practices. Being a PhD student from a university like Cambridge and not being an industrial PhD on their payroll seemingly just added to such worries.

Yet I talked to researchers working in such teams who showed me the work they had been doing and how it had impacted projects. Some of them also opened up about the difficulties of working in such environments, and their concerns about 'data' and 'evidence'. One of the charges levelled against basing design on 'evidence' is that it might seem innovative but, through its emphasis on existing knowledge, reproduces and recreates the status quo, and is, therefore, restrictive. Indeed, many architects I met expressed scepticism and worried that it limited their 'creativity', and one incident relayed to me by a researcher exemplified this explicitly. The researcher was not trained as an architect but worked at an architectural firm in Copenhagen, carrying out specialist analyses in relation to project work. The professional had presented a piece of research that they were asked to carry out for the project during an internal company workshop for a building that their firm was designing. The conclusions of this work suggested that the direction of the project should change substantially. The senior partner, an architect, who was leading the project dismissed this research during the workshop. He made clear that he was not interested in following it. In no uncertain terms, the researcher told me that the senior architect said (in Danish): 'your knowledge fucks with my creativity'. The researcher was shocked. They were especially shocked because their presence in the office and contribution to projects was frequently highlighted by the same senior partner whenever a client visit took place. Specialist knowledge can thus be perceived as threatening, regulating and imposing hierarchies on abductive reasoning processes, and challenging other kinds of knowledges such as 'experience', 'intuition' or simply aesthetic sensibilities. It is not only the content of evidence that poses challenges to its acceptance and persuasive powers; it also depends who presents information and in what context, as well as the specific form that it takes. In this instance, the fact that a junior, non-architect called into question the design that the senior architect had come up with was regarded as an insult to the architect's skill, experience and intuitive understanding. Not only had the senior partner invested his professional self in the specific design, but also the evidence challenged the expertise that constituted this self. He was able, however, to control and coordinate what knowledges were acceptable in the context of this project.

Knowledge-based design was thus practised in studio spaces in Copenhagen and versions

Figure 47. 'Healing architecture' exhibition

of 'evidence-based design' influenced buildings in Copenhagen and elsewhere in Denmark. In 2009, the Danish Building Research Institute and the Institute for Architecture and Design of Aalborg University published a guide on 'healing architecture' (Frandsen et al. 2009), which is a literature review of 'evidence-based design' in relation to the design of healthcare facilities. It is written in Danish and summarises in 275 pages much of the relevant literature for a Danish-speaking professional audience. It is difficult to retrace exactly how this publication, or evidence-based design, was taken up by architectural firms in Denmark. But the guide definitely seemed to be consulted by architectural firms working on healthcare facilities. For instance, at the beginning of 2018, the Danish Architecture Centre hosted a small exhibition on new hospitals that were designed or planned by Danish architectural firms (Fig. 47). The Danish regions, who are the political bodies in charge of hospitals in Denmark, planned to renovate or construct 43 new hospitals by 2025. The projected cost of 41.4 billion Danish kroner (£47 billion) is a significant investment and, as the exhibition pointed out, this opportunity was seen as a way to ensure the longevity of public healthcare in Denmark by updating some of its infrastructure. The principles of evidence-based design, or 'healing

architecture' as it was glossed, are meant to support the objectives of the healthcare system: at best, leading to better treatment and faster recovery or, at least, to ensure that the healthcare environment does not have any negative impact on patients. For this reason, one of the exhibition panels made clear that '[y]ou will find these design principles in several of the new hospitals.' The exhibited architectural projects were presented as following or incorporating many of the suggestions contained in the Danish 'healing architecture' guide.

At least two psychiatric hospitals in Denmark that were included in the 'Architecture with added value' project, which we will encounter in the following chapter, used the 'healing architecture' publication as a guide. The architect in charge of the project said that, as part of an assessment after the projects were in use, doctors had provided feedback that pointed to 'lower forced fixation rates' and a reduced use of tranquilisers. These effects were also attributed to the architecture of the places. But the architect emphasised that this relation between a building and its apparent effects would not be one of 'pure causality' but rather one of 'enhanced probability'.

This problematic of correlating certain desired effects with spatial configurations and evaluating the validity of these claims is what evidence-based design purports to achieve. But the assessment of 'enhanced probability' captures the lingering uncertainties, which are acknowledged by some of the leading voices of evidence-based design. For instance, most histories of evidence-based design lead back to a seminal paper published in 1984 by the environmental psychologist Roger S. Ulrich, then at the University of Delaware, in the journal *Science*. His two-page paper 'View through a window may influence recovery from surgery' (Ulrich 1984) analysed recovery rates of patients after gallbladder removal surgery in a Pennsylvanian hospital from 1972 to 1981. The difference between the patients was that one group of 23 patients was assigned to rooms with windows looking onto what the study evoked as 'nature', i.e. plants or trees. Another group of 23 patients was the control group. They were put in rooms that the study identifies as comparable to the rooms of the other patients - with the supposed main difference being that the windows in those rooms did not look onto 'nature', they looked onto a brick wall. The conclusion that patients with the view onto trees or plants 'had shorter postoperative hospital stays, received fewer negative evaluative comments in nurses' notes, and took fewer potent analgesics' (ibid.: 420) than their counterparts seemed to suggest – note the 'may' in Ulrich's title – that a specific design intervention, having a window with a view onto nature, can have a direct effect on people, here specifically in health outcomes. A connection between a design and direct effects was not

a claim that until then could be backed up with research or 'data' by designers or researchers. Until then, such relations relied on the knowledge, experience, authority or 'intuition' of the relevant architects-in-charge. Recently, one key figure in the evidence-based design movement, D. Kirk Hamilton, discussed the impact of Ulrich's paper in the main journal called *Health Environments Research & Design Journal:*

> 'Architects like me knew that physical and natural environments had impacts on those who experienced them, and we were certain that nature almost always played a positive role. We never before had access to the kind of evidence Ulrich had suddenly provided to support our instinctive beliefs.' (Hamilton 2016: 156)

This comment – that evidence-based design could or should validate the 'instinctive beliefs' of architects – resonates again with how architectural practitioners approach the potential of data-driven approaches. The fact that Ulrich's 1984 paper appeared in the peer-reviewed, scientific journal *Science* was important. It gave credence to those design intuitions – or to 'common sense' as it was formulated to me in the field. It gave healthcare architects a reason to argue for certain design interventions, such as windows in patient rooms. The problem, however, is the 'may' in Ulrich's original study. Hamilton, a key figure in the evidence-based design movement, went on to discuss how over time and with more studies reviewed, 'the healthcare architecture profession took it as gospel that patient rooms should have windows, ample natural light, views of nature' (Hamilton 2016: 157). This had been codified in building codes. He drew attention, however, to a recently published study that raised doubts about the effects of windows. He concludes that a single study which might not be replicated could not be used to generalise, but that different methodologies could provide greater reassurance and also that 'we need to remember that research never 'proves' anything EVER; it only reveals findings for each specific study sample at that specific study site.' (ibid.: 158) One of the perceived problems with evidence-based approaches is also the applicability of general evidence to specific architectural projects. This mirrors the problematic in evidence-based medicine of how to reconcile general population data to a specific patient's needs; or how to reconcile the standardised medical body with a person's specific body (cf. McDonald 2014, 2018a), is a similar question. Modern architecture has grouped similar buildings together by function into typologies of buildings, such as hospitals, office buildings, and so on. In the case of healthcare, this has allowed for the emergence of a specialist architectural knowledge matching a building typology of public health architectures, mostly hospitals, but also extending to care homes, etc.

The idea that decisions should be based on the best available data appears, at first sight, as something that is hardly objectionable. On closer inspection, multiple lines of criticism can be levelled against evidence-based design and other evidence-based practices. The problems with basing decisions on evidence are not specific to evidence-based design per se but stretch across the spectrum of evidence-based decision-making processes. Anthropological discussions of other evidence-based practices - especially within medicine and other areas of policy-making (cf. Lambert 2006, Lambert et al. 2006) – highlight comparable issues. Many of the problematics that evidence-based approaches pose for medicine can be translated into the field of design. Drawing on the work of Lambert (2006: 2634), one can summarise that abstract evidence cannot easily be applied to concrete cases. Moreover, evidence-based practices have a bias towards certain kinds of interventions, e.g. ones that are easily provable, replicable or inexpensive interventions. Such approaches generate formulaic protocols, procedures and guidelines, whereby experiential knowledge and expertise risks being side-lined.

Against evidence-based design

Some Danish critics of evidence-based approaches agreed that architects should continue to draw on their disciplinary strengths and distinguishing features. One of those critics was an architect, Jesper Pagh, who then became director of the Danish Association of Architects (*Arkitektforenigen*) from 2015-17.

In an article for the main Danish architectural journal *Arkitekten*, Pagh (2013) argued passionately against evidence-based design, which he viewed as an external influence on architects. He lamented that evidence-based design was a development that had gained much traction among architects and designers. This was seen to be a paradox because this was happening at the same time as other professionals were becoming aware of the importance, you might say value (see next chapter), of architectural skills based on 'creativity' and 'intuition'. These last notions, with their disciplinary significance, were repeatedly placed in direct opposition to evidence-based approaches.

> 'While engineering firms, public institutions and government agencies and even economists are envious of architects' and designers' creative and intuitive methods, which are able to handle complex issues holistically and create new, surprising and cross-border solutions to the world's most urgent problems, an increasing number of architects and designers turn away from exactly this and throw themselves at evidence-

based design. It sounds appealing that design is based on evidence.' (ibid.: 68)

What was highlighted here were relations between architecture and other disciplines and professions, and what many architects viewed as their own particular professional abilities: an approach that is shaped by 'intuition' and 'creativity', and methods that can grasp and digest complex problems and create impact through 'solutions' to global challenges. Pagh argued against simplistic architectural products that could be produced and applied anywhere. The descriptive label of 'evidence' was applied too loosely to market existing work:

> 'First of all, there is nothing new about evidence-based design. Rather, it is a return to a long-abandoned idea, based on a positivist understanding of science, that it is possible to calculate optimal solutions, which can then be scaled up, produced and distributed anywhere by anyone. […] Secondly, what is called evidence-based design is, in reality, not based on evidence. There is a lot of talk about a kind of near-empirical documentation that points out that one thing is better than something else, and most of what is written in competition submissions and on websites of architectural firms is inconsistent non-sense in order to legitimise solutions that have come about through good old-fashioned sketch work. By professing evidence-based design, you renounce the basis of good design work: That solutions come about through hard and continuous work with program, place, materials and technology.' (ibid.: 68)

According to this analysis, an architectural motivation to turn to evidence-based design has stemmed from an anxiety concerning the demand to demonstrate that design interventions are effective. Budget cuts and related 'economic pressures' had led to a situation in which it was necessary to prove that money was spent correctly and efficiently; and 'impact' had to be measured in some way. Evidence-based design offered false hope that it was possible to offer such reassurances. Pagh concluded by saying that, '[i]t is a profession in deep crisis that responds to external attacks by sowing doubts about its own values, and hopefully this is over soon.' (ibid.: 68)

Pagh's architectural position echoes Marilyn Strathern's insights on 'impact' in the context of disciplinary encounters; she warns that a 'discipline's success becomes defined in terms of how well it *produces* or performs its relational potential. Making responsiveness *relevant* is to assume that responsiveness only gives evidence of itself when its use can be shown by those on whom it has impact.' (Strathern 2006b: 103, original emphasis) In other words, notions such as 'impact' or 'evidence', narrowly defined, risk undermining and devaluing the distinctive contributions of a discipline or profession.

Despite such interventions, perceived pressure to demonstrate impact have not only persisted but, as we examine in the next chapter now, have become even more pronounced to the extent that architectural organisations seek to find architectural responses reformulated in the language of business.

Figure 48. 'Architecture with added value' exhibition

Chapter 5 Added value

We have had indications in previous chapters that perceived pressures termed 'economic' are placed on architects and architecture as a profession.[1] We now explore this aspect further. One consequence of this has been that architects have sought to show not only the 'impact' of their work – but also what they see as the 'added value' of architecture, especially with measurable and calculable data.

Here, we examine particularly the work of one BLOXHUB member, an organisation called *Danske Ark*, which is the representative organisation for architectural firms in Denmark. Danske Ark carried out work to draw attention to the added value of architecture, especially to the value that architecture accrues over time, over the lifecycle of a building, along with any immediately transformative impact that an architectural project might have. One way that architectural value has been shown has been through calculating potential cost savings generated by a design: according to Danske Ark, these savings should be taken into account during the financial appraisal of the proposed project. Again, this requires calculable data, particularly as numbers. One example that was given by Danske Ark for how architectural design can lead to massive cost savings included designing buildings, especially workplaces, in such a way that they result in fewer sick days for those who use the building, and might therefore keep employees healthy. Architects were sure that they added value. Rather the issue, for Danske Ark, was how to 'document' this production of value, to be able to show 'the added value of architecture' to other professions.

As we will see, this process necessitated the production of models, including models of value, models of architecture as a profession in Denmark, business models and models of architectural quality. Architectural scale models, maps and perspectival drawing practices have provided architects with a perspective that they felt gave them an overview over their designs and plans and made it possible to design from afar, typically handing over their drawings and designs to non-architects to construct buildings. When applied to architecture and urban planning, this overview perspective – an apparently detached view, as if from nowhere – has been frequently criticised by anthropologists and allied scholars (e.g. Holston

[1] Recent ethnographic attention has been on the 'value' of buildings and architecture in the context of mortgages (e.g. Ackroyd 2019, Jiménez 2017, Stout 2016), processes of financialization (Bruun 2018), alternative values attached to houses (Sjørslev 2012) and the 2008 financial crisis (Stender 2018). This literature adds to related, earlier anthropological discussions of 'houses' and 'households' (Carsten and Hugh-Jones 1995), conceptions of 'property' and 'ownership' (e.g. Hann 1998) and other seemingly related categories such as 'assets' (Guyer 1997, 2016).

1989, Rabinow 1989, Scott 1998). Modernist architects particularly were criticised for claiming ‘a bird’s eye view’ of the world and architecture, for planning buildings and cities from above, for seemingly never having been on the ground and having encountered the people and how they lived their lives. Today architectural practitioners lament a different situation: many of them feel they have lost power as a profession and identify tensions with other professionals, whose models – especially business models and cost-cutting economic logics – risk shaping, or have already come to shape, designs and finished buildings more than any grand design visions. As in other professional situations in Europe, the ‘economic’ feels more real and dominates (McDonald 2012). The language of numbers, calculations and financial gains has become a common and powerful language in exchanges between professions and disciplines. Architecture has also become articulated in the language of economics. Architectural decisions that could otherwise be dismissed as judgements of taste or aesthetic changes, are seen as too expensive and as an unnecessary cost. To regain control, those aspects of architecture – referred to as its social, cultural, and environmental dimensions – have to be shown now to be economically productive, to produce value.

What is being modelled in his process is not only relations between built environment professionals and architects but also what constitutes and distinguishes architecture. Why should one employ architects at all? Architects claim to go beyond what is perceived to be economic and to consider what are framed as social and environmental concerns also. Having an overview perspective in this sense, and not a narrow point of view, is claimed to be what sets architecture apart from other professions: this is what is felt to produce architectural quality and how architecture adds value.

The value of architecture

Valorising architecture

Representatives from BLOXHUB member organisations, such as from Danske Ark whom we encounter in this chapter, frequently came into BLOXHUB. They attended events in BLOX, gave talks to the rest of the BLOXHUB community or presented their work to visiting delegations. Just a couple of walking minutes away from BLOX – walking up *Vester Voldgade,* which constituted the Street Lab of Copenhagen Solutions Lab – there is Copenhagen's town hall, the beginning of Copenhagen's main shopping street *Strøget* and, on the other side of the square, a glass building called the House of Industry (*Industriens Hus*) that houses the offices of multiple companies.

From mid-March to the end of April 2017, the lobby of *Industriens Hus* housed an exhibition called *Arkitektur og design med merværdi – en god forretning* ('Architecture and design with added value – a good business') (cf. Introduction, see Fig. 48). This exhibition was organised by Danske Ark, which is the name of the Danish Association of Architectural Firms, in collaboration with the architecture school in Copenhagen. The title 'Architecture and design with added value – a good business' conveyed an attempt to show that employing architects and designers was a worthwhile investment that generated *merværdi* or 'added value'. A literal English translation of the Danish word *merværdi* would be 'more value'. *Merværdi* is felt to be the Danish equivalent of the German term 'Mehrwert', which is the original German term that Karl Marx used in *Das Kapital* (1867) and is usually translated as 'surplus value' in English. Marx used the concept to describe the increase of value that is produced through labour. In addition to the concepts of use-value and exchange-value, surplus-value forms one of the central tenets of Marxist theories of value. Surplus value is the difference between the sales price of something and its production and labour costs. This is also how many people in Denmark encounter *merværdi* in their everyday lives: in the form of *merværdiafgift*, also called *moms,* which is the 'value-added tax' that buyers pay when purchasing goods and services. Perhaps unsurprisingly for an employers' organisation, one of the *Danske Ark* organisers later clarified that the reference to Marx was not intentional. Rather, it was taken from the language of contemporary business. Nonetheless, the points conveyed in the *Arkitektur med merværdi* project are, arguably, founded on basic Marxist understandings of value that see value created through labour. The concept of *merværdi*

(as employed in the exhibition) emphasised architectural labour as a source of value and highlighted that material cost is only one factor in the production of this value. Architectural *værdiskabelse* (production of value) is imagined to be both generative and additive: an architectural project does not only generate the desired built environment but, through architectural labour, produces 'more', here conceptualised as *merværdi*. The English version of the accompanying exhibition booklet entitled *Arkitektur med merværdi* (Danske Arkitektvirksomheder 2017), translated by Danske Ark, is simply entitled 'Architecture creates value' (The Danish Association of Architectural Firms 2017). The main point that was emphasised by Danske Ark was 'value-creation'. By this they sought to highlight that employing architects does not only cost money but instead should be seen as a valuable investment. Although most, if not all, architects I met in Copenhagen would agree that architectural design produced or added value, they would probably also agree that 'value' needs to be questioned and carefully considered.

Recent anthropological investigations into value have noted the multiple understandings of value that people hold (e.g. Graeber 2005, Robbins and Sommerschuh 2016). Anthropological approaches have gone beyond understandings taken from the discipline of economics that focus on value as price. Rather, such conceptualisations have served as starting points to investigate whatever is or might be valued by the people that anthropologists work with.[2]

> 'The promise of value theory […] has been to understand the workings of any system of exchange (including free-market capitalism) as part of larger systems of meaning, one containing conceptions of what the cosmos is ultimately about and what is worth pursuing in it.' (Graeber 2005: 443)

The question of how architecture adds value made Danske Ark consider these issues in the context of architecture, examining what architecture was about. The architect at Danske Ark responsible for the project summarised this by referring to the issues of 'meaning' ('what do you value?') and 'measurement' ('how do you measure value?').

The exhibition sought to highlight the role of architects in creating specific values. One of the architectural projects featured in the exhibition was the redevelopment of *Sønder Boulevard* (Southern Boulevard) by SLA, an architecture and design practice based in

[2] One strand of such anthropological approaches, developing the work of anthropologist Louis Dumont (1980, 1986, 1994) and engaging with the anthropological literature on ethics and morality (e.g. Laidlaw 2002, 2014, 2017; Mattingly and Throop 2018), has begun to chart and conceptualise whether values that people pursue are largely in conflict or in harmony (Robbins 2013). Another strand of anthropological approaches – by, for instance, anthropologists David Graeber (2001, 2005, 2013), Nancy Munn (1986) and Terence Turner (2008) – has drawn attention to the role of human actions in the production of values.

Figure 49. Sønder Boulevard in exhibition video

Copenhagen (Fig. 49). Sønder Boulevard is a busy road in the neighbourhood of *Vesterbro*, located not far from the main train station in Copenhagen. As part of the redevelopment, SLA have added green spaces and other amenities, such as seating opportunities and playgrounds for children, to the boulevard. The project was often said to be a successful example of Copenhagen's recent urban developments (SLA 2018). A general assessment that the project had transformed the area was also one of the reasons that the project was included in the exhibition. According to the accompanying booklet, the Sønder Boulevard project has 'given such a decisive lift to the area that the city park will be back paid *samfundsøkonomisk* in a year and a half'. The Danish word *samfundsøkonomisk* translates literally as 'society-economic' and will be discussed in more detail shortly. The booklet further stated that the 'value of the green avenue is seven times more than the total construction costs'. The economic impact of the project was given numerical values: the value generated by the project was seven times the construction costs of the project. The value was made measurable and calculable on the basis that, with the redevelopment of Sønder Boulevard, 'property prices rose by 351 million Danish kroner' (around £40 million), as the exhibition video stated (Fig.

49).[3] It was not communicated in the exhibition or the booklet exactly how these calculations were made.[4] Rather what seemed to matter was the general implication that the value of the architectural project was much bigger than its cost. Another publication that was available online explained that, due to the increased property prices, 'the City of Copenhagen obtains 12 million Danish kroner extra in tax revenue.' (Danske Ark 2017) The impact of architecture was stated in the language of economics, which is borrowed and appropriated to establish an impact as real, and architecture as valuable.

The *Arkitektur med merværdi* project aimed to document and demonstrate that there were direct correlations, and ideally causative relations, between architectural projects like Sønder Boulevard and measurable and calculable effects that 'add value'. The transformation of the boulevard was assumed to have had direct effects on the area. The rise in property prices around the boulevard was taken as an indication that such value transformations had taken place. Social scientific studies of measurements and enumeration (e.g. Merry 2011, 2016) highlight the persuasive character of numbers in many contexts. Numbers and statistics are typically trusted in Europe (Porter 1995). Amongst other factors, there is an association of numbers and their calculation with the natural sciences and scientific values such as objectivity, certainty and precision (cf. Wise 1995). An inclusion of numbers here sought to show that proclaimed increases in value had actually happened and to remove any doubt about them – even if not all dimensions of generated value could be expressed or calculated numerically.

In the case of Sønder Boulevard, property owners around the boulevard were set to reap the main direct benefits of this kind of economic value increase wrought by an architectural project. When one of the exhibition's organisers talked to me about the project, they mentioned that increased property prices were not necessarily a good thing per se but that 'the market had recognised that value'. Here was a demonstration that the 'quality of space had an impact on the economy'. The numbers helped to make the argument and render market value visible. In Europe, market value is seen to be produced in and for an economy, which is usually spatialised as a place. 'The economy' is performed and rendered intelligible through numbers, statistics and other 'market devices' (MacKenzie et al. 2007, Muniesa et al. 2007).

[3] Rising property prices are not necessarily a positive trend for many built environment professionals. On the contrary, the lack of 'affordable housing' and the resulting changes in neighbourhoods, usually termed *gentrificering* (gentrification), are increasing worries for many Copenhageners and policymakers alike.
[4] The sources for the numbers and how they were calculated are not included here. This is common practice in much design and architectural work.

Yet these are not the only kind of values that could be generated: 'architecture creates value in many dimensions – social, environmental, and economic.' (Danske Arkitektvirksomheder 2017) In addition to the property owners around Sønder Boulevard, it was especially 'society' (*samfund*) that can expect to gain something. The concept of *samfundsøkonomi* (literally: 'society economics') is mentioned in the Danish description of the Sønder Boulevard project and this Danish term broadly corresponds to the disciplinary branch of economics that is usually referred to as macroeconomics in English – but the Danish version points to a particular emphasis on 'society' (*samfund*). In the case of Sønder Boulevard, it referred to the extra tax revenue that the City of Copenhagen gained, and the potential uses for 'society' in Copenhagen of that money. The relation between 'the economy' and 'society' is a key dynamic for the conceptualisation of the Danish 'welfare' system (cf. Olwig and Paerregaard 2011, see Chapter 6). Architectural commentators in Denmark (e.g. Jensen and Weiss 2016) argue that living in and experiencing the Danish welfare state and its founding values, such as providing universal welfare to ensure a good basic living situation for all, has influenced architects in Denmark and the way in which they design their buildings.[5]

Sønder Boulevard was one example from the exhibition that was cited to demonstrate how architecture had created measurable changes. The next section will focus further on how the language of economics – and the associated business models – were employed in order to valorise the work of architects.

'Every building is a business model'

The organisation that produced the 'Architecture with added value' exhibition was Danske Ark. Danske Ark is, in English, the 'Danish Association of Architectural Firms' (*Danske Arkitektvirksomheder)*. It is the representative organisation of architectural firms, an employers' organisation. The purpose of Danske Ark is, according to their self-presentation, 'to represent commercial interests of practising architects and to strengthen their position and improve the quality level and professionalism of Danish architectural firms.' (DAAF 2017) It is, therefore, not an organisation that individual architects can join. Not all architectural firms can join either. First, to become a 'company' in Denmark, the firm needs to be registered with

[5] See Lotz et al. (2017) for a recent architectural survey of the links between the Danish welfare state and specific buildings. The anthropologist Keith Murphy (2015) in *Swedish Design* examined how social democratic values are made present through the design of everyday things, such as household goods. The design of the 'home' and its goods has been the subject of ethnographic attention (e.g. Buchli 2010a, Pink et al. 2017). In Denmark, how to light the home, for example, is an important dimension of how to construct a 'homely atmosphere' (Bille 2019).

the Danish state in the form of the Danish Commerce and Companies Agency and receive a CVR-number. CVR stands for the Central Business Register, *Centrale Virksomhedsregister*. The CVR-number identifies the business. It is a number needed to open a business bank account or to take out professional insurance. Potential company members then formally apply to Danske Ark and through it have to be recognised as an architectural company by architectural peers. Potential members need to satisfy certain requirements to be eligible to join as an 'architectural firm'. A firm needs to have professional liability insurance and at least one person in the management of the firm needs to have a degree in architecture and at least five years of work experience as an architect, including two years as a self-employed architect or two years of leading a department in an architectural firm (DAAF 2017). There are two other professional organisations for architects as individuals in Denmark. There is the trade union for architects (*Forbundet Arkitekter og Designere*), which provides practical advice and help for architects and designers, particularly in relation to their employment or self-employment, and the Danish Association of Architects (*Arkitektforeningen*), which amongst other things is responsible for the accreditation of architects in Denmark: membership is restricted to those who hold a completed master's degree from one of the two Danish architecture schools or from an EU-recognised school of architecture. Memberships in Danske Ark and Arkitektforeningen are meant to signal professional quality and safeguard architectural standards within the discipline. Architecture is not a profession that is regulated by law in Denmark. For this reason, it is not the state but Danske Ark and Arkitektforeningen that, if necessary, provide their members with certificates stating that they satisfy the necessary educational and professional requirements according to EU Directive 2005/36/EC, which regulates the 'mutual recognition' of professional qualifications in the EU. According to the Danish Building Act, it is the responsibility of the building owner to make sure that the proposed building is in accordance with the relevant regulatory frameworks. Municipalities are the responsible building authorities in Denmark that review planning applications and issue building permits. Having professional insurance is important because building owners can seek compensation for design or construction defects from the relevant architect, engineer or construction firm. Thus, the organisational perspective of Danske Ark is special. As a member organisation, it aims to shape the conditions in which architecture is practised in Denmark and beyond.

I had contacted one of the representatives of Danske Ark who had led the project that resulted in the exhibition. He was an architect who had at the architecture school in

Copenhagen, and had worked as an architect at various architectural offices in Denmark. We met in the offices of Danske Ark in *Industriens Hus,* which also serves as the headquarters of *Danske Industri* (The Confederation of Danish Industry), one of the main employers' organisations in Denmark. Other organisations rented office space in the same building. The side entrance that doubles as Danske Ark's main entrance was shared with what are seen as political organisations such as 'State of Green' (a public-private partnership promoting Danish companies and organisations, cf. Chapter 1). The lobby space of the main entrance was used to showcase small exhibitions championing industries in Denmark in a broad sense. This was where the *Arkitektur med merværdi* exhibition had taken place and now it hosted an exhibition on the Danish Design Award.

We went up to the sixth floor of the building to get a coffee in the canteen. Most of the meetings I had with professionals took place over coffee or lunch; this time-slot seemed to be the space for professional meetings that were not related to their immediate work. The architect pulled up a presentation on his iPad at the beginning of the conversation, to help him illustrate what they saw was currently going wrong in the field of architecture in Denmark. I had seen him give these presentations at three or four other times in different settings, including at BLOXHUB and the Danish Architecture Centre. In this sense, I constituted a public and, if anything, I received a more detailed version of the presentations. He presented in English, although he had two versions of each presentation, in Danish and in English, depending on the audience. Afterwards he commented that articulating and presenting his ideas to me helped him to hone his presentation skills for all these professional audiences.

Although he was an architect, at this stage in his career, he said that he did not make the kinds of models any more that are typically associated with architecture: scale models of buildings. But he still made models of architecture, representations of architecture on his computer – such as the ones he showed me in his iPad presentation. They were representations of the profession as a whole and took the form of diagrams and explanatory text. He also called them models, 'business models'. Diagrams, because of their image form, are favoured in many professional presentations of architects and convey information differently from pure text. In the case of the iPad presentation, the diagrams illustrated the relations between architecture and other disciplines. First, I was shown the image of a Danish magazine advertisement on the iPad. On the image you could see a building with grass on its roof. The Danish text next to it read: 'When architects want to have grass on the roof ... Who is wearing the 'is-this-going-to-sell' hat?' It is an advertisement by a Danish real estate

Figure 50. 'The value of architecture' diagram (presented at an event)

company, ridiculing a perceived architectural trend portrayed as wasteful and unnecessary. I was told that this encapsulated how other professionals viewed architects: creating unnecessary costs; but that an architectural decision like putting grass on roofs could, in some cases, really add value to projects. He flicked to another image on his iPad. It was a recent building with a grass roof, the Moesgaard Museum in Aarhus designed by Henning Larsen Architects. It was a new building complex for the museum, located north of the old museum, and it now apparently attracted seven times more visitors with the new grass roofed building added. The architecture had created a new attractive destination for the city of Aarhus, it produced 'added value'. The museum project was part of the 'Architecture with added value' exhibition and project. The architect telling me all this was generally unhappy about the term 'added value' because of its history and connotations in Marxist theory. He preferred the term 'value-creation' because 'every building is a business model'. Pulling up a new slide, he said that the key questions were around 'meaning: what do you value?' and around 'measurement: how do you measure it?' Next, the iPad showed a diagram with multiple circles and with the labels 'cost' and 'value'. The diagram put cost and value in relation to a building's lifecycle

– that is from idea to design, fabrication, operation and usage. The argument was that up until now, the focus had been on construction costs but actually you needed to consider the value created for the user organisation once the building is occupied. To make this point, the diagram showed a huge circle labelled 'business value' that was much bigger than a smaller circle labelled 'business costs' and much bigger than all the other circles that indicated 'construction costs' (Fig. 50).

Whilst doing the research for the 'architecture with added value' project, this architect had been concerned to see that his professional colleagues lacked common methodologies on how to capture the effects of their buildings or did not routinely record or document the measurable effects that their projects had. He had often had to find the information himself. For this reason, Danske Ark is now preparing a 'toolbox', a set of approaches and methods of 'data management' for architects, outlining how they could record this information and capture the effects of their projects. The value was 'there' but what was required was a way of 'making tacit knowledge explicit.' Ideally measurements were taken, and numbers were used to convey this value because this helped architects in arguing for their position with other professionals: 'If you can't explain the value of architecture, how do you get someone to pay for it?' Although the need to document effects could 'produce a documentation regime' that could be seen as a burden for architects, it was ultimately in the interest of architects to do this because 'it enhances their reputation, gives access to future jobs. They become better architects, it offers a better situation in the marketplace, and you get a better end-product.'

Not all architects necessarily shared this view. I was told that another architect had recently disagreed publicly on a social media post on this topic and declared: 'You don't understand what architects do.' Collecting this information on the effects of buildings was a cost and an investment and not all firms could afford to do it, especially as architectural firms do not usually get paid for any work that is carried out after the building is constructed and handed over to its user organisation. As a representative of Danske Ark, my interlocutor's job was to 'make strategies for the entire profession' and to improve the 'context of practice'. Danske Ark as an organisation has an overview of the profession as a whole, achieved through talking to its member firms and taking into account the broader developments that affect architecture in Denmark. In giving presentations to me and to other professionals in Denmark, using diagrams and other forms, such as the exhibition, publications and online content, employees of Danske Ark actively construct 'architecture' in Denmark and influence what architecture as a professional practice should be and how it should be practised.

The language and idioms of business, of added values, have become the dominant and common shared language across professions (cf. Cefkin 2009, Chapman 1996, Suchman 2013 for examples of anthropological encounters with business idioms and practice). Demands to produce and demonstrate value can be found in corporate contexts (e.g. Moeran 2010, Stein 2017) as well as public institutions (Miller 2003); and in addition to claiming economic value, companies now talk about the corporate values that underpin their brands and reputations (Krause-Jensen 2011). In other professional contexts, claims to added value are sometimes made explicit as an articulation of skill, craft, or provenance – how and where a product is produced and by whom (Paxson 2010, 2013). This is also the case for 'Danish architecture' as enacted by Danske Ark, or indeed by the BLOX project.

The articulation of an architecture that 'adds value' in Denmark assumes that there are other architectures out there that do not add value. Beyond the call to collaborate, architecture has become a competitive business. Technological change is both an opportunity and, as with many professions, a potential threat also, as it is feared that automation and computerisation can render some professional activities obsolete. Architecture is not necessarily an exception. Being able to produce drawings by hand was once the distinguishing feature of being an architect during the twentieth century. Today it is possible to be an architect and produce architectural drawings solely on the computer. It has become standard and expected practice that 'computer-aided design' ('CAD') and other technological means to produce drawings are employed in architectural firms. The use of these computer programs is taught in architectural schools. Other professions, such as structural engineers, can produce drawings of buildings that could be built, without any input from architects. This potential, existential threat produces tensions within the discipline of architecture and with other professions, as Danske Ark detected: it requires architecture to articulate its specific and unique disciplinary contribution that cannot be replicated by other professions. Architecture must add value.

Modelling architectural performances

The *Arkitektur med merværdi* exhibition featured various architectural projects in Denmark in the form of architectural scale models, videos and photos, as well as descriptive texts and numbers. Practices of modelling are central to much of architecture (Yaneva 2005, 2009a, 2009b; Yarrow 2019). From drawings and scale models to computer-generated, three-dimensional models, architectural models of various materials and sizes have enabled processes of imagining, doing and building architectures. In her ethnographic work with the

architectural practice OMA and their modelling practices, Albena Yaneva (2005) emphasises how buildings are enacted by architects through working with various models, information and scales: 'Moving up and down in scale lets us discover two hologram-like faces of the building: one small, vague and data-poor, the other large, detailed and data-rich; being maintained as such, they make it possible for the building to emerge in the architectural office.' (ibid.: 885) Scale models are not the only models that enable architecture as a professional practice. Danske Ark sought to draw attention to other models, especially business and economic models, that condition and shape architecture as a profession and practice. Similarly, the diagrammatic, explanatory models that were evoked in the presentation – models that convey an opposition between 'value' and 'cost' and that associate architecture with value and show that 'architecture makes business sense' – illustrate how pervasive economic logics have become in many professional contexts including architecture. At the same time, exhibiting or presenting these models aims to shift ideas about architecture that architects themselves have or that other professions might hold. This work of Danske Ark was described as 'crafting mind-sets by educating business leaders' and 'coaching' architects by 'developing strategies with them'. This aimed to shift the conditions of contemporary architectural practice.

The architect from Danske Ark became interested in what he called the value-chain (*værdikæden*) of architecture and how to model the 'performance' of buildings as a result of his previous architectural work. Modelling and simulating are connected processes. In the world of architecture, computer-based simulations of how, for instance, a specific building performs is also usually referred to as modelling (cf. Turkle 2009, Loukissas 2009: 154). Other practitioners use the term simulation to describe the process of using or running a specific model – that is the performance of a model, typically conceptualised as a system, over time. Theorists such as Bruno Latour and Albena Yaneva (2008), in their call for an actor-network-theory-based view of architecture, criticised architects conceptualising buildings as 'static'. By contrast, many of the architects I met in Copenhagen talked about the 'life' or 'lifecycles' of buildings and their performances – as well as the 'urban life' that they aimed to create around buildings. Conceptualising architecture as alive and organic has historical precedents (e.g. Steadman 2008) and this kind of vitalist language flourished in architecture over the twentieth century (cf. Forty 2004: 103). In the last couple of years, computer models and simulations have helped to make architectures come to life on screen, and more and more aspects of an architecture's 'performance' can be simulated and tested via various computer

programs. ‘Performance’ can refer to almost any aspect of a project that can be analysed and, typically, measured or evaluated – including features of the building, its relation to the environment around it or the people that use it. This analysis can range from assessing the sustainability of construction materials, evaluating indoor climate or electricity consumption to modelling sun paths or potential people movements in and around the space. The language of performance is one that is shared with economic models and, in particular, auditive forms of assessment (cf. Strathern 2000). In contrast to these modelling practices that take place during the design phase and before construction, systematic evaluations of post-design and post-construction performance of built projects, often called post-occupancy evaluations, have not become standard practice for architects yet.[6]

To grasp what was meant by performance-based modelling of buildings, the same architect and I talked about the redevelopment of a building in the Frederiksberg part of Copenhagen that he had worked on. The original building complex had been built in the 1930s by the Danish architect Vilhelm Lauritzen. *Radiohuset* (Radio House) was one of the main buildings of the Danish national broadcasting company DR before DR had moved to a new location in Copenhagen called *DR Byen*, which was inaugurated in the mid-2000s. *Radiohuset* was vacated by DR and a competition was held to redevelop and adapt the building to be used by the Royal Danish Academy of Music.[7] This architectural competition was won and carried out by the firm of the original architect who had already died: Vilhelm Lauritzen Architects. The building had to be adapted for its future use – especially in relation to the concert hall and the practice rooms to be used by the musicians. My interloctutor from Danske Ark had become interested in performance-based models as a result of trying to understand and bring together the ‘experience of space’ and the ‘science of acoustics’ for this purpose. He described how sound was a ‘physical phenomenon’ that can be modelled through spatialised scientific models and computer programs. These models show how a building would perform, in this case how sound would be produced in the future building, and the design can be adapted accordingly, to produce the best possible outcome. This led to the realisation that modelling such performance-based models could be ‘powerful tools’ for architects because they ‘give more control over the design and more power to the architect.’ These models brought what he called ‘hard facts’ to the discussion table with the client and the contractor about why and how a building should look. This was necessary because architects ‘lose power’ to contractors

[6] Conventional architectural reviews do not fall into this category of ‘post-occupancy evaluations’.
[7] See VLA (2020) and DAC (2020) for condensed histories of *Radiohuset*.

during the construction phase, contractors wanting to build as cheaply as possible to make greater profit

I heard much of this was the result of how contracts were set up across Denmark and Scandinavia. Another diagram appeared on the iPad with an overview of the different design phases. During the construction phase, the focus was first on the client and then on the contractor. But if the architect could not supervise the construction phase or did not possess enough power, then the contractor 'will compromise the quality of the project. This is how they work. This is where they make the profit.' Performance-based models or other recent computer-based modelling programs – he gave me the example of building-information modelling - can help architects 'have control over the quality of the building'. These simulations were complementary to other modelling practices. It was explained to me how the *Radiohuset* architectural team made a full-scale mock-up of one music room in a corner of the building. But 'the musicians hated it, they hated our design.' This was a reminder that 'models are far from perfect' and that a building's future performance needs to be anticipated in various ways across its lifecycle: both through computer-based simulations and through consulting the building's future users.

Modelling and simulating emerged here as 'powerful tools'. The anthropologist Stefan Helmreich (1998), who carried out an ethnographic study of computer-based simulations of 'life' by scientists in an American research institute in Santa Fe, evoked similar points when he criticised a development project run by another anthropologist, seeking to utilise simulations, for leaving out 'contexts' (Helmreich 1999, 2000). 'Simulations describe a world and, like human language, can be instrumental in contests over what will be an authoritative account of reality or a compelling argument about the changing relation between human enterprise and the world in which it unfolds.' (Helmreich 1999: 259) What is or is not simulated is often not just a technical issue but is 'political' (Ferguson 1994). In that sense, simulations do not 'describe a world' but create worlds.[8] In the case of architecture, buildings would be different, if certain models were not made or simulations not run – if, for instance, the full-scale mock-up had not have taken place in the development of *Radiohuset*.

[8] By the late 2010s, computer-based simulations abound, of course, especially in the form of the digital and virtual worlds of the Internet, social media and online platforms, and various forms of models and simulations in the case of architecture. Earlier anthropological discussions of the 'reality' and 'materiality' of the virtual (e.g. Carrier and Miller 1998; Miller 2002, 2005; Callon 2005) and digital practices (e.g. Boellstorff 2008) appear dated now; see also the earlier work of Jean Baudrillard (1983 [1977/1981]) on the role of simulations in then-contemporary Europe and America.

The 'Swedish model'

A model of 'Swedish architecture' provided a metaphor for Danske Ark to see differences and professional threats. The 'challenge of the entire profession', according to Danske Ark, was that budget and time had become the factors by which architecture was increasingly evaluated, rather than by architectural quality. One of the main sources of professional competition came in the form of big design-build contractors (*entreprenører*). This was sometimes called the 'Swedish model', in an elision of professional and national differences. Engineering firms promise to carry out a specific type of construction or building work for a fixed price. A contractual relationship between a client and a design-builder contractor was created whereby the architect becomes a sub-contractor to the design-build contractor, and thereby, architects 'lose control'. Here it is the design-builder contractor who is responsible for project delivery and its consequences. The contractor assumes total responsibility for carrying out a specific project at a fixed price and can deliver the promise of building on time and within budget. But it was feared they would compromise on quality. Architects cannot give a guarantee concerning price at the same stage because designs typically needed to be put out to tender and 'when the tender comes back and when it is twenty percent over budget, then you need to cut, then you lose time'. Architects 'cannot control the market'. Design-build contractors could do this, however, as they promise a final sum, a final price at a very early stage in the project phase. This could result in a general focus on the economic dimension of architectural projects with a focus on cost-efficiency and a disregard for architectural quality, as these firms would use lower-quality materials in order to stay within the promised budget. Moreover, architecture's clients are often represented by 'bureaucrats' of 'management committees' concerned with avoiding going over budget and losing time, and architects have not been educated enough to manage clients' economic risks, whereas other professionals have specialised in doing this. This 'Swedish model' could become dominant because many of the design-build contractors operating in Denmark today are Swedish. The construction of the Swedish welfare state has resulted in the emergence of such contractors. The Swedish social-democratic government of the post-war periods promised to deliver housing on a massive scale. The programme that the Swedish government initiated in the 1960s and 1970s called *Miljonprogrammet* ('The Million Homes Programme'; cf. Hall and Vidén 2005), was a house-building exercise on an industrial scale. The Swedish government aimed to deliver one million housing units over the following ten years. In order to fulfil the promise of delivering a million homes, the design-build contractors developed who could replicate

their standard housing model all over Sweden and they are still powerful today. Yet one important, unintended effect of this programme was also its effects on architecture in Sweden; this apparently led to a marginalisation of Swedish architects. These housing complexes 'weren't as fabulous as imagined' and Swedish architects were blamed. As a consequence, the reputation of Swedish architects is still said to suffer. For instance, Swedish architects were perceived to be less widely known, especially compared with their Danish counterparts.

Alongside this modelling of national difference, the Danske Ark employee who presented all this to me also modelled differences between professions. The conceptual models that were produced highlighted the tensions between business logics and architecture, between contractors and architects, and between Danish and Swedish models of architecture. To exemplify some of the differences, he gave the example of one square metre. Contractors would only be interested in realising this one square metre at the lowest possible cost due to a focus on cost efficiency. But architects would be interested in value-creation, that is having a 'mind-set' to make the most out of this one square metre and to rethink what it could be: 'Architects want to do more.' To make the case, and shake up the profession to this threat, this same Danske Ark employee has engaged in an exercise of mapping out the entire project process and the relationships and stakeholders involved. The two main scenarios that he had identified were the 'Swedish model', whereby architects would lose power to contractors, acting as sub-contractors with little control. And the current 'Danish model' whereby the architect retains a supervisory role over the construction process but with this supervisory power endangered and being eroded. Although the strong design culture and identity of Danish architects is widely seen as the strength of the architectural profession in Denmark, this is currently felt to be under threat. We discussed the news in Denmark that big engineering firms have purchased architectural offices in Denmark and can now offer architectural services in-house. Due to this power imbalance, architects might lose supervisory control even further, along with the ability to judge the work of other professions, especially contractors and engineers, during the construction phase. Instead, trust in the architectural profession needed to be restored: 'with trust comes power'. Architects needed to incorporate 'all valid considerations of clients and user organisations' into their project processes and take them seriously. But architects are trained to do this: 'only architects are trained to work with all aspects of construction at all scales. It is the strength of the profession.' Architects are educated to 'see the public good'. It is a question of 'professional ethics', they are trained to think in terms of 'quality at all scales and times and communicate this to stakeholders.'

These models of architecture describe and re-describe relations between professions in Denmark. Instead of collaboration, a competitive image emerged, placing architecture in Denmark at risk. In talking to me and to other professionals about these possible scenarios during his presentations, the Danske Ark employee simulated the effects of the economic model, the contractor model, the Swedish model, on Danish architecture. In doing so, he used these models to both provide and claim an overview and to make the case for architects to be in a similar position of oversight and supervisory control. Due to their educational training and ethical commitments, architects were argued to see beyond economic concerns, unlike contractors, taking other factors - glossed as either 'social' or 'environmental', 'quality at all scales' or 'the public good' - into account, resulting in better spaces. At the same time, all these descriptions turn architecture in Denmark into a model, into a brand, whose products and services can be commissioned and bought based on its reputation: Danske Ark was thereby doing its job - to 'represent the commercial interests' of its clients.

Modelling architectural quality

To create a measurable model of architectural quality that might be more easily communicated to other disciplines and professions, Danske Ark was engaged in creating a certification system called 'the Diamond'. Some of the preliminary results of the pilot phase of the Diamond project were relayed at a national conference for members of the Danish Green Building Council. Although this was a members-only event, I was invited along to attend. This project, the Diamond, aimed to certify architectural quality and was meant to be an addition to an existing certification system developed by the Danish Green Building Council called 'DGNB' to assess how sustainable a building is (DK-GBC 2020). In this instance, sustainability was made measurable through, for instance, assessing technical performances, characteristics of building materials, as well as evaluating the building process. In setting out what criteria needed to be fulfilled in order to obtain the certification, the system aimed to set a standard for sustainable buildings in Denmark, thereby also defining and regulating what sustainable buildings were. This project was developed to convey, evaluate and communicate what architectural quality was - to communicate this to other professionals who questioned the contribution of architecture as a profession or who found the concept of quality in architecture 'too subjective' or 'fluffy'. In response, the assessment scheme called *Diamant* ('Diamond') had been developed. Diamonds, it was noted, are not 'fluffy' or soft - they are extremely hard and valuable. Buildings that have passed the assessment and that have been

awarded a ‘diamond’ could be signposted to be of particularly high architectural value, with this value documented with, to use the phrasing of the Danske Ark representative, ‘hard facts’.

At the annual winter conference of the Danish Green Building Council, Danske Ark reported to the assembled professionals how the pilot phase of the Diamond went, i.e. how first practical experiences and assessments were carried out. The audience present was composed of building professionals – from sustainability consultants, to engineers, architects and real estate professionals. The first speaker was the Danske Ark representative I had met and spoken to at length previously. He didn’t start as expected with his presentation on the Diamond. Rather, he presented a version of the presentation that he had shown me on his iPad, before then giving an update on the Diamond project. When I asked him afterwards about this, he said that he had felt compelled to change his presentation because he had caught the last part of the previous presentation. That presentation had been given by a real estate professional, who had mocked architects as producing unnecessary and costly designs. The real estate professional had claimed to know what sold and what was needed. He claimed that his profession was the one with appropriate expertise – endowed with what was called the ‘does-this-sell’-hat in the real estate ad that featured again in the presentation. The Danske Ark representative hadn’t wanted to leave the audience with the impression that architecture was ‘merely’ concerned with questions of beauty and aesthetic judgement, so he had given a presentation on the value of architecture first.

For everyone involved in the process of developing the Diamond system, what had become a pivotal question was how to turn their sense of what might be good architecture into a framework that could be used to assess all different kinds of buildings. The Danish Green Building Council is connected to the German Sustainable Building Council – the term DGNB is short for the German name ‘Deutsche Gesellschaft für Nachhaltiges Bauen’. Before the Danish team had started their work, the German organisation had already produced a first version of how they thought architectural quality could be measured. The German version proposed the following foundational criteria: ‘Adequacy (sense of scale / integration, implementation / construction, robustness / timelessness), Context (urban integration, development, dealing with open spaces), Shape (proportion / composition/overall appearance, materiality / color, detail), spatial organization (floor plan design, interior design, visual connections / orientation, space arrangement and relations)’ (DGBN presentation 2016).
But this German system was felt to be too complicated and an alternative version had been developed. For this, basic categories for architectural quality had been needed, however. In

the end, it was decided to base the Danish framework on the Roman author Vitruvius who had laid out principles for architecture in the book *De architectura* (On architecture), which is today typically published as 'Ten Books on Architecture' (Fig. 50). As I indicated earlier, the book has arguably become one of the mythical foundational texts for the discipline of architecture, outlining architectural principles that are still seen as relevant by architects despite – or perhaps because of – its dating to the first century BC. Its place within design histories, e.g. the famous drawing of the 'Vitruvian man' by Leonardo da Vinci, has been assured. I asked why these seemingly ancient principles were chosen. For the Danske Ark representative:

> 'The simple reason is that developers are suspicious about architectural judgments because they see unstable, unpredictable, fuzzy judgments of taste. How do you deal with that as a developer? Your money is at stake, 70,000 Danish kroner are on the line to do the assessment and you don't get it. And then what if you don't understand the arguments, it's a very painful problematic. So, the reason why I pointed to Vitruvius is basically 2,000 years of practice, you don't need to discuss whether it's right or not. Or why that criterion or that criterion is there.'

Vitruvius, it seemed, now represented a tradition, an 'invented tradition' (Hobsbawm and Ranger 1983), for architecture as a discipline, and for architectural practice in Denmark. The perceived endurance over time of the Vitruvian principles provided a consensus that otherwise might not exist today. This was why it was 'called a peer review, rather than a jury. That's what you do when you do research, it's peer-reviewed, although it's maybe not entirely comparable to architectural research. But it's a question of rhetoric and balancing a sense of security and creativity. It is difficult, even among architects, some people feel a bit queasy about it.' To counter the idea that architectural quality was merely based on 'judgments of taste' and therefore volatile and changeable from architect to architect, from person to person and over time, it was decided to refer to Vitruvius as an exemplar, exhibiting architectural principles that have not changed over time. These Vitruvian principles, on which the Diamond system is based, were in Danish *holdbarhed* (durability or strength), *funktionalitet* (utility or functionality) and *skønhed* (beauty). Based on these categories, the Diamond took the form of an assessment visit by a panel, 'a peer review', that assessed the project in person based on

Figure 51. Vitruvius and the Diamond presentation

written criteria related to the Vitruvian principles.[9]

The Diamond aimed to produce a practical definition of architectural quality that could serve as an evaluation tool, a guideline and thereby a standard as well as a specific design tool for the development of architectural projects. The evaluation process had been set up to control individual 'judgments of taste'. Concerns and anxieties around 'objectivity' and 'subjectivity' are not unique to architecture as a profession (cf. Daston and Galison 1992, 2007). The assessment was therefore to be carried out and developed by an organisation that was not involved in the building

[9] These criteria were formulated as questions asked of an architectural project during an assessment visit. The three principles are each evaluated with reference to three dimensions: 'Place: the shape of the building, external appearance and connection to the site', 'Disposition: the internal disposition of the building and spatial relations' and 'Detailing: the building's technical solutions, installations and detailing'. For instance, the questions ask the jury to evaluate: 'Does the project create spatial connections that strengthen activities in relation with the surroundings?' and 'Is the project's way of dealing with daylight, temperature, acoustics and ventilation legible in the architecture and therefore easy to understand and operate for the users?' This gives nine questions related to the principles, and the answers are to be provided as – it is stated on the assessment – 'qualitative evaluations', that is as sentences. An additional box relates to a discussion of the building's 'vision and programme' ('How does the building programme support architectural quality? How does the tendering process and the contracts support architectural quality?'). Finally, the overall assessment is meant to be 'holistic', taking all answers into account.

process – the Danish Green Building Council. The assessment as a 'peer-reviewed' process draws on the language of the peer-review process of the natural and social sciences and resembles an assessment carried out as architectural criticisms or reviews in the architecture school. The criteria used to model architectural quality are established and known before the assessment. The assessors – architects and other building professionals – are asked to answer a protocol, a list of questions. Their individual views are gathered and statistically averaged out, and consolidated in one written report, which is then handed over to the developer who commissioned and paid for the assessment. It was briefly discussed that the financing could pose potential problems and that such a process was not as straightforward as it might seem. The jury members had indeed encountered unresolved questions whilst evaluating, e.g. whether a building still deserved the Diamond if one dimension was rated unsatisfactorily. A building of architectural quality would, ideally, score unanimously high on all scores. Yet despite all efforts with the Diamond, there was no ultimate consensus on what might constitute quality in architecture. It was nevertheless seen as a first step, a necessary model.

Constructing reputations

At a later meeting, the Danske Ark representative told me that he feared that maybe he had come across as too negative about contractors. He was not against contractors per se, he wanted to clarify, it was a question of competition and dominance. There was the need to collaborate and the various professions needed to work together. The analogy he gave was one about shops. It mattered where you went to buy something. If you went to the architectural shop, you'd get a certain architectural quality. If you went to the contractor's shop, you'd get cost-efficiency. If you went to an engineer, you might get technical expertise. Within this presentation, architects, generally speaking, were not motivated only by profit – they wanted fame and a good reputation. This, it was felt, was an important aspect leading to architectural quality.

This representative was well-known in that he gave these kind of presentations multiple times to professional audiences. One such occasion was in BLOXHUB, for a visiting delegation. Another time was a presentation to a Belgian delegation of civil servants and planners for 'State of Green', a public-private partnership between the Danish Government and the four main Danish business associations. This last presentation took place in the offices

of State of Green, located a few floors below Dansk Ark's offices in the same building. The organisation champions Denmark as a country full of companies with expertise in developing 'green' and sustainable ideas, technologies and solutions (see Chapter 1). State of Green connects visiting delegations to Danish businesses and public organisations by organising visits and presentations. The Danske Ark representative stressed to the Belgian delegated that 'things are going well for Danish architects', that it was a 'very internationalised profession' and that 'you can find Danish architecture almost anywhere'. He continued by emphasising that exports had doubled, and that teams had been formed with other architects and professionals abroad: 'collaborations' that could also be forged with their delegation. The main point seemed to be that good architectural design was something worth investing in: 'the power of architectural design is that it transforms a problem into something that becomes an asset.' This transformative power was the added value of architecture.

Through all the talks, presentations, exhibitions, and publications, Danske Ark contributes to shaping and influencing what is presented and perceived as 'architecture' in Denmark – as do BLOX and BLOXHUB. Such a process could be described as one of 'selling' (Cross and Heslop 2019), 'marketing' (Moeran 2007), 'advertising' (Mazzarella 2003a, 2003b) or 'branding' (Foster 2007) architecture in Denmark. These practices are part of what could be described as an 'economy of qualities' (Callon et al. 2002). Architecture is not stable: to use the language of the science and technology scholar Michel Callon and his colleagues, architecture is what is being qualified and requalified by various professions and disciplines and by architects themselves. Architecture is done and redone, and the multiple architectures are momentarily coordinated through talks, presentations, exhibitions and other publications (cf. Mol 2002, 2008). Nevertheless, some sense of stability is created through professional assessments and regulations, through 'disciplining' (Schaffer 2013). Communicating and documenting value-creation processes attempt to requalify and position architecture as a united profession and practice. Yet the specific forms that the practices of architecture take – based on measurements, calculations, and statistics – potentially redefine architecture each time, and what its practitioners do.

In her ethnography *The Fame of Gawa* (1986), the anthropologist Nancy D. Munn describes how actions and practices of people living on the Papua New Guinean island of Gawa are constitutive of values that are pivotal to Gawan self-other relations in the inter-island world. In Munn's words, the 'fame' of Gawa is the desired outcome and one of the key 'values' produced through specific practices as 'transformations'.

> ‘Similarly, the name of Gawa as a community achieves this circulation and eminence through the actions of its members […]. Thus intrinsic to the value-production process is the evaluative rendering of the self by significant others. Fame is both a positive value product (an outcome of certain positively transformative actions) and an evaluation of the actor by significant others. Similarly, the reverse evaluation of defamation is an outcome of certain negatively transformative actions […].’ (ibid.: 15)

These processes of evaluation that Munn describes are linked to specific practices that are linked to the production or transformation of qualities. These practices range from fabricating canoes (Munn 1977), consuming food and providing hospitality to overseas visitors to participating in the inter-island exchange of necklaces and arm shells, that is the kula exchange as also described by Malinowski (1922).

Organisations such as Danske Ark but also BLOXHUB similarly construct and transform the image or reputation of architecture in Denmark. The category of ‘Danish architecture’ and the qualities associated with ‘it’ are the outcome of evaluative practices inside and outside Denmark, inside and outside the profession – linked to the design and experience of architectures as well as the production and consumption of presentations, ideas, events, books, and so on.

After the presentation to the Belgian delegation, I was party to a discussion about how one tower building in Copenhagen had been in the news recently: it had been under construction and went massively over budget. Since it was a government-funded building that was leased by the university for a price that was based on the overall construction cost, the reporting had focused on the costs that were revised upwards and then later kept secret. This looked ‘bad for the whole built environment industry.’ Architects had been in charge of this project. In the press, it was especially the contractors who had been blamed for errors. Errors on part of the architectural or project team – including by the contractors who might choose inferior construction materials – were feared to be damaging the public perception of architecture. It was not just individual projects or architects that were on the line here but, it was said, ‘the whole industry’. In that sense, criticism could both enact and conjure up unity.

This chapter examined constructions of architecture through modelling and related practices. Reformulating Yaneva’s (2005) insight on the role of scaling and modelling in architecture, this chapter has highlighted how architecture as a professional practice is enacted, paying attention to the practices that make it possible for architecture to ‘emerge’ (ibid.: 885).

Architecture emerges as a profession, a profession that is shaped not only by architectural practitioners but also by national, public or private organisations with their specific agendas. Modelling practices in the context of studio work feature prominently in ethnographic analyses of architecture, yet other practices that lead to other kinds of models of architecture or models for architecture are not routinely examined. Following the work of one architectural organisation particularly – Danske Ark – what this chapter foregrounded were the sometimes neglected practices in the repertoire of architects: how architecture is constituted, is enacted, is done, by official representatives and industry organisations, for example, in conversations, lobbying, presentations, and talk as well as exhibitions, publications, websites and other projects, such as 'the Diamond'.

The next chapter returns to BLOX and how BLOX was evaluated and reviewed – how BLOX was constructed through commentaries.

Figure 52. Politiken review of BLOX 'From prestige building to monstrosity'

Chapter 6 Architecture for people

This final chapter returns to BLOX and explores some of the ways that the building was evaluated. The previous chapters have already explored how BLOX – as well as 'architecture' in Denmark more generally – were constructed and shaped through commentaries, presentations and other representations.

Some of the claims made could be described as claims to relevance, to forms of usefulness (cf. Strathern 2006b). Previous chapters explored how Copenhagen has been turned into a model from which other cities can learn and how BLOX was to become the city's new 'lighthouse' that would shine light on future solutions that would address 'global' challenges both shared and urgent. We also heard about the importance of events, meetings and conversations in BLOXHUB. Many of the topics, people or developments that were discussed were often said to be *meget relevant* ('very relevant') before, during or after events. Similarly, many professionals I met wanted to emphasise their relevance, meaning the relevance of their work, to potential clients. They attended events to be informed, to be seen and to 'be part of the conversation'. They also 'pitched' their businesses and their ideas in this idiom in presentations and meetings with other professionals and potential clients. Having 'impact' is important, we have seen, and architectural organisations such as Danske Ark have sought to demonstrate that architecture, as a professional discipline, produces output for clients that is useful, or indeed relevant such that it could be framed in the language of 'value'.

The architectural profession and the broader building industry are not unique in this. Demonstrating relevance – or usefulness – has become a common demand of disciplines in many contexts, including anthropology (e.g. Mazzarella 2002, Sillitoe 2006). But these kinds of evaluations are, of course, a product of relations. In her analysis of recent demands to produce useful knowledge, the anthropologist Marilyn Strathern writes that '[r]elevance is an admonition that backfires – people will make up their own minds what is "relevant" for them.' (Strathern 2006b: 76) This observation serves as a starting point to consider the reactions towards BLOX in this chapter.

In the case of Denmark, being 'people-centred' or 'for people' forms part of the self-understanding of the architectural profession.[1] It forms part of the 'final vocabulary' of Danish

[1] For instance, a recent exhibition and accompanying publication (Jensen and Weiss 2016) formulated a people-centred approach, presented as 'humanism', as the common agenda for Danish architecture. This exhibition was shown in the Danish Architecture Centre and in the Danish pavilion for the 2016 Venice Architecture Biennale.

architecture, to use an expression borrowed from Richard Rorty (1989), that Keith Murphy (2015: 41) employed in his ethnography of *Swedish Design*: ambiguous yet persuasive descriptive words that are seemingly self-evident. Architecture should somehow be relevant 'for people'. Buildings should provide or 'give something back'. This is often understood to mean that newly-built architecture should provide new 'public space', such as the new square and harbour front that were created as part of the BLOX project. Architecture is held accountable in reviews, as we will see.

Nonetheless, other factors seem to enter into assessments and evaluations of a building. For instance, even before it was finished, BLOX was discussed in various media. The idea of a 'public opinion', mediated and seemingly manifested in newspapers, on the Internet and other media, is felt to play an important dimension in how buildings are perceived and evaluated by 'people'. It matters who or what counts as public, and who is included in, or excluded from, the category of 'the people'.

Yet even indicators by which professional judgments on architecture are made are not always consistent or made clear: this is, as we saw in Chapter 4, why organisations like Danske Ark attempted to establish their own metrics, hoping to be more 'objective' than judgments of 'taste', which are seen to be subjective (cf. Mol 2009, Sutton 2010). But professional and disciplinary evaluations of what to value can vary, especially as they are made in relation to many other factors, such as what counts as 'beautiful' (Bunn 2018, Harkness 2018) or concerns about 'sustainability' (see Chapter 1).

The second part of this chapter discusses how architectural reviewers were asked to assess BLOX. In the first instance, a review is an assessment for a publication. But such reviews are, collectively, also spaces for disciplinary discussions: reviewing is one practice of disciplinary self-monitoring for architecture. The reviewers differed in their assessments of BLOX, thereby also raising the issues of who and what are architects building for. The criteria by which architecture was evaluated varied amongst architects who reviewed buildings such as BLOX: but this disagreement should be regarded as one dimension of disciplinary debates over what might constitute 'good' architecture. Mixed or negative reviews were problematic for those who designed, built or were about to use the building. When many of the architectural reviews of BLOX – particularly from Danish reviewers – came back negative, the decision-makers behind BLOX shifted their public reasoning (Fig. 52). Now, in post-hoc reasoning, disagreement was taken to be the sign of good architecture; because good architecture, it was said, should stimulate discussions and debate.

I. Commentaries

New centres

Over the past decades, one of the main planning narratives for Copenhagen has been one of 'urban transformation'. The 2010 policy document *Copenhagen City of Architecture. The Architecture Policy of the City of Copenhagen* summarised under the heading 'urban transformation' the planning strategies of the municipality as follows: 'The master plan for Copenhagen is to continue the development from an industrial and harbour city to a modern, sustainable metropolis for people.' (City of Copenhagen 2010: 14) The harbour area is a central element in this process of post-industrialisation through which Copenhagen's urban identity is reimagined. During the inauguration speeches of BLOX, the CEO of Realdania, Jens Nygård, situated BLOX squarely within this history of Copenhagen: 'BLOX is in this way a symbol for the city's and the harbour's transformation: from a busy environment for heavy harbour activities into a modern centre for knowledge, development and experience. But first and foremost a centre for people, a development from an industrial harbour to a harbour for people.' The harbour as a 'harbour for people' is host to many cultural institutions such as the Opera, the Playhouse (a theatre), the Royal Library and, of course, BLOX. It is now also possible and encouraged to swim in the harbour and many Copenhageners and visitors do so regularly when the weather permits. These recreational swimming facilities in the harbour, the 'Copenhagen Harbour Baths' designed by the firm of the Danish architect Bjarke Ingels, have become an attraction in Copenhagen and a symbol for the 'greenness' of Copenhagen (Chapter 1). With its harbour location and as the cultural destination for architecture and design, BLOX was put forward as 'a symbol' of this transformation at this particular time. The harbour and BLOX, it was hoped, were to become new destinations in the city.

In addition to creating a new destination as the 'meeting place' for architecture and design in Denmark or the place where solutions should be created, other transformations were meant to take place too. For example, the team behind BLOX frequently highlighted that BLOX had been built on, and thereby replaced, a car park. They asserted that by being a car park, this site constituted an (almost) outdated infrastructure that did not live up to the 'potential' of its harbour location (see Chapter 1).

More generally, such kinds of planning processes have been described as the 'production of

determinacy' (Ringel 2018b), especially for obsolete infrastructures (such as former industrial sites) and objects that gain, at least temporarily, a more determinate future when they are revaluated and thereby revalued (Alexander and Sanchez 2018). The BLOX project was meant to provide a more precise future for this site. The area itself had also been rebranded in consultation with the municipality and other museums in close proximity to BLOX: the surrounding area had now become a 'cultural district', where 'culture' meant 'high culture' institutions such as museums and galleries.

Elsewhere, the anthropologist Michał Murawski (2019) has argued that the Palace of Culture and Science in Warsaw, a piece of monumental post-socialist architecture, had particular effects on Warsaw as a city and the people in it, centring the city (Bach and Murawski 2020). BLOX was not perceived to 'centre' Copenhagen as a city in the same way. But BLOX was intended, by both the Danish government and Realdania, to consolidate Copenhagen's architecture and design community in the BLOX building complex. For that and many other reasons, many architects, related professionals and other persons I met in Denmark appeared to have taken a position vis-à-vis BLOX. In that context, this chapter offers only a selected, non-exhaustive overview of reactions to BLOX.

'Polder'

A few weeks before the official opening of BLOX, I spoke to one of the main architects who had designed the BLOX building. She spoke frankly about many of the challenges that the project had entailed but was now equally proud and relieved that this process was coming to an end. She had invested more than a decade in it. The OMA architect then mentioned that the official photographer of her architectural firm was currently in the building and documenting it so they might have photos for their presentations, publications and archive.

It was suggested that I could join them walking around the building. We went up to the fourth and fifth floors with the elevator. This part of BLOX was usually closed off and not accessible even to those working in the building: it was the residential part of the building. We walked around the empty but spacious flats. The photographer took pictures. I did not want to disturb him. But as we were standing by one of the private terraces, offering an impressive view over the harbour, he paused. I then asked him about his impression of BLOX. He had worked with OMA and Rem Koolhaas, the OMA founder, for the past thirty-five years, and mentioned that he had visited many, if not all, of OMA's projects around the world to photograph them after the projects were built. He replied that he liked the 'blocks' concept,

the playground that forms part of the building and many other things about the building but – and he paused for a while here – you could feel the 'polder' here in this building. 'Polder' is a Dutch concept, he explained. He was Dutch, too. This idea refers to decisions being made through a process that takes into account what he called 'many opinions from all layers of society' and that this gets 'complicated'.

The Dutch concept of 'polder' refers literally to land reclaimed from the sea where water is managed through socio-technical systems (cf. Hendriks and Toonen 2001). I was told that it has become a Dutch metaphor for consensus-based decision-making processes: to establish a 'polder', in both senses, requires effort and coordination from a variety of actors as well as specific, cooperative institutional arrangements to effect maintenance and repair. The 'polder' model became a way to describe and critique Dutch political processes in the 1990s and early 2000s (ibid.). It can have negative undertones. When there are too many decision-makers involved in the making of a building, it becomes 'complicated' and can fall short of what was intended to be achieved architecturally because too many compromises have had to be made. This description of BLOX as 'polder' does not translate readily into Danish but is understood. Consensus-based politics have played an important part in Danish political and institutional life: from Danish coalition governments to the fact that the Copenhagen Municipality is governed by seven different mayors (each heading their own administration and portfolio) from different parties, depending on their election results. BLOX as 'polder' summarised in many ways the challenges that the architect had conveyed in our conversation earlier that day: the building took more than twelve years to realise, owing to many factors from local protests against the project to the 2008 financial crisis which halted it temporarily. Whilst it is unusual for an architectural firm to be given free reign over a project, a close alignment or trust between the architect and the client (and other involved parties) is often put forward as a reason why a project was a success. BLOX had been perceived as a compromise between many factors and parties. For some people, like the photographer, this might result in a diluted architectural vision. But a design process that takes all these voices into account is a necessity for others, with all its possible setbacks and delays.

'The new axis of power'

One BLOXHUB resident whom I got to know was particularly enthusiastic and personally invested. She had trained as an architect and worked for Realdania in the past. Back then, she was heavily involved when the idea for *Bryghusgrunden* (the initial name for the BLOX

project) was conceived. Whenever I saw her in BLOXHUB, where the organisation that she now worked for rented desks, she wore a BLOX pendant around her neck. This pendant was given to a select number of people after the opening, including, for instance, the architectural reviewers whom we encounter below (Fig. 53). She was the only person I met who actually wore the pendant. When I met her for coffee, she said that it was an expression of how proud she felt to be involved in the project. We also talked about the street that is located next to BLOX because she mentioned that she had even written a short piece about this in an edited volume that was published by another BLOXHUB member. This street, *Vester Voldgade*, not only served as the 'urban lab' for Copenhagen Solutions Lab, the smart city unit within the City of Copenhagen (Chapter 3). *Vester Voldgade* also connected the headquarters of Realdania at one end of the street, via Copenhagen's City Hall and the City Hall square, to the harbour front and BLOX. Because the street connects some of the key decision-makers in Denmark, this BLOXHUB resident referred to this as 'the new axis of power', at least in the fields of architecture and urban planning in Copenhagen.

Figure 53. BLOX 'goodie bag' for architectural reviewers with BLOX pendant

Attracting people

In the weeks leading up to the opening of BLOX, a massive poster was installed on Realdania's headquarters in central Copenhagen, just north of the town hall, spanning one side of its facade (Fig 54). At the same time, announcements appeared on poster billboards throughout Copenhagen and in the national newspapers. The posters drew attention to 'The city's and the harbour's new meeting place' (*Byens og havnens nye mødested*). Another poster showed an image of children playing on the playground that forms part of BLOX and, with a pun, announced in English that there were 'New kids on the BLOX' (Fig. 55). With all these public announcements, Realdania urged Copenhageners to come and experience BLOX on Sunday and, importantly, to come back to BLOX again after that.

BLOX was opened (at least partially, as we will see) to a public or the public. The invention of 'publics' is historically linked to 'spaces', in the sense of media (e.g. newspapers) as well as specific places (e.g. coffeehouses), where topics deemed 'political' can be raised and discussed – by a 'public' (see Calhoun 1992; cf. Habermas 1989 [1962]). It is especially

Figure 54. Poster on Realdania building

Figure 55. 'New kids on the BLOX'

here that 'public opinion' was seen to be collectively produced and articulated, which social scientists subsequently claimed to be able to capture methodologically.

Architectural forms are one means through which notions such as 'public' or 'private' were conceived in Europe and elsewhere. The anthropologist Victor Buchli (2013: 19-45) points out how 19th century, European preoccupations with the search for the origins of architecture (such as the Vitruvian 'primitive hut') highlight how 'the social' has been imagined through architectural forms. Anthropologists, especially after Pierre Bourdieu's (1990 [1970]) analysis of the Kabyle house, have examined the spatial effects of such concepts; for instance, how 'public' and 'private' space are instated or enforced (e.g. Caldeira 2000, Low 2004, Low and Smith 2006); of course, anthropologists have, more generally, examined and challenged such dualisms and questioned their validity in various contexts (cf. Buchli 2013, Carsten and Hugh-Jones 1995).

The opening of BLOX was an event that, over three days, was deliberately made accessible to what were seen as different publics on each day; the opening drew attention to the building and sought to create a connection between each public and the building in distinct

ways. A selected group was deemed to be 'very, very important' and was shown around BLOX on Friday and made familiar with the building; on Saturday, professionals working in 'architecture, design and new ideas' were invited for a celebration inside BLOX that involved talks, food and drink, and 'networking' and music on the terraces of BLOX and in the building. On Sunday, all Copenhageners, the general public, were invited to take a quick tour through the building and to come back and visit from the following Monday onwards, when the Danish Architecture Centre and its exhibition could be visited in its entirety. The public was meant to enjoy the 'public space' around BLOX including the new square and the harbour front, where almost all of the activities took place.

To fulfil its intended role as a new 'meeting place' for the city, BLOX required, ideally, the permanent presence of people. This was not unusual: the presence of human life around buildings has become an indicator of architectural success in much architectural rhetoric and theorising. According to this 'place-making' logic pervading much contemporary urban design thinking in Denmark and elsewhere, a successful and ultimately well-designed place is able to attract people. Thus, for BLOX to be judged a success, it should be an 'attractive' destination to which people want to come. The architects of BLOX made similar remarks in interviews. The presence of people should extend both inside and outside: BLOX should become a lively and animated 'house' (*hus*), as it was often called, round the clock. BLOX and architecture more generally should not be 'dead'. This vitalist language references the organic metaphors that have flourished in much modernist architectural discourse (cf. Di Palma 2006, Forty 2004). Such discourses on architectures as 'generating' or 'housing' life have specific histories, largely as critiques of the apparent inhabitability of mid-20th century architectural modernism.

Over the course of the past decades, architectural professionals in Denmark have prided themselves on producing 'human-centred' architectures that are said to foster social interaction. This is said to be achieved by privileging pedestrians and cyclists instead of cars when designing. Such 'user-focussed' approaches attempt to take 'human senses', and modes of perception into account and pay attention to the sizing and proportions of urban and architectural elements: all of this is summarised as 'human scale'. Thus, one way of evaluating architectural success is closely associated with Copenhagen for many contemporary architects and urban planners as well as for many Danes and Copenhageners more generally. 'Copenhagen' is here both a place that can be visited and an idealised symbol. This Copenhagen is said to have epitomised architectural and urban success: it is a city with

‘urban life’, ‘liveable’ and ‘attractive’ spaces, a ‘city for people’. Good architectural and urban interventions must attract people. Confirmation of this capacity is delivered and proven by the number of people ‘using’ spaces: usually the more, the better. Copenhagen has been proclaimed successful in this regard: despite the Scandinavian and, thereby, often rainy and windy weather, many of inner Copenhagen’s streets and squares are often busy with walking and sitting outside. This measure of architectural and urban success has emerged over the course of the twentieth century in response to critiques of modernist design and planning practices, and a perceived revaluation of many of the characteristics that architectural modernism is felt to have rejected.

I have spoken to many Copenhageners and visitors about their opinion of BLOX and architecture. But I did not intend to conduct any ethnographic experiments that attempted to capture the ‘public’ perception of BLOX, although other anthropologists have experimented with statistical methods in similar contexts (e.g. Murawski 2013). Political theory and practice reproduced a notion of ‘public opinion’ through processes of measurements and statistics over the course of the twentieth century (e.g. Price 1992). Architecture and urban design have drawn on a related but separate political concept, however, to assess the success of many designs, invoking ‘the people’, a notion with its own histories, including being a by-product of the French Revolution (cf. Canovan 2005). In practice, human-centred architecture means that bodies are counted in and around a building as a way to assess its ‘people-friendliness’.

For BLOX’s stakeholders, the perceived success of BLOX was also contingent on the hope that many people would come to the opening event and would then animate the building and its surrounding spaces in the months and years to come. After all, Realdania’s explicit mission was to improve ‘livability’ through the built environment. The first test was going to be the ‘public’ opening of BLOX that was held from 12 noon to 8pm on May 6, 2018 – which was seemingly passed: many people came to BLOX. Realdania publicised that 17,000 people on their BLOX social media channels.[2] The good weather was later pointed to by critics as one expedient factor that attracted people: for a day in early May, it was a particularly sunny and warm Sunday with blue skies (Fig. 56). But the weather certainly wasn’t the only reason Copenhageners seemed curious. In addition to the publicity that Realdania had installed in the city, the Danish media had been reporting on BLOX for weeks leading up to the opening.

[2] The official BLOX Instagram account shared a photo with this caption in Danish: ‘BLOX invited the whole city to the celebratory opening day, on Sunday 6 May. A total of 17,000 happy people came by to enjoy the sunshine and entertainment.’ (bloxkbh 2018)

Figure 56. 'Public' opening

Limits

Just who is included in a notion of 'the people' and around whom architecture in Denmark is thus centred is an important question. Any notion of 'the people' (cf. also Amit and Rapport 2002) needs to be placed in the context of the emergence of social democracy as a political goal in a Danish nation state that provides for its population. Similar to many places in Europe and other places that anthropologists have studied, 'society' and 'the social' have been key notions that have contributed to how 'Denmark' is conceptualised as a state today. Denmark became a 'nation state' over the course of the nineteenth century (cf. Skovgaard-Petersen 2016). Nationalism is founded through 'imagined communities' as Benedict Anderson (1983) famously put it. Although the notion of 'society' has a separate history, intellectual influences such as the organism analogies of the nineteenth century especially have linked it to the nation state (cf. McDonald 2006). Anthropologists studying nation states, such as Rytter (2018) in the case of Denmark, have examined how 'society' ideals have ramifications in daily lives and experience – e.g. in terms of feelings of belonging and the production of difference or sameness. In Denmark, the twentieth century saw the introduction of policies that led to

both the Danish 'welfare state' and the rise of 'social democracy' as the dominant political ideas, especially after the Second World War.[3] Underpinning the idea of the welfare state in Denmark is a theory of the state (*staten*) that relies on an idea of a collective entity to which one belongs and with which a citizen has reciprocal obligations, expressed as 'rights' and 'duties'. In Denmark's construction of the welfare state in the decades after World War II, citizenship by the 1960s and 70s became also a 'social citizenship, an idea of social security in a very broad meaning as a social right.' (Christiansen and Klaus Petersen 2001: 194). The idea that a state provides welfare and cares for people as individuals within a country in times of need, irrespective of their families, is said to have also fostered an increased sense of 'individualism' in Scandinavia (cf. Gullestad 1992). This redistributive welfare system relies on money transfers, from individuals to the state via taxation and from the state to those individuals in need via welfare provisions. Ideas around 'equality' structure this system (cf. Jenkins 2011: 46). 'Population' as a means of framing 'the people' emerged as a necessary category of government through which lives could be shaped, cared for and administered (cf. Foucault 2008, 2009, 2010). But as recent ethnographic accounts of Denmark and the Danish welfare state have shown, migrants and others face practices of exclusion and there are limits to the principle of 'integration' (Johansen and Jensen 2017; Olwig and Paerregaard 2011; Rytter 2010, 2019).

As much as spaces are meant to 'attract' certain kinds of people, they exclude others. There was considerable opposition to the BLOX project from local inhabitants who had organised themselves in the form of a protest group called *Bryghusgruppen* (Zettersten and Sandberg 2012). But this opposition was seemingly no longer active once BLOX had been built and when I conducted fieldwork. Rather, opposition to BLOX was now articulated through outlets such as newspaper comments. For instance, a few months after the opening of BLOX, I saw a newspaper letter by a self-styled 'Copenhagener', a concerned citizen. By that time, almost five months had passed since the opening of BLOX. But even in late September 2018, the building still seemed to incite passionate reactions to the extent that opinion pieces were published in *Politiken*, one of Denmark's leading newspapers. One article was entitled 'A Copenhagener is wondering: We bomb the fine and intact places with new buildings without paying attention to anything but money' (Nørgaard 2018). It was accompanied by a photo of BLOX that was taken from the air. The title of the piece already made clear that the author

[3] Cf. Christiansen and Klaus Petersen (2001) for a brief overview over the historical development of the welfare state in Denmark.

saw the BLOX building as an affront to good taste and felt that the situation was serious: buildings like BLOX were an assault, if not a full-on war, on existing architecture. The image of 'bombing' recalled what the Danish urbanist Jan Gehl, who has become a symbol of 'people-friendly' architecture, has called in many of his public talks 'bird shit architecture' (cf. Carmona 2021: 128). Gehl used this expression to mean architecture that seemed as if it was designed from an aerial perspective and then subsequently 'dropped', more or less arbitrarily, onto the ground with negative effects. But Gehl himself would not describe BLOX in this way since he and his firm were working as consultants for the BLOX project to avoid this. The author of the opinion piece went on to criticise Copenhagen's money-driven redevelopment that results in new buildings characterised by 'soulless conformity'. BLOX was cited as an example of this and, according to the author, Realdania was to blame: 'Realdania, who otherwise claim that they have been established with the aim of preserving architectural cultural heritage, have planted the architectural disaster BLOX at the end of Frederiksholm Canal, in the middle of one of the city's beautiful 17th-century environments between Copenhagen's [Christian IV's] brewhouse and the yellow [former] military buildings [*Fæstningens Materialgård*].' (Nørgaard 2018)

In addition to such strong opposition, there were also others who felt that BLOX was not for them but for other reasons. One brief anecdote drove this home. In the days after the opening of BLOX, I asked various people I met whether they had gone to any of the events or seen the building yet. Most people said that, of course, they had seen it in the past and were probably going to visit at some point. But one person replied that they had seen the building but did not plan on going. I enquired why and they said: 'You can see that it is typically Danish, too expensive and not for people like me.' This person was a friend of a friend, aged in their early 30s, university-educated and working in the not-for-profit sector. They formed part of the professional publics that BLOX sought to attract. But they explained that, as a Danish citizen with foreign heritage, they did not necessarily feel at ease in such 'corporate' environments, perceived to be 'typically Danish'. The architecture and the materials in the BLOX building reminded them of other corporate offices. The ones they cited as an example were on the other side of the harbour, on Islands Brygge, and looked vaguely similar to BLOX. They were spaces where you had to 'fit in', but where this person felt themselves to be different, and which they therefore generally avoided as a result, unless it was for work.

What was stressed by the BLOXHUB team and residents when they were confronted with negative press about the architecture of BLOX was that evaluations could change. It was

felt that people should come and visit the building and BLOXHUB in it for themselves: their 'personal experience' would (somehow) constitute the unmediated empirical truth of the building. Anthropologists – e.g. drawing on Martin Heidegger's (1971 [1951]) idea of 'dwelling' (cf. Ingold 2000, 2013) – have, of course, shown that there is no such unmediated experience readily available. But Tim Ingold, for instance, has pointed out, too, that the 'idea of showing is an important one. […] Through this fine-tuning of perceptual skills, meanings immanent in the environment – that is in the relational contexts of the perceiver's involvement in the world – are not so much constructed as discovered.' (Ingold 2000: 21-2) Put differently, the various practices, sometimes competing, that were explored in the thesis (and many more) constitute and reconstitute architecture and any experience of 'it'. The relevance of buildings or their potential usefulness is, therefore, not something that can be determined, tout court. As Marilyn Strathern (2006b) put it, 'there can, in this sense, be no predetermination of "relevance", no predetermination of "usefulness", before the comparison has been tried.' (2006: 91) One might add, to build on Matei Candea's (2018) analysis of comparisons in anthropology, that there are not only different kinds of comparisons but also that good comparisons 'object' (ibid.: 347). In that sense, learning from comparisons can be an additional important dimension: 'Comparisons which stand the test of these multiple cross-cutting critiques will be robust.' (ibid.: 352) A similar sense of 'robustness', emerging from additional evaluations based on being shown BLOX and BLOXHUB from the inside, were seemingly also what the BLOXHUB team were hoping for.

'A redeeming feature'

In September 2018, the official book on BLOX (Weiss 2018) that had been commissioned and published by Realdania was launched in BLOX. This book launch – similar to the other activities mentioned in this chapter – was an event through which certain knowledge, 'facts', about BLOX were produced and disseminated. It was another event through which BLOX was enacted. This 'coffee table book' on BLOX, as it was sometimes called, gathered a lot of the visual material on BLOX in one place but it also contained the story and narrative of BLOX that Realdania wanted to tell, through specific interviews and commissioned essays. The book constituted a specific record, leaving out negative images. During this event, the editor said that he lived opposite BLOX on the other side of the harbour, by Islands Brygge. He mentioned that he had a daughter who went to school nearby. The playground that had been integrated into BLOX's architecture was his daughter's local school playground (Fig.

Figure 57. Playground

57). One of the things he said – and this was something that I had heard from other people too – was that the children from his daughter's school called the playground 'the prison playground' (*fængsels legepladsen*) for a while. The requirement of the city planners had been that the new playground was to be a 'world-class playground'. The materials chosen and their colour palette (quite dark and, particularly, grey tones) for the playground might evoke other associations, some of which the children in this instance articulated through the nickname. Some of the architectural reviewers criticised the choice of materials, too. But despite the materials and colours, the playground was quickly used by children, to the extent that some architects I met called it 'a redeeming feature' of the building: 'public' in a way that the rest of the building wasn't perceived to be.

The second part of this chapter now turns to the architectural reviews of BLOX.

II. Reviews

Reviewing BLOX

In late April 2018, a week before the opening of BLOX, OMA and Realdania invited a selected group of architectural reviewers to see and review BLOX. Anthropologists of journalism (e.g. Boyer 2013, Boyer and Hannerz 2006, Hannerz 2004) have drawn ethnographic attention to the ways in which 'news' or 'facts' are produced and disseminated. Architectural reviewers are architectural journalists who turn a building into a text, usually with accompanying photos, for a publication. Reviews usually happen not long after the construction process is completed. This is often the time and space where the work of architects is to be judged: before those who will occupy the building have fully moved in, which is also before they will have had any opportunity to carry out any substantial alterations to the building, to the architectural vision. This was also the reason that the OMA photographer was taking photos now.

The reviewers were invited to a 'celebratory dinner' and a press tour of BLOX the next day. Once again, commensality creates and cements relationships, and draws boundaries of inclusion and exclusion (Mintz and Du Bois 2002; Carsten 1995, 2011). Invitations had been sent out beforehand and were restricted to selected architectural reviewers from non-Danish publications: architectural print and online publications from Germany, Italy, the UK, France and other European countries. A friend, an architect from Denmark who had written for architectural journals previously, was approached by a Dutch online publication to write a review of BLOX (Bjerke 2018). The editor of the publication was looking for another perspective on these events and I was put forward to write a separate piece about the review process.[4] This is how I became part of 'the international press' (as it became defined by the BLOX organisers) and invited to these events. They wanted an account of these events, apparently organised for 'the world's architecture press', including insights into whether such events might influence reviewers and sway their judgments. There seemed to be little doubt that such press previews and associated events existed for two main reasons: first of all, to get the building reviewed at all, and secondly, to get it reviewed positively. The 'problematic' suggested to me by the editors was that of 'the gift' in anthropology: that there is a possibility that architecture reviewers are influenced by fancy dinners, special treatments and potential

[4] I am drawing here on an adapted version of an online publication (Hoehn 2018) and am grateful to Christine Bjerke and the ArchiNed editors for this opportunity.

presents. The anthropological literature on commensality and Maussian gift exchanges (as summarised in Yan 2020, for example) would certainly suggest that closer relations between the architects, dinner hosts and the reviewers would be expected; and it would not be surprising if the hospitality were to be reciprocated through positive reviews.

Building performance assessments, such as the DGNB certification system that Danske Ark worked with, are one particular mode of evaluating architecture.[5] The process of doing performance assessments (*vurderinger*) usually consists of checking whether the building project does fulfil certain criteria, which are established before the assessment. Such assessments are designed to hide the person doing the assessment (and what is feared to be their personal judgements) from the process and from the final evaluation, thereby typically claiming to be 'objective' (cf. Daston and Galison 2007) In architecture, these assessments have become more common since the 1990s.[6] They are modelled in contra-distinction to the more established practices of architectural reviewing and criticism, which themselves are connected to the writing of architectural history as a disciplinary concern over the course of the 20th century. In contrast to the building performance assessments, architectural reviews (*anmeldelser*) typically highlight the personal experience of the reviewer when visiting the building and discuss to what extent the building amounts to good architecture. Reviewing can itself be seen as a disciplinary self-monitoring practice (Schaffer 2013) that lays out to what extent an architectural project conforms to shifting disciplinary expectations.

Individual reviews, however, also convey the point of view of the professional reviewer. Therefore, it matters who the reviewer is. Architectural reviewers are usually trained architects. Whilst one does not necessarily have to be an architect to be an architectural reviewer, it would be unusual not to have recognised architectural expertise of some kind. The architectural reviewers of national newspapers are typically full-time employees whose reviews appear regularly. Their stable employment ideally means that they can (at least theoretically) give their honest opinions in their reviews without immediate professional consequences. But there are also many freelance reviewers who write for multiple publications. Depending on the publication for which they are writing and depending on

[5] See Stender and Walter (2019) for a discussion of the DGNB system in relation to Danish housing developments.

[6] The DGBN certification system was first introduced in 2008. Other, similar certification systems started earlier. BREEAM (abbreviation for 'Building Research Establishment Environmental Assessment Method') is the British certification system and was first launched in 1990. The LEED certification system (LEED is an abbreviation for 'Leadership in Energy and Environmental Design') by the U.S. Green Building Council was first introduced in 1998.

what is seen as the 'editorial line' of this publication, these reviewers have varying degrees of autonomy over the tone of their reviews, and it could be difficult to be critical about a particular building or project. Some reviewers whom I met as part of the BLOX press event mentioned that they sometimes feared professional consequences depending on the precarity of their employment situation: they wanted to be asked again to review buildings. Others mentioned that they were afraid to lose a good working relationship with whatever architectural firm they were reviewing the work of. It is common practice for internationalised architectural firms (with high profits) to pay the travel and hotel expenses of architectural reviewers (of certain, invited publications) who don't live in the city where the building is situated. Not being invited again or not being able to review a building – for instance, because the firm won't cover your travel costs because of a negative review – would then also mean losing professional opportunities and damaging your own 'career'.[7] Unless the publication, the building owner or architects cover their expenses, many freelance reviewers who would need to travel would probably not choose to review a specific building. The payment they would receive for the review would not usually cover their travel expenses. By writing these reviews, reviewers are implicated in the making of a reputation of a certain building and, by extension, in the making of the reputation of the architectural firm that designed it. To some extent, reviewers also construct their own professional reputations and that of the publication that they are writing for.

The BLOX press event started with a 'celebratory dinner' that was held at the Dutch ambassador's residence in Copenhagen. The reviewers who were flown in from all across Europe were picked up from their hotels in sponsored cars and driven to the ambassador's residence. I arrived by bike. OMA partner Ellen van Loon, the main architect behind BLOX, and the Dutch ambassador to Denmark had invited architecture reviewers and a few other, corporate guests (such as a representative from the forementioned car company) to a private dinner at the ambassador's residence. The residence turned out to be a modern apartment in the Copenhagen area of Islands Brygge, not far from BLOX that is located across from Islands Brygge on the other, northern side of the harbour bank. Representing and promoting the Netherlands to the assembled architectural reviewers, the ambassador gave a welcome toast shortly after everyone had arrived: 'First of all, a word of welcome to you Ellen. When I heard that you were coming to Copenhagen, a week, a bit more than a week, ahead of the official opening of BLOX, I thought that, of course, we should meet and that you should

[7] See Garsten (2008) on 'being flexible' and changing conceptions of 'careers'.

bring all your friends ...' The international reviewers worked for American, Dutch, Italian, German and other non-Danish architectural publications; some were also writing for national newspapers. We were assembled in the ambassador's living room and his friendly words conveyed the intimate setting, with twenty to thirty people in attendance. The ambassador's word choice – 'friends' – struck me. Over the course of the evening, I gradually met more people, mostly reviewers as expected but also OMA staff and their business partners. Many reviewers already seemed to know each other, especially those from their own countries. A buffet dinner with a selection of various main dishes was served on crested porcelain with silver cutlery. The atmosphere was, especially after wining and dining, relaxed and the reviewers were given the opportunity to mingle as well as to talk the architectural team. Post-dinner, some reviewers took quick photos with their mobile phones to add to their personal collection as souvenirs, but no one took photos with their professional cameras. Although the dinner was part of the press events, and undoubtedly impressive, it was not really meant to be judged and included in the reviews – and it did not take place in BLOX.

The next morning, the reviewers who stayed in hotels were again picked up and driven to BLOX, where they were shown the fully automated parking system that forms part of the underground levels of BLOX. The morning was filled with presentations, where those involved most intimately in the project presented the ambitions of the BLOX project to the reviewers, from the Realdania project manager responsible for the construction of BLOX, to the director of the Danish Architecture Centre and the director of BLOXHUB. All reviewers were also handed bags, a 'press kit' that included all the press releases on BLOX and professional architectural shots of BLOX on a USB stick. The 'press releases' contained all the information that was seen to be key by the team behind BLOX and that they hoped the reviewers would include in their reviews. The press package also included other gifts, including branded pens, water bottles and an unexpected gift, a round brass necklace with the word 'BLOX' cut out. The Realdania client representative told the reviewers that the necklaces were made from what was left over from the brass used in BLOX's 'Golden Room'. This room is one of the Danish Architecture Centre's new exhibition spaces, decked out in brass and designed by OMA as the building's 'treasure room', as they called it because expensive artwork can be displayed in it. Then lunch was served in BLOX, specifically in its new restaurant called 'BLOX Eats' that doubles up as the building's canteen. We were told that we, 'the press', were the first people to ever eat there. The lunch was 'traditional Danish open sandwiches'. Over lunch, the CEO of Realdania joined and gave a short speech, too.

Other key actors – such as the main architects and engineers – were sitting spread out across the room and talked to the reviewers. By this point the reviewers had only seen a fraction of BLOX. The tours of the building took place after lunch. The reviewers were divided into two groups. I overheard a comment that made clear that they had ranked the publications and sent the reviewers from what they regarded as the more important publications with the main architect, Ellen van Loon. The other group was guided by another key OMA architect and the main structural engineer. Yet the reviewers put the spotlight on Ellen van Loon (Fig. 58). Journalists were tightly gathered around Ellen van Loon, with their notebooks and pens, ready to soak up and write down the best, perhaps most illuminating or damning quotation. It seemed competitive, which became more apparent when I attempted to make small talk with a reviewer from a well-known international newspaper and asked them about their opinion on BLOX. Their only reply was 'I guess you'll find out' and they walked off. These tours of the building lasted more than two hours and provided the reviewers with an opportunity to 'get a feel' for BLOX. But BLOX is a vast building, and the tours only provided a chance to see and walk through the building, but not what it would be like to inhabit the different spaces. Locked doors and some confusion meant that some reviewers skipped floors and did not get to see the building in its entirety. A huge effort was put into planning and staging these events for the assembled reviewers. After the tour, the reviewers were given the opportunity to do sit-down interviews with the assembled members of the BLOX team, especially with the key architects. These interviews, along with the rest of the organised programme, aimed to show the building from its best side. They provided direct access to the key decision-makers and architects.

But would any of the hospitality influence the reviewers? The point of the events was, if not to 'make friends' as the ambassador had said the night before, then at least to make the press feel special, and to receive favourable reviews.

When I asked some of the reviewers about all this, they insisted that these special events, dinners and gifts wouldn't make any difference to their reviews. Clearly, the gifts and entertaining all too easily raised the spectres of bias and corruption. One reviewer said that it was simply a way of 'trying to give gravitas to the building.' Another added that if they had done it for just one critic personally, maybe then there might be more of an imperative to be lenient in one's review, but this was for a big group of journalists, so didn't feel particularly special or tailored. I asked a member of the BLOX team about these events and the reply was that these events were, after all, the culmination of over ten years' work, and given this

and the huge budget, then all they did was ‘book some flights and hotels and pay for some food’. I asked another member of the project team how they would react to bad press, or if someone wrote a particularly nasty review. They replied that everyone could obviously write what they wanted but added: ‘I guess the only thing is that you would want to be invited again.’ Although this was meant as a joke, it hints at the important point that falling out of favour with the architects might come close to professional death for an architecture reviewer; especially since ‘the architecture press’ only ever really comes together, physically, at events that include openings, biennales and similar occasions. It is through such events that reputations are allocated, and invitations are then sent the next time according to reputation. The more fragile your reputation, the more fragile your career, particularly for a freelance journalist. Access to buildings, information and the important commentaries is imperative; not being able to visit is a problem. Architectural reviews have an important phenomenology of their own: what matters is that the reviewer has been there and can claim to have ‘experienced’ the building, but not necessarily for how long.

The gifts seemed to have had the desired effect on at least one reviewer whom I met

Figure 58. BLOX architect and reviewers

again a couple of weeks later, after they had written their review. They told me that 'all the champagne and sweet talk might have softened [their] hits'. This reviewer was critical about the building before the event, but the effort put into the press day had left a more positive impression. The hospitality established a familiarity with the architects, and it made the project, in an important sense, 'more human'. It made strangers – 'the press' – feel familiar with the building, its architects, its history, and the people who commissioned it. One effect of this seemed to be that some of the reviews afterwards became more a character profile of the main architect, Ellen van Loon, and her design visions. What was being staged was the architect as much as the actual design ideas and the finished building.

'A monstrosity'

Despite all these efforts, the reviews of BLOX were seen to come back 'mixed'. Some of the reviews were positive and praised the architecture of BLOX and BLOX as a project. Some of them focused on Ellen van Loon as an architect. Some of them were a write-up of the press kit – that is, modified or translated versions of the press releases. But other reviewers were more critical. Afterwards, the architectural firm only included links to largely positive reviews on their website.

The reviewers from the main Danish national newspapers were particularly critical. They had visited BLOX on another day. The Realdania team and, for instance, the professionals working in BLOXHUB were particularly concerned about the negative reviews from the Danish newspapers. The day when the first review was published, the BLOXHUB director walked into BLOXHUB with the newspaper and said to his team, me and other professionals who sat nearby: 'Have you seen this?' It was not just the building that caused debates, but the reviews, too: On 25 April 2018, one of the main Danish newspapers, *Politiken*, published its architectural review of BLOX, written by its architecture critic who entitled his piece 'BLOX has become a monstrosity' (*BLOX er blevet et misfoster*) (Ifversen 2018). In his subheading, Ifversen wrote that 'Copenhagen's new prestige building is clumsy, deliberately provocative and unnecessarily complicated. This may surprise as BLOX should simultaneously promote interest in Danish architecture.' (ibid.)

By the time that Realdania celebrated the opening of BLOX over the first weekend in May 2018, most of the architectural reviews had already come in and the verdict was clear. This *Politiken* review had seemingly set the tone and other Danish newspapers seemed to agree, giving similarly damning reviews. A week later, *Berlingske*, the other main national Danish

newspaper, entitled its architectural review 'BLOX – the ugly building with the inner values' (*BLOX – den grimme bygning med de indre værdier*) (Weirup 2018). Some foreign reviewers were critical, too. One review by the British newspaper *The Guardian* made news in Danish newspapers. Although the Guardian piece was critical, its headline ('Urban jumble: the building that wants to upset the calm of Copenhagen') was not. But the critical content of this review was taken up again in the Danish newspaper *Politiken* in an article entitled 'English newspaper chastises Copenhagen's prestige building: BLOX is like [American pop singer] Lady Gaga without meat dress.' Moreover: 'The new prestige building is 'un-Danish and not successful, according to The Guardian's reviewer.' (Søndergaard 2018) In his review for *The Guardian*, the reviewer himself referred to a comment made to him by the director of the Danish Architecture Centre, about the metal mesh that features prominently in BLOX. He quoted the director as saying 'It feels like New York! [...] Some people think it is cold, but I prefer to say "cool". It has a Lady Gaga vibe.' (Wainwright 2018) The reviewer's subsequent comment on this statement was repeated by Danish commentators (e.g. Søndergaard 2018): 'You can sort of see what he means, if Gaga had ditched the meat dress and set up a financial consultancy.' (Wainwright 2018) Here BLOX was presented as too corporate and sterile – and not 'cool'.

Public access

One of the main ideas through which the architects explained the design of BLOX was through the stacked but interweaved 'programming' of the building. The 'programme' of the building refers to its designated uses. A picture that was much used by the architects when they talk about BLOX illustrates this idea. It was a picture that had resulted from working with foam models to represent the urban environment – 'the site' (cf. Yaneva and Mommersteeg 2019) – and the abstracted massing of BLOX, just represented through simple blocks. The photo showed BLOX as multi-coloured foam blocks that represent and materialise the 'programme': blue for housing, green for office space, red for the DAC and grey for parking. Instead of neatly arranged blocks, the image showed the blocks thrown and mixed together. An accompanying diagram illustrated this idea further: instead of lines lying on top of each other, the architects envisaged the lines going up and down, overlapping and intermingling, thereby creating the characteristic form of BLOX. The resultant form was not one in which each 'programme' occupied a single floor, but instead they were to be located on multiple floors. The assumption was that this arrangement would lead to interactions between

the people, the 'users' of the building. The architect of BLOX, Ellen van Loon, called this 'architectural contamination'. These kinds of ideas of mixing within a building have been an important and somewhat defining characteristic of OMA's architectural projects, especially since OMA founder Rem Koolhaas published his book *Delirious New York* (Koolhaas 1978).

In her review, the Danish architect and urbanist Christine Bjerke described BLOX as 'stacked territories' (Bjerke 2018). She emphasised the discrepancies between such architectural intentions and how the architecture turned out, how it was built and occupied. Although the design might have been meant to be 'transparent', 'public' and 'accessible', this is not how it was actually occupied and managed. Ownership over specific spaces, 'territories', emerged.

One consequence was that inside BLOX, doors were installed and were locked. They could only be opened with the right key fob. BLOXHUB tenants could not normally enter the office space of the Danish Architecture Centre. Locked doors created inconvenience: BLOXHUB tenants on one side of the second floor needed to go up to the third floor in order to access the other side of the second floor. Another example was the plant pots that were used as markings on a terrace that was shared between BLOXHUB and the Danish Architecture Centre. These pots literally demarcated which part of the terrace and which chairs 'belonged' to BLOXHUB and which seating space was reserved for the Danish Architecture Centre and its employees.

The reviewer argued that, in a similar way, BLOX could not be accessed 'publicly': only a specific public who paid could access the building. You needed to buy a ticket or an annual card to access the Danish Architecture Centre and its cafe; you needed to have a paying membership (or be invited by a member) in order to access BLOXHUB[8]; you are expected to purchase something to eat or drink to use the cafe spaces on the ground floor; and the housing units on the last two floors of BLOX are only to be accessible for their (future) tenants and guests; and of course, one had to pay to use the automatic parking spaces below BLOX; and to be a paying gym member to access it. However, what was felt to be 'public' here, too, was the children's playground that was integrated into the design of BLOX.

After the online publication of her text, the reviewer told me that she received an e-mail from the press officer of the Danish Architecture Centre, who pointed out that the 'public realm' outside BLOX and the DAC passage – which is the underground passageway connecting the public realm, a square called *Bryghuspladsen*, to the harbour front – were

[8] There are exceptions, such as my own presence in BLOXHUB. I was invited by the BLOXHUB team to be in BLOXHUB as a researcher. I was fortunate in that I was exempted from a membership fee.

‘publicly accessible’. This meant here that this area was accessible without a ticket and one could browse the DAC design shop located in the passageway without buying anything. But this passage was locked at night (Fig. 59): seemingly to make sure that homeless people could not enter those spaces to sleep there. ‘Is that really public?’, the reviewer remarked.

In this ‘publicly-accessible’ space, not everyone counted as a public, and not at all times. The architectural notion of ‘the user’ (cf. Forty 2004) assumes that architectures have specific and designated users: homeless sleepers in the DAC passage were not included. Privatisations of public spaces have become more and more common (e.g. Low 2001, Low and Smith 2006), and access to ‘public’ buildings is increasingly restricted, not least because of a ‘securitisation’ of cities – in Copenhagen as elsewhere (Simpson et al. 2017).

Figure 59. DAC passage

Critique of critiques

Instead of publishing their own review concurrently with the opening of BLOX, the main architectural journal in Denmark *Arkitekten* chose to publish a 'critique of the critiques' in their August 2018 issue. This piece (Jensen 2018), written by a professor of architecture at Aarhus School of Architecture, supplied a summary commentary on the various kinds of critiques levelled at BLOX; critiques that had been 'relentless' (Jensen 2018: 10).

Three main strands of critiques were singled out. The first was that BLOX as a building and as architecture was 'un-Danish' (*udansk)* (ibid.), with the building not rooted in 'local building culture' and with no connection to 'Danish architecture'. The *Arkitekten* author dismissed this point as a 'moral judgment' resting on an imagined consensus and understanding of what 'good' and 'bad' architecture was and what 'Danish' or 'un-Danish' architecture was. The second strand of criticisms focused on arguing that BLOX was misplaced or detrimental or even destructive to its immediate surroundings and context. This critique might be more valid, according to the author – because, depending on one's position in the city and where one stood, some buildings that were visible before the construction of BLOX were so no longer. In some cases, according to him, this was deplorable: for instance, some of the old buildings including Christian IV's brewhouse on the Castle Island (*Slotsholmen*) were no longer fully visible when looking back at the city from *Langebro*, the bridge next to BLOX; in other situations, this was a welcome development, when looking towards the busy H.C. Andersens Boulevard and towards the waterfront area of *Kalvebod Brygge* with its corporate headquarters and hotels, which were now hidden. Additionally, he welcomed the fact that BLOX helped to create a new urban space between BLOX and its neighbouring building, the Royal Library. The third kind of critique levelled at BLOX was apparently that BLOX was unnecessarily complicated to navigate. But BLOX was architecture, 'not an airport or a shopping centre', and architecture can be 'convoluted and ambiguous' (ibid.). The author added his own two criticisms to the mix: he criticised the name BLOX because he found the metaphor too fitting, and the entrance charges that one had to pay in order to enter the building. He provided an overview of the adjectives and qualities attributed to BLOX – which included 'ugly, clumsy, cold, soulless, vulgar, monotonous, indifferent, monstrous, unimaginative, overbearing, uninspired, characterless, insensitive, pop, primitive and misplaced' (ibid.). Many of the negative reviews focused on the outside appearance, and the size of BLOX. This did not necessarily come as a surprise. Ellen van Loon, the main architect, had publicly called BLOX a 'provocation' to 'Danish typologies'.

Defending BLOX

For many residents in BLOX and for other stakeholders, the negative press was frustrating and a distraction from 'what is going on inside BLOX' (Fokdal 2018) as one BLOXHUB resident wrote in their own opinion pieces for Danish newspapers. Most of the criticisms did not take into account the activities, effects or ambitions of BLOX as a project, especially that of building a future architecture centre, the new Danish Architecture Centre, as well as all the work that had gone into BLOXHUB. The negative reviews challenged the narratives that they had wanted to tell about BLOX.

Soon after all these reviews were published, some of the key decision-makers and stakeholders behind BLOX published articles and interviews themselves. A group of successful Danish architects published a defence of BLOX. They stated that:

> 'Architecture can and must help to push boundaries. No city should be static and museum-like. Therefore, we must be happy that Denmark has received BLOX, which helps to identify Copenhagen as an international city.' (Mandrup et al. 2018)

They argued that the SAS Hotel designed by Arne Jacobsen, now an iconic landmark in Copenhagen, was also heavily criticised when it was built. They also pointed out that Copenhageners and people in Denmark should welcome different kinds of architecture – and welcome foreign architects in Denmark, too. These architects – and many other architectural firms in Denmark – rely on winning projects in other countries, too; and one aim of BLOX is to encourage the export of Danish architecture and design. In other words, they have a stake in conserving the good international reputation of Copenhagen as well as of architecture in Denmark: BLOX had become a crucial part of this.

Spawned by the negative reviewers, it became a recurring theme of conversation in BLOXHUB that the architecture of the building, its outside, should not be conflated with BLOX as a project and what went on inside. Gossip circulated just before the opening among the professionals in BLOXHUB. Queen Margrethe II of Denmark was to officially open the building on Friday, 4 May 2018. Prior to the Queen's visit, one of the topics discussed over lunch and coffee in BLOXHUB was that it was an 'open secret' that the Queen was privately critical of the architecture of the building. However, the BLOXHUB team (and everyone else responsible for the building) hoped that she would change her mind when experiencing the building from the inside. This argument, of which we have already seen aspects previously, was also made about other kinds of critics. Sceptics might be critical about what BLOX looked like but what actually mattered was what went on inside the building, and they need

to experience it for themselves. A couple of days later, the Queen visited the building as part of the opening ceremony. Only a selected number of people – who according to the organisers counted as 'VVIP' (very, very important) guests – were invited to this event. The event consisted of speeches in the main DAC conference room in BLOX, followed by tours of the building in smaller groups. I did not take part in this programme but was present in BLOXHUB that day. We were told at what time the Queen was expected to be shown around the building and at what time she was meant to be in BLOXHUB. When she entered BLOXHUB and was shown around the co-working space, everyone stopped working on their laptops and rose to their feet. Afterwards, it was discussed how she seemed to have liked the space and building but (at least according to my knowledge) she did not express any personal opinions about the building, or any change of heart she might have had. What seemed to matter was that she visited and that, in doing so, she approved of BLOX as a project and looked beyond the architectural appearance of the building alone.

Wall of fame

In the days and weeks after the reviews were published, the Danish Architecture Centre team collected all architectural reviews that had been published about BLOX and then printed and hung them up on a wall in their new offices in BLOX, located on the floors below BLOXHUB. They added the heading 'Wall of Fame' (Fig. 60). There were so many reviews printed out that the wall that was earmarked for the reviews did not provide enough space, and more reviews were hung up around the corner. But because of the many negative or critical reviews, it was quickly called the 'wall of shame' by the Danish Architecture Centre team.

The criticism hit home, even before the wall of fame turned into a wall of shame. A day before the opening, the Danish Architecture Centre leadership sent a motivational email to the whole team, shown to me by an employee working for them. The negative reception had clearly disappointed the leadership, who acknowledged that the reviews were overwhelmingly but not exclusively negative. They took the fact that the critics did not share their enthusiasm as an opportunity to make the experience for visitors even better. They reminded their team that the job of architectural critics is 'to make a personal, aesthetic judgment – to assess whether they like what they see.' The Danish Architecture Centre should instead focus on making sure that BLOX became 'an international, agenda-setting destination for the broad dissemination of how architecture can contribute to creating more beautiful, better and more sustainable frameworks for human life in the 21st century.'

Figure 60. Wall of fame in Danish Architecture Centre offices

Realdania's investment

The reviewers did not only question why BLOX was built in the way it was but also that it did not live up to Realdania's slogan: 'creating quality of life for everyone through the built environment'. In addition to the personal investment by the architects and all those involved in the project, BLOX was particularly relevant for Realdania as a project: it was its biggest project to date. It was an enormous institutional investment, both in financial as well as in reputational terms. BLOX was Realdania's flagship project. BLOX took over twelve years to be realised. It cost more than two billion Danish kroner (around £240 million). This number of around two billion Danish kroner was stated by Realdania representatives who disclosed the sum when pressed by architectural reviewers and journalists. By virtue of their form and replicability, numbers can circulate and this number quickly spread in the Danish media. Two billion Danish kroner is a lot of money, even for such a monumental building.[9] The seeming precision of numbers can hide their uncertainties. The qualifier *omkring* (ca. or about) that was usually added by Realdania employees leaves open that it might have been more: 'around

[9] For instance, the extension building to the Royal Library was finished in 1998 and is located next to BLOX. Its costs were made public and amounted to (then) 462.1 million Danish kroner (Det Kgl. Bibliotek 2021).

two billion, maybe two-and-a-half, maybe a bit more' as someone working within Realdania commented. It depends on what is and what is not included in the calculations and accounting procedures. But a whole building can be reduced to one number. Numbers are one diagnostic for evaluating architectures; and as a measure to assess a project, numbers can render it controversial and problematic: particularly so where it is over budget and publicly funded. BLOX was privately funded by Realdania, so this was not a problem. A precise breakdown of costs did not have to be released. Other professionals in BLOX had asked about the building costs out of curiosity before and had encountered a reluctance on the part of Realdania to release them: it was said that the numbers might not have been finalised or that Realdania had not intended to make the costs public – and because BLOX was presented as an architectural gift to Copenhagen. It was also said that to only take building costs into account when evaluating a building was a limited way of judging buildings.

Yet critiques were not unexpected. Years of public and professional opposition to the project and critical media coverage had preceded the building process. But these concerns were perhaps forgotten as BLOX was tightly marketed and branded by Realdania in the months before the opening. No photos could be taken or shared by those who were already able to go inside BLOX before its opening. A project manager at Realdania, who had worked for Realdania for many years, seemed entirely unsurprised about the reviews when I talked to them. They stressed that these criticisms were created 'back in 2005/06' when this particular, prominent plot of land had been chosen as the site for BLOX, and when Realdania chose OMA as the architects for the building. The criticisms were therefore 'more or less predictable'. BLOX was the brainchild of Flemming Borreskov, who was Realdania director from 2000 to 2013. Jesper Nygård took over as CEO of Realdania in 2013. Consequently, it was unsurprising to see that Nygård as current CEO of Realdania was quoted in *Politiken* as saying that they 'would not have built BLOX today.' (Benner 2018) Nygård argued that Realdania had become more self-reflexive and open about its approach to philanthropy-turned-urban development, and its projects and thereby also to BLOX. Realdania had evolved since it had first purchased the site.

Stoppages and new beginnings

I left Copenhagen at the end of September 2018, but I returned briefly a couple of weeks later in order to attend the third launch that BLOXHUB celebrated of itself as an organisation: this involved the re-opening of the now renovated yellow buildings, *Fæstningens Materialgård*,

that form part of BLOX and are part of the site that BLOXHUB inhabits. The BLOXHUB team used this opportunity to invite the 'BLOXHUB community' to meet in the yellow building's courtyard for drinks, food and entertainment. Commensality of this kind, we have seen, has so often been used in this project to bring people together, not only physically but morally. With the completed renovation, all of the BLOXHUB-managed spaces were now open. The BLOXHUB director gave a short speech full of optimistic statements about the future and what the assembled people could achieve.

When I returned to Copenhagen for this brief visit, I also went to the architectural school. In the canteen, the social hub of the school, I ran into an architect whom I had met many times before. He was teaching and researching at the architectural school, and we discussed BLOX and the Danish Architecture Centre. He was disappointed by the output of BLOX and DAC so far. In comparison with other architectural institutions and museums (such as the Canadian Centre for Architecture or, closer to Copenhagen, the German Architecture Museum or Het Nieuwe Instituut in the Netherlands), the architect found the work that the Danish Architecture Centre had produced so far was unimpressive; it was mostly, as he put it, 'branding and marketing Danish architecture'. He then asked me if I agreed and, if so, how I would approach this development of BLOX 'critically'. This chapter and the thesis have tried to show how BLOX has been constructed through these and other kinds of commentaries and practices – and that architects and other professionals have already articulated and made 'architecture' present.

The opening of BLOX could be seen as a temporary 'stoppage' – using the term of anthropologist Alfred Gell (1998) – of this transformation (cf. Buchli 2013: 8, Chua and Elliott 2013). Gell proposed the idea of a 'network of stoppages' to make sense of the body of work of an artist, Marcel Duchamp, and the 'representation of duration and the problem of continuity' (Gell 2013 [c.1985]:88). Similarly, this thesis is also a particular stoppage.

The opening of BLOX had constituted a snapshot of this transformation of the harbour and a particular stoppage in the lifecycle of a building. As we have seen in this chapter, it is around this moment when, typically, the building is evaluated by 'the people' – in effect, largely by architectural reviewers – and when the direct involvement of the architectural firm in the project stops; the design and construction of the building are seen to be 'completed' and handed over to the client or user organisation. This was also why the architectural firm, OMA, asked its photographer to document the building before the opening.

This chapter has set out more practices through which BLOX was enacted: from the

‘opening’ re-definition to giving interviews and speeches, publishing articles and publications, running events, and hosting dinners and press days for architectural reviewers. The BLOX organisers and stakeholders sought to coordinate the building’s image and their own reputations through careful management of access and reviews. But as Marilyn Strathern (2006b) reminded us, people decide for themselves if and how something is relevant for them. Yet, reviews also constitute a temporary snapshot and assessments are subject to change – especially, if the future might be as ‘co’ and as optimistic as BLOXHUB envisioned it.

Figure 61. ‘The Future is Co...’

Conclusion

This thesis examined architecture in Copenhagen through fieldwork in and around the BLOX building in Copenhagen in 2017-8. The chapters have suggested how architecture is 'done' (Mol 2002) beyond the design and modelling work usually associated with the profession.

'The future is co'

One of the slides that the BLOXHUB director almost always showed when he gave a presentation to visitors and others was an image of BLOX as the background with the words 'the future is co' (Fig. 61). The 'co' – a prefix that has also come to be used in Danish – echoed points made in other representations about BLOXHUB and BLOX, and architecture more generally: regarding the importance of 'co-working', 'collaborating', 'connecting', building a 'community' and 'co-creating future cities'.[1] 'Co-create Copenhagen' was, for instance, the name of the official 'vision for 2025' by the City of Copenhagen (2015). In those presentations, it was partly a play on words as Copenhagen also starts with 'co', of course; and, as an anglicism, 'co' can be seen to signal the self-consciously international outlook of BLOXHUB and Copenhagen's design world more generally. The thesis sought to situate some of the dimensions of these presentations and representations of architecture in Denmark in the context of the BLOX project.

BLOX was one of central Copenhagen's major urban development projects until its opening in May 2018. It was financed by the Danish organisation Realdania with political support from the Danish government and the City of Copenhagen. The BLOX building was now supposed to play a central role in promoting Danish architecture and design and its future developments. It was likened to a lighthouse, intended to shine a light on Danish architecture and design. I came to study BLOX at a special time in its building lifecycle: just before its construction phase was finished and then when various organisations and companies settled into the building. Visions for BLOX had long been formulated, but now was the time to enact and live up to the expectations constructed by Realdania and others. In addition to the vigorous enthusiasm expressed by those who formed part of the project, BLOX also

[1] These ideas were also explored elsewhere in Copenhagen, of course, and especially connected to ideas around 'co-designing' or 'participatory design' which had been explored by anthropologists, designers and architects in Copenhagen at the time – also in the context of the architectural school where anthropologists such as Thomas Binder and Joachim Halse ran 'co-design' courses (see Binder et al. 2011; Binder et al. 2015, Halse et al. 2010). Of course, design anthropology has developed into an area of research more generally (e.g. Clarke 2018, Gunn et al. 2013, Smith et al. 2016).

faced vocal criticism, especially for its external appearance. The project could be described as a 'controversy' (Yaneva 2012) through which new, perhaps unexpected relations were formed. The STS scholar and architectural theorist Albena Yaneva argues that it makes more sense analytically to talk about 'the architectural' rather than discrete architectures: 'The architectural is a manner of doing; the architectural is a type of connector.' (Yaneva 2012: 108)

'Architecture' is 'co' in another aspect, too: the 'term is a coordinating mechanism operative in conjunction with the various distributions.' (Mol 2002: 117) Here, BLOX emerges as a building 'multiple' (Mol 2002). As we find in other ethnographies of architectural projects such as Gökçe Günel's (2019) study of the Masdar project in the United Arab Emirates, we could say that BLOX 'was not one thing but rather an amalgam of widely varying ambitions and demands for the future' (ibid.: 10). The futures at stake have included those of architecture and design in Denmark, the national economy, individual firms and organisations, cities all over the world and also the state of the planet and its climate. BLOX is all these things. It is also a 'mixed-use' building and hosts multiple organisations, including BLOXHUB and the Danish Architecture Centre. There is another sense in which BLOX was literally multiple too: it might appear to be one building but a nearby yellow building complex called *Fæstningens Materialgård* forms part of the BLOX project, too.

Chapter summaries

In summary, BLOX is not singular; and this thesis is not exhaustive and does not purport to give a 'whole' picture.[2] The chapters move from the BLOX project (Chapter 1) to BLOXHUB (Chapter 2, also Chapter 4), to a BLOXHUB resident and projects outside BLOX in Copenhagen (Chapter 3), to other places and practices of architectural knowledge-production such as the architectural school (Chapters 3 and 4), to a BLOXHUB member organisation and (Chapter 5), and then back to BLOX and how the project was received and constructed in reviews (Chapter 6).

The first chapter introduced the BLOX project and the visions of BLOX as a future instantiation of 'the world of architecture, design and new ideas in Denmark'. BLOX became part of the policy objectives of the Danish government. The second chapter focussed on the co-working space in BLOX, BLOXHUB, and its organisational aims: instigating

[2] See, for instance, Strathern (1992a), Cook et al. (2009), Otto and Bubandt (2010) for discussions of related 'holisms' in anthropology.

collaboration through the design of the co-working space, events and everyday interactions. The third chapter examined the logic and talk of 'solutions' that has pervaded much of Copenhagen's architectural and design worlds. In this context, more and more spaces – known as 'urban labs' – emerged where impact could be tested and simulated. Impact had to be made visible (Chapter 4). This also meant that existing places, such as the architectural school, had to formulate their own impact in light of new demands. In Chapter 5, we saw how these pressures centred around demonstrating that architecture produces effects; effects that could be expressed in the language and logic of business. Architecture needs to 'add value'.

Certain dualisms are still seen to clearly structure and order knowledges in the corporate world in Europe – categories such as 'arts' and 'sciences', 'subjective' and 'objective', 'quantitative' and 'qualitative', and numbers and calculable data are seen as more real, more trusted than, for instance, architectural forms of knowing based on intuition and creativity. Some architectural practitioners turn to 'data' and to other disciplines, especially the natural sciences, for different models of design that claim to be more obviously based on 'objective' evidence or 'facts' (Chapter 4). But architecture also has its own established, disciplinary ways of assessing its outputs: one such practice is the reviewing of architectures. We encountered this practice in the last chapter, Chapter 6. The architectural reviewers criticised BLOX on multiple accounts – not just for aesthetic reasons but also based on other disciplinary considerations: what should good, newly built architecture do or achieve? One answer that reviewers in Denmark gave is that architecture is still subject to other, 'public' forms of accountability, one in which it is felt that new architecture should contribute something new, or should give something back – to 'people', to 'the city' or to 'architecture'.

Contributions

The thesis hopes to offer a conceptual departure towards examining the various means through which 'architecture' is realised: the making of 'architecture' as an entity – an entity that takes shape in and through multiple forms, for instance, as professional practice, as a discipline, as built space, as publications and exhibitions, as reviews, discussions and other accounts of experience, impact and outcomes. Existing bodies of anthropological literature on architecture have, thus far, mainly provided ethnographies of buildings and built spaces or ethnographies of architects in the studio. In other words, on the one hand, there has been the anthropological literature that is concerned with the production of spaces (as the outcomes of architectural designs), offering discussions and critiques of architectural visions (e.g. Buchli

1999, Günel 2019, Holston 1989, Laszczkowski 2016, Murawski 2019). On the other hand, there have been ethnographic studies of architectural design work carried out in architectural studios or similar spaces where architectural activities are typically imagined to happen (e.g. Gunn 2002; Houdart and Minato 2009; Yaneva 2009a, 2009b; Yarrow 2019). One of the contributions that this thesis makes has involved bridging the gap between these bodies of literature and examining how and where 'architecture' is shaped and practised more generally. This thesis has attempted to take debates in the anthropology of architecture forward by taking them beyond the architectural studio: we have gone instead to some of the other places, people, and practices that also shape the architectural profession, even if they might not seem recognisably, at first glance, 'architectural'. One point conceptually at stake here is that neither anthropologists, nor architects can take 'architecture' for granted, or where, by whom, or how 'architecture' is practised.

The relationship between architecture as a set of practices and architecture as the outcome of those practices (as built form, as an 'object', as a profession, as a discipline) could be described as recursive or mutually constitutive. Architecture is a discipline and profession with regulations on who might count as an 'architect', and with self-disciplining mechanisms (Schaffer 2013); but, more generally, it is a set of practices, and in this sense, architecture is 'done' and constituted by a variety of professions and people. 'Architecture depends', as the architect Jeremy Till (2009) has put it. The thesis has therefore tried to highlight how 'architecture' has been practised in and around the BLOX building and – more generally, how architects as well as how other professionals, political decision-makers and organisations design and redesign, one might say, what 'architecture' in Denmark is or should be. The relationships between architecture as built space and architecture as a set of practices became especially pertinent in the context of BLOX: it is in and through the built form, the space of a building that different professional practices and understandings of 'doing architecture' were proposed and facilitated. As a building complex, BLOX produces and provides space where architecture is done – through exhibitions, presentations, discussions, and events where architects and other professionals shaping built environments gather; and in the design shop in BLOX, visitors and Copenhageners can buy selected books, posters, and objects from the design world. BLOXHUB was founded to 'foster dialogue' and 'build bridges' between the fields of architecture, design, construction and technology – by providing an explicitly 'co-working' environment. In this sense, BLOX (as a project and as a building) builds on what established disciplinary logics of architecture, especially the idea that architecture (as built

space) influences human actions and practices, and that it is through building (and, thus, buildings) that the profession develops and progresses.

I have suggested that, in outlining some of the ways in which architecture is 'done', this thesis offers both a contribution to, and conceptual departure from, the existing anthropological literature on architecture through a novel focus on practices that are not usually considered to be architectural – especially presenting, debating 'architecture', and, thus, talking. Many of the practices that I encountered evoked and imagined possibilities: it was a matter of communication and articulating ideas. Much of it was (only) 'talking' – as some anthropologists (and architects) might say. Yet it mattered – especially to those who were involved in the project and to those who inhibited the building – that the architecture of the building was discussed, and how it was critiqued. The building attracted and caused (largely unintended) debates about the specific architecture (as appearance) of the building and its own architectural contribution to 'Danish architecture'; but BLOX was also mobilised – for instance, during the Venice Biennale – to frame discussions and directions for the future of architecture more generally. Debating, talking and presenting are, of course, everyday practices that can be found in many office environments and professional workplaces, and consequently also in many architectural firms or in professional spaces like BLOX. Nevertheless, such practices are not usually acknowledged in analytical approaches to architecture, especially in the architectural literature. In his ethnography of Swedish designers, Keith Murphy has (2015: 130) argued that everyday linguistic practices constitute and reproduce design, even and especially in the design studio. In the case of architecture, such practices not only mediate and communicate concepts and visions – they are essential to how architecture and design are 'done'. Similarly, designing BLOX involved typical architectural activities such as drawing, making models, and planning that have been explored by ethnographers elsewhere (e.g. Yarrow 2019; Yaneva 2005, 2009). But the project also entailed other practices such as giving presentations, tours and interviews as well as the production of publications, reviews, exhibitions and policies: this also constitutes architectural work. It would be practically impossible to realise an architectural project without them. Even the production of most drawings, models and plans relies on the everyday practices of communicatory exchanges: activities such as engaging in conversations, holding events on architectural topics, writing articles or books, reviewing buildings, engaging in public debates and interviews, 'networking' or 'collaborating', producing exhibitions, giving presentations, or organising and participating in meetings.

Therefore, one important aspect I came to understand about my fieldwork, in its eventual focus and practice, is that the various presentational practices I encountered and engaged in, during the 'chatting', 'events', 'networking' and 'meetings' with those professionals I got to know, were part of what constituted BLOXHUB – and of what it constituted. As we have seen in these pages, the space that BLOX (and BLOXHUB in particular) both allowed and encouraged me to inhabit was one in which anthropological work could flourish in a particularly constructive sense – allowing and encouraging architecture to be 'done' through the very conversational and observational practices the ethnographer engaged in. Whether as a meeting participant, 'interviewer' or as an audience member during talks and events, for example, I became participant in the practices I studied – and at the same time, like any good ethnographer, had to 'hold them up for inspection' (cf. McDonald 1989, 2018b [1989], 2020).

Much effort and money were invested to coordinate BLOX and make BLOX cohere – and to make BLOX present as 'Denmark's world of architecture, design and new ideas'. The Danish government, Realdania and its partners branded BLOX as a 'meeting place', and it was a place where I encountered presentations and re-presentations of this professional world – building here on the work of Rupert Stasch (2014), who reclaimed the notion of 'representation as simply "making present,"' (ibid.: 631), and on Victor Buchli's (2013) emphasis on iterations and reiterations. Thus, 'architecture', more generally, and BLOX, in particular, emerged in and through each of these practices, through these iterations and reiterations, through the material that I have explored throughout the thesis.

Making architecture present

The director of the Danish Architecture Centre told a Danish journalist in response to some of these comments that he preferred a controversial building that is talked about to a building that people would find 'nice' – which would be 'boring'. In line with the director's goals for the Danish Architecture Centre, BLOX 'puts architecture up for debate and involves people.' (Kraul 2018) 'Good architecture creates debate' is what those who defended BLOX against criticisms argued; and BLOX created debate. We saw throughout the thesis that many different people spoke on behalf of BLOX, or talked or wrote about their ideas or opinions regarding BLOX. The potential and future successes of BLOX, as well as any positive or negative effects that have already been achieved, were much-discussed issues. Generating this kind of commentary was recognised to be a form of 'impact' in itself, albeit largely unplanned. We have seen in the preceding chapters that discussions and debate, whether oral

or in print, are important practices through which both BLOX and architecture take shape, are done (Mol 2002), and gain their factuality (cf. Latour and Woolgar 1979).

Taken together, the chapters have highlighted another related concern: the need to be 'cross-disciplinary' and engage in collaboration in order to achieve impact. 'Interdisciplinarity' has been an increasingly common trope of accountability in Europe (see Barry and Born 2013). As Chapter 1 highlighted, BLOX is the home of the Danish Architecture Centre, and its proclaimed purpose is to champion architecture and design in Denmark through its scheduled events. But BLOX can also be seen as the symbol for the disciplinary adaptations that architecture faces. As Chapters 2 and 3 discussed, developments such as emerging technologies and global 'challenges' from climate change to urbanisation are seen to require the input of professions other than architecture. One key principle of BLOXHUB was that 'the future is co': one of the assumptions here was that only organisations and companies that collaborate with other professions and disciplines will be able to produce solutions. 'Sustainable urbanisation' was the key theme that was seen to unite the professional and disciplinary differences of the BLOXHUB members and visitors. In addition to the spatial design that was meant to stimulate interactions and exchanges, BLOXHUB organised themed events (such as talks) as well as tailored 'match-making' activities to create relations between members and, for instance, members and visitors. Therefore, nearness – similar to what Victor Buchli (2015) has called 'propinquity' – was expected to play an important role in achieving this, as both physical proximity, being there, being in the same building, and conceptual closeness, sharing interests in the built environment. A BLOXHUB employee reported that someone on the BLOXHUB board had referred to BLOXHUB as a 'possibility machine'. But in her opinion, BLOXHUB was much more than creating possibilities with its events, match-making initiatives and all the other programmes. The BLOXHUB team had come up recently with an analogy from football to describe their work. BLOXHUB is playing the 'passing game'. This means that the BLOXHUB team support their members in coming close to the goal, the solution, but the members still need to score the goal themselves. Being part of BLOXHUB is understood to increase the chances that beneficial encounters take place. For instance, in the months after the opening, BLOX had false fire alarms. The two occasions when I was present, the whole building needed to be evacuated. Everyone had to assemble outside the building and wait for the firefighters to arrive and clear the building. It was unclear how and why the fire started, but back inside the building, it was attributed to BLOX being a new building: fire alarms were set off accidentally because the building and the people were

not used to each other yet. But the disruption caused by the fire alarm meant that everyone in the building had to stand outside for a prolonged time. The BLOXHUB team received feedback afterwards that various BLOXHUB members who had not met previously started talking outside and scheduled meetings with each other as a result. This, it was hoped, would lay the foundations for future projects and was also interpreted as a success of BLOXHUB and its selection of members with overlapping interests. The interdisciplinary collaboration practised in BLOXHUB was one answer to the pressures seen to be placed on architecture and other professions. Basing design on 'knowledge' or evidence or interdisciplinary research teams in architectural studios and the reorientation of the architecture school towards the Sustainable Development Goals were other examples that we have encountered in this thesis. As Chapter 4 discussed, the main perceived pressures are framed as 'economic' concerns. Employing the language of economics allows architects to argue with credibility: it seeks to demonstrate and 'prove' with numbers that employing an architect 'adds value' and should not be seen as a cost, a cost that other professionals potentially considered as unnecessary. Interdisciplinary engagements are only thought to be a threat to architecture if control is lost over the design process and thereby over the design outcomes; the 'economic' concerns, as business concerns, are feared to come close to doing this. The managing, processing and visualising of data have already generated new professions and job titles. One of the open outcomes for architecture as a professional discipline is whether such developments have lasting effects on how it organises or 'disciplines' its knowledge – and on what it means to be an architect.

This thesis builds, in part, on the body of anthropological literatures on usefulness, impact and forms of accountabilities (e.g. McDonald 2000; Strathern 2000, 2006b; Stein 2017) and seeks to make its own contribution, its own impact, especially in the field of an anthropology of architecture and design. The existing literature on the anthropology of architecture can broadly be categorised along two lines, based largely on where ethnographic fieldwork was carried out: firstly, ethnographies of the architectural profession with a focus on architectural work in the studio (e.g. Houdart and Chihiro 2009; Yaneva 2009a, 2009b; Yarrow 2019) and secondly, ethnographies of specific architectural projects and buildings (e.g. Buchli 1999, Murawski 2019, Weszkalnys 2010). This thesis contributes to these bodies of literature through an ethnography of oft-neglected architectural practices outside the studio setting, and centred on a building project that aims to set a direction for architecture in Denmark. What happened in and around BLOX materialised some of the concerns that architecture as a

discipline and profession felt itself to be facing; it raised questions about the shape and role of architecture when the future of the 'architectural' can seem to be post-disciplinary.

The actions of practitioners in places like BLOX have been paralleled by theoretical shifts towards the effects or outcomes of architecture in recent architectural literature (e.g. Easterling 2021, Till 2009). These developments could be summarised as a shift from objects to outcomes or from products to performances. This should not be taken to mean, however, that form and form-giving as design processes do not matter anymore. Rather the scope of possible forms that architects and designers can draw on has expanded. This is what the architect Keller Easterling, a one-time visiting professor in Copenhagen's architecture school and whose work I encountered via architects in Copenhagen, calls the difference between architecture's 'object forms' and 'active forms' (Easterling 2012). Designing active forms means attending to the potentialities and consequences of possible designs rather than focusing on specific physical products: architectural design beyond the design of buildings. Instead, design becomes a means to make or remake existing conditions. These world-making capacities of design have been recognised by anthropologists such as Arturo Escobar (2018), who has criticised the consumerist and commercial pasts of design practices whilst also seeing their potential for other causes, such as environmental and social movements.

But for many professionals and architects, it is difficult to ignore economic logics in practice. In contrast to Escobar's (2018) position, we could say that the commercialisation of design solutions was a necessary condition for BLOXHUB as an organisation and for many of its members. Any project that hopes to become a successful 'solution' needs to 'make business sense'. It needs to be commercially viable in addition to being able to 'solve' a specific problem. Economic considerations, such as capital investments, were seen to be obligatory in being able to 'scale' designs and bring them to those who might need them.

In her examination of the 'knowledge economy', Strathern (2006a) emphasises the significance of criticism and disagreement for evaluating and advancing knowledge: disciplines like anthropology or architecture are a 'community of critics' (Strathern 2006a: 191). In interdisciplinary encounters, Strathern notes that there is often now a danger that knowledge production becomes subject to a logic of 'management'. One problematic is that a 'specifiable outcome is sought' (Strathern 2006a: 198) in this economic model of knowledge. But often 'outcomes are multiple, indeterminate' (ibid.) in a research endeavour, in any discipline. Coming up with a specific form, a response, to a specific problem is what designers do, as the Danish word for design '*formgivning*', meaning the process of 'giving form',

suggests. But the forms that these outcomes might take are not necessarily predetermined. It is not unimaginable that new 'communities of critics' will emerge in places like BLOXHUB. Indeed, this is exactly what BLOXHUB is trying to cultivate: professionals that can work together constructively on projects, 'building bridges' across disciplinary boundaries.

The developments generated through the BLOX project could shed light on 'how architecture takes shape in the age of the Anthropocene, in which market forces are comparable to natural forces' (Stender 2017b: 36). In her ethnography of residential buildings in Copenhagen, especially the 8-House designed by the Danish firm BIG, the Danish anthropologist Marie Stender (2014, 2018) highlights how the financial crisis of 2008 influenced design decisions and left tangible effects on the building. Similar arguments could be made for BLOX since the financial crisis was blamed for the delays it took for BLOX to be finally constructed. Thereafter, we have seen throughout this thesis that 'the economic' in its various forms, from 'the market' to 'business opportunities', is made present as influencing or shaping architecture. Architecture is increasingly shaped by concerns framed within other disciplines – especially economics and business management but also the emerging 'data science' as well as engineering and construction and the natural sciences, with its disciplinary boundaries sometimes expanded and sometimes irritated by the friction.

Emergent architectural forms

By hosting organisations and events on the potential of technologies and how they could be integrated within existing built environments (see Chapters 2 and 3), BLOXHUB aimed to 'co-create future cities' and to become a 'thought leader' on these issues. Through technological advances in sensor technologies, machine learning, and artificial intelligence, buildings and cities were imagined to be improved, said to become intelligent and autonomous. The vision of the 'smart city' was alive and well during the events we have noted. Such topis were repeatedly discussed, although the terms 'smart city' seem themselves to have fallen out of fashion amongst some practitioners (e.g. Greenfield 2013, Coletta et al. 2018). To bring these future smart environments into the present, urban labs have sought to demonstrate the possibility by testing and demonstrating how technologies could be built into existing infrastructures (Chapter 3). As a building, BLOX was 'smart': for instance, in order to save energy and be a 'sustainable building', the indoor climate was regulated by a computerised system. The summer months brought a heatwave, but inside BLOX, it was chilly – too cold for some people, although the thermometer and the specialists maintaining

the system insisted everything should be 'normal'. The atypical heat as well as drafts and wind flow caused by the few small windows that could be opened were blamed initially. In order to detect a pattern, the BLOXHUB reception team was tasked with noting at what time, temperature and sun condition the blinds were automatically lowered. It was especially women who felt cold. This led to speculations that the representation of the human that was built into the system, the human that BLOX sees, might not be an inclusive one but rather one that was modelled on a standard 'man' who wears standard 'male' office clothes (cf. Murphy 2006). After some weeks, the building seemingly adjusted the temperature, and the humans adapted, too, bringing more clothing layers to the office.

The growing anthropological literature on human-environment relations suggests that anthropology may need new conceptual tools to describe their emergent and entangled connections . The Danish anthropologist Marie Stender (2017b) discusses aspects of the relations between anthropology and architecture and how to study architecture as an anthropologist. One of the unresolved questions concerning how one could study architecture as an anthropologist seems to be: 'Do we know how to interview a house or do fieldwork, not just in, but also among buildings?' (ibid.: 33) Stender notes that 'what a building *does* would have to be approached through the social life that takes place in and around it.' (ibid., original emphasis). Effectively Stender suggests that buildings 'speak' through their performance and effects, which are often different from what their human designers originally intended. Bruno Latour makes the point that these effects are always already mediated when he says that 'I do not claim that things speak "on their own," since no beings, not even humans, speak on their own, but always *through something or someone else.'* (Latour 2004b: 68, original emphasis) The question is, therefore, not necessarily 'can the thing speak?' (Holbraad 2011) but rather, how can 'it' speak? Buildings create and configure 'space' with intended and unintended implications for how life is lived in and around them. Architectural theorists like Keller Easterling (2021) argue that specific arrangements of space have specific 'dispositions'. Anthropological literature on more-than-human sociality (e.g. Tsing 2014, 2015) highlight that these concerns reach beyond recurring debates on the 'agency' of things. Rather, these debates point to 'entanglements' (Tsing et al. 2017) of humans in their environments, with some then also labelled as 'the Anthropocene' (cf. Kohn 2015; Chua and Fair 2019).

Recent ethnographic work suggests that 'form' could be an object of study as 'a strange but nonetheless worldly process of pattern production and propagation' (Kohn 2013: 20). In his ethnography of both a village and the Amazonian forest, Kohn attends to the

representational capacities of other-than-human entities. ‘Forests think’, he argues because they also produce signs and patterns, they also produce representations. More generally, Kohn refers to this patterning as ‘form’, which is the ‘product of constraints on possibility’ (ibid.: 159). But ‘form need not stem from the structures we humans impose on the world. Such patterns can emerge in the world beyond the human.’ (ibid.: 183) The interactions of such patterns shape other forms. Kohn gives the example of how the distribution of rubber trees and the specific characteristics of the Amazonian landscape gave rise to an exploitative system known as the Amazon rubber boom (ibid.: 165). ‘Thinking like a climate’ is what the anthropologist Hannah Knox (2020), who draws on this work, proposes in order ‘to hold in view, ethnographically, the multifarious manifestations of climate’ (ibid.: 8) in the British city of Manchester. Like the forests or the rubber boom, Knox suggests that ‘climate change’ needs to be analysed as ‘a pattern that is produced out of the interaction among sign-producing entities.’ (ibid.: 23) Similarly, BLOX – or any building – can be conceptualised accordingly: some of those signs might be the result of conscious design decisions, but some are the interactions of forms that exceed any human intentionality. Conceptualising BLOX in this way would similarly mean holding the different manifestations of BLOX in view: the emergent forms, the enactments, of architecture that were explored in this thesis.

So far, the disciplinary relations between anthropology and architecture have been called an anthropology of architecture (Buchli 2013), architectural anthropology (Amerlinck 2001) or an anthropology with or by means of architecture (Ingold 2013). These terms convey varying degrees of imagined interdisciplinarity. Knox proposes the image of ‘fellow travelers in a process of understanding’ (Knox 2020: xii) to describe the relationship with the people she studied and the shared quest to act on climate change. This is also how I understand, for instance, the idea of ‘sparring partners’ (Tinius 2021) that is based on critical engagements that seek to further mutual comprehension. This is especially important perhaps where both anthropology and architecture seek to amplify their impacts. On this basis, this thesis has tried to engage the presentations and representations of architecture: ‘the future is co’.

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