2
Opening the Box

In the following, I will introduce the typology of monospace,[1] a specific form of open plan architecture, and argue that monospace urges us to re-think our bodily relation with and theoretical approach to architecture. The question of space is central to this. That said, this is not about a philosophical discourse on what space is and what not but about contrasting the prevailing notion of space in architecture with spatial models from the social sciences and humanities. Finally, it is about showing which consequences arise when approaching this type of architecture with the ANT methodology.

Architects most commonly follow a traditional spatial understanding. According to this approach, space is what is contained in a building (Hilger 2011; Till 2013). The term monospace, too, refers to such a three-dimensional container space, which roots it in an absolutist spatial understanding. However, architects are also aware of the complex relations between *their* buildings and the social, not least because they have to meet all the contradictory demands and parameters that shape a building in the course of its design. In addition, after structural completion, buildings are subject to complex processes. To some extent architects try to anticipate or to structure and even define the forms of living interaction made possible by their buildings. Thinking buildings and people together thus is not alien to architects. Some scholars even argue that this is the basis of the architect's authority as it creates social and political relevance (Lipman 1969). In relation to the prevailing spatial concept, however, it is certainly subject to contradiction since sociological spatial categories are excluded or set in relation to causal relationships in absolutist spatial models. As I believe, it is particularly indispensable with monospaces to think a more complex mutual interrelation between people and building. This is necessary to understand their 'doing' together, not only of people and building, but of all the different devices that create the world of a

1 Thoughts on the potential for a typological classification and designation that allow fundamental questions about the nature of architecture and its relationship to space and social life have also been published in the article *Über Hüllen und Werden* (Geipel and Hansmann, forthcoming), which draws on this chapter.

specific monospace. To do so, it is fruitful to include the insights of current anthropological and sociological research. In the latter, we find a way into the shared 'doings' that thus turn away from the separation of objective, passive, stable material or subjective, active space (Latour 1997). It is in this 'doing' that space is constituted, that the architectural quality emerges, and that we can understand what difference a building does. This is something that is neither contained in the plan nor visible on high-glossy prints of the façade: it is present in the 'social life of a building'.[2] We will thus explore the concept of spacing and shed light on the implication it has for our understanding of the concept of agency before introducing the components of the inquiry and laying out the specific methodological choices for approaching the lived reality of the Sainsbury Centre in the next chapter.

Before going into a brief introduction of the typology of monospace and the many concepts that we can group around it, let me provide an initial note on the use of the term space. 'In the hands and minds of architects, space is generally emptied, and with this is made available as something that can be directly manipulated as some kind of stuff.' (Till 2013, 118) However, in the use of the term space, as Till further notes, it is not always clear whether what this implies is physical or mental, an actual condition or metaphoric notion. Delving into the world of monospace, I leave this vague use of the term space without comment. By the end of this chapter, however, we will have gained more clarity and capacity to draw distinctions.

2.1
Open-Plan and Monospace

In the late 1980s an advertisement for the *Renault Espace* appeared, a large limousine with seven seats where passenger and luggage share one space without a separate trunk. A few years later the *Renault Mégan Scénic* with removable back seats was introduced with the epithet *Monospace*. In the field of architecture these vehicles have been a source of inspiration for the term monospace. Influenced by the idea of a flexible internal space that allows for various uses in changing constellations, the architect and urbanist Finn Geipel and his colleague Nicolas Michelin took this term up in the context of their project Nîmes Arena (1989), France. No longer addressing a small mobile unit of space but describing one-room-architectures distinguished by a maximally open floor plan with one all-encircling shell,

2 Speaking of 'a social life of buildings', I follow Yaneva's work (Yaneva 2009b, 2012, 2017) who shows how 'A building is not a static entity composed of symbols, but a flow of trajectories.' (Yaneva 2012, 20) In the use of the term, Yaneva references Arjun Appadurai, who argues in his study about commodities and the exchange of values, that things, like people, have a 'social life' (Appadurai 2013).

Geipel, concerned with the aspect of transformation and openness, experimented with this concept in various subsequent projects and in his academic teaching (Geipel, Koch, and Thorwarth 2011; Place 2000).[3] The typology of monospace in the broad field of open plan architecture is a comparatively small group of buildings. I suggest understanding monospace as a radical case of open plan architecture: the boundaries between the two are fluid. One distinguishing feature is the single-storey or multi-storey design. The floor plans alone do not necessarily allow a distinction to be made.

Although the term monospace is a recent one, the history of such buildings is not tied to any particular period; similarly, it is not subject to any specific culture, size or function. Already in the Stone Age caves or the itinerant dwellings of early hunter-gatherers or pastoral peoples are characterised by open-plan layouts, most of them comprised of only one room. Thus, from the outset, monospace can be described as an early or primitive typology, which can be found on every continent.[4]

Monospace structures are built to this day and there are various motives for using this supposedly primitive type of building. Public and cultural uses take advantage of the large single room, which allows for substantial gatherings. Early examples are the Pantheon in Rome (119/125–128 AD) with its domed rotunda that was built as a temple dedicated to all the gods and later converted into a church for assembling the community (MacDonald 1981). Another example are the Roman basilicas which had been used originally as places of business and legal matters (Platner 2015, 71 ff.). Additionally monospaces are used for sport activities and events as well as serving as places for production. They create vast and continuous spatial layouts—economic aspects, as well as visibility, play an important role here.[5] The last examples could also be viewed under the title 'supersheds', which author and architect Chris Wilkinson defines in his eponymous book as 'buildings enclosing a large single volume of space with relatively long span and without major subdivision' (1996, xi). Wilkinson explains that supersheds belong to a group of buildings that 'has largely been excluded from the mainstream of architectural classification, and left to the province of engineering' (ibid.).

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3 In distinction to a functional typological approach as we find e.g. with Pevsner's history of building types (1979), Geipel suggests here grouping buildings according to formal criteria; that said, in a form that is to be found in continuous spatial layout.

4 Anthropologist Stephanie Bunn (2002) shows the variety of tent and other itinerant or temporary structures that have been used in the Artic with the Inuit, with the First Nations in North America, the Bedouins in North Africa and the Nomadic tribes in Central Asia.

5 From the visibility of the crowd to a spectacle, to visibility for control in the sense of the 'panoptic machine' as defined by French philosopher Michel Foucault, who illustrates a state of permanent visibility in his analysis of Jeremy Bentham's Panopticon (Foucault 1995 [1977]).

With the creation of a continuous and deep floor plan challenges arise, concerning engineering but also for example in terms of fire protection, lighting, and ventilation. Monospace is not simply a formal task but depends (particularly above a certain size) on the performance of materials, processing methods and technologies. Albert Kahn, an industrial architect who extensively built for the Ford Motor Company, introduced reinforced concrete for better fire protection and double-shed roofs to allow for good and even illumination and ventilation (Ferry 1987). Frank Lloyd Wright likewise was able to develop the open plan office as early as 1906, with the Larkin Company Administration Building in Buffalo as heating and air-conditioning allowed for a large scale continuous well-tempered environment (Quinan 1987, 66 ff.). Thus, open plan and monospace structures are not simply empty shells but arise from a complex interaction between many specific conditions and needs. Contradictions easily emerge between the capacity to host large groups and the single person who for example wants to work or study in concentration. This draws attention to the relation between the shell and the furniture that occupies it. The carrel, which not only defines a territory but also mediates a specific activity within a large room, obtained great importance in work environments during the second half of 20th century. Office Landscape, a concept developed by the German-based Quickborner Team from late 1950s on uses furniture as means to create a non-linear, egalitarian working environment in the open office setting to break with the ideas of 'Fordism' and 'Taylorism' that had invaded the modern office layout, using the open plan as an economic and easily observable solution.[6] The relation of open building structures and easily changeable interior fittings and furniture is not only specific to fast-moving team-based working environments, but also points to a field of tension that is inherent in architecture in general and in monospace in particular: the question of stability versus flux—traditionally separated into stable architecture versus ephemeral social life.

Particularly with the open plan office building, the dichotomy of understanding architecture as tool, as 'a testing ground, not only for ideologies of power and productivity, but also for representation and identity' (Kuo 2013, 19), and architecture as a mere background for social life is a contentious issue. In the latter half of the 20th century 'the mantra of flexibility and profit' emerged 'leaving the architect's role to providing little more than a fancy gift wrap around a stack of generic floor plans' (Kuo 2013, 19f.). The monospace then reduces the architect to a designer of a fancy gift box, as a building's shell seems to add little to the mundane social hustle and bustle. Or is the opposite the case? Does the ultimate visibility, and the in-built flexibility as a tool of control, not elevate the architect to a designer of the social, disciplining people's behaviour? Both perspectives seem

6 For more on the concept of Office Landscape and their founders the two brothers, Wolfgang and Eberhard Schnelle, see Andreas Rumpfhuber *Architektur immaterieller Arbeit* (2013).

exaggerated, yet, these are the poles, in which the relationship between architecture and the social is traditionally conceptualised.[7] While architects tend to believe that their buildings have (at least) a structuring or organising impact and in more radical cases determining qualities, traditional sociology regards this as either presumptuous or paternal towards the users as sociologist Heike Delitz (2009b) points out. If considered at all in more detail, traditional sociology sees architecture as an attribute, mirror or embodiment of society (Delitz 2009a). Here we discover disciplinary boundaries, which as we will discuss later, current scholarship tries to challenge. Indeed, there are more complex and realist accounts of this relationship. However, let us stay for the time being with the monospace and this field of tension.

Although not confined to any specific culture, epoch or use, architectural historiography and theory particularly point to the modernist interest of opening up space (Curtis 1982; Giedion 1954 [1941]; Forty 2004). In the 20th century, there was a resurgence of efforts to get rid of the corridor, a tool of circulation, which had dominated western architecture since the 17th and 18th century.[8] Here architectural historiography presents the story of several avant-garde architects—Frank Lloyd Wright, Le Corbusier and Mies van der Rohe—often mentioned in combination with artworks ranging from Cubism, Futurism to Russian Constructivism. In its development throughout the early 20th century 'space' fell under topics such as 'liberation', 'spatial continuity' and 'universality', a physical as much as a philosophical project, particularly in the field of dwelling (Ngo and Zion 2002).[9] The list goes on: Buckminster Fuller, Cedric Price, Rem Koolhaas or Toyo Ito. Each figure who appears here will become known, amongst other things, for their concern with 'open' and 'flowing' spaces or spatial systems, which are supposed to distinguish themselves by a high level of 'flexibility', 'transparency', and structural 'simplicity'—all terms which derive from a modernist vocabulary.[10] All terms

7 Architectural theorist Hilde Heynen (2013) provides an overview of the literature here, which she clusters around three categories: space as receptor (a neutral background for social activities), space as instrument (a tool to organise, structure or determine social activities) and space as stage (which integrates the former into a mutual relationship).

8 See Trüby (2016) on the cultural history of the corridor.

9 Following the three concepts of 'liberation', 'spatial continuity' and 'universality' the authors of *Open House. Unbound Space and Modern Dwelling* (2002) take 'a new vision of architectural space' at the beginning of the 20th Century and the 'free plan' as point of departure. They do so to examine how open houses as a physical attempt as much as a philosophical one endure throughout the 20th Century (Ngo and Zion 2002, 15).

10 See Forty (2004) on modernist vocabulary. For an introduction to modern architecture see e.g. Giedion (1954) [1941], Banham (1962) or Curtis (1982).

that can be attributed to the monospace and, as such, can indeed be discussed as a particularly modern phenomenon.

Adrian Forty elucidates that the modernist interest in 'space' was purpose driven as it drew attention to a new sort of architecture that permitted converse 'with the socially superior discourses of physics and philosophy' (Forty 2004, 265). As Forty goes on to explain, we should disclose the fact, however, that what they meant by 'space' was not a clear and fixed entity and surely not the same as that occurring in those adjacent discourses.

In this context, the work of Mies van der Rohe whose open plan buildings and approach have been studied and discussed extensively is exemplary (Neumeyer 1994; Blaser 2001; Hilpert 2001; Kim 2009; Fontenas 1998). 'For Mies, "space" was without question the pure essence of architecture—but not of the architecture of all times, only that representative of the "modern".' (Forty 2004, 268) Several of Mies' buildings, the design for the Cantor-Drive-In (1945–50, unbuilt), the Crown Hall in Chicago (1952–56) or the Neue Nationalgalerie in Berlin can be referred to as monospaces.[11] The typology of monospace is a specific case of open-plan architecture and a type that seems to be particularly controversial regarding its usefulness or value in terms of utility.

> One must deduce that Mies van der Rohe's desire to develop a strictly limited range of architectural 'type-forms' (such as the single volume pavilion) to accommodate all the diverse functions of the modern world, and his idea of completely flexible and adaptable internal space, were less practical than he liked to believe. Many activities do need particular room shapes and sizes, and particular lighting or acoustic conditions, which should be specifically designed into a building if it is to function well. It may be that spaces designed to suit *all* functions will not actually be particularly suitable for *any* function. (Vandenberg 1998, 22; original emphasis)

The concept of functionality, which is used here to evaluate the Neue Nationalgalerie, is closely associated with Modernism, but it is also as Forty explains, particularly a term of the criticism of Modernism (Forty 2004, 103–17, particularly 174–95). 'A "function" describes the result of the action of one quantity upon another; relative to architecture, the question is what is acting upon what?' (Ibid. 174) The functional relation of the Neue Nationalgalerie is more complex and the concept of functionality here seems too rigid to do justice to the life that is possible with that building. Whether it is a 'decorative gift box' for social life to emerge or

11 Here I always only address the upper part of the buildings under discussion and not the areas below ground that follow, for example in the Neue Nationalgalerie, a conventional 'room-based' plan layout.

plays a decisive role in shaping it—the truth must be somewhere in the middle, in the complex entanglements between buildings, space, time and people. Approaching this building through a causal relation of what is acting upon what seems insufficient hence 'the modernist open plan is not functionalist' (Hill 2003, 36).

In monospace architecture, our interactions and bodily relations with buildings are fundamentally different. Without walls creating rooms, there are no traditional corridors to follow, no doors with labels to knock on and open, no secrets behind these doors. The building plan does not tell much about the movement and action to be expected. Hence, monospaces urge us to rethink and discuss the relation of building and body, of architecture and the social and to evaluate our access to this relationship.[12]

Monospace is therefore a very interesting building type. Not only does it raise the question of what architecture does, how it allows, fosters or hinders certain activities (and here no quick answer can be provided). Furthermore '[d]irectly dealing with the problem of temporality, this theme [of the single large open space] delineates as well the limits of a strictly constructive idea of architecture.' (Fontenas 1998, 9) This raises not only the question of the role of the architect but also the question of our understanding of the nature and field of architecture. The idea of shaping a static and a-temporal space seems to block access to this process-oriented architecture. That said, let us turn to previous accounts in the world of monospace buildings and learn from these attempts to grasp the relationship between architecture and the social before approaching the topic of space. Introducing monospace buildings, I left out many other aspects, architects, buildings and movements that could have been mentioned. However, this quick survey already shows that open plan architectures—and monospaces amongst them—form a large arbitrary group associated with diverse and theoretically charged concepts. How should we approach these buildings analytically?

Let us take another look at Mies van der Rohe's Neue Nationalgalerie in Berlin (**Fig. 1.3, 1.5**), probably one of the most well known monospaces, to learn from existing research on this building. While the lower part of the building follows a traditional spatial layout, glass walls on all four sides surround the great upper hall. Used as a temporary exhibition hall, this monospace seems to challenge curators as much as it repeatedly encourages new installations and exhibitions. Two dissertations have recently been dedicated to this building. The first is within the discipline of architecture by Imke Woelk (2010) who approaches the Neue Nationalgalerie through its use with a focus on the material setting of the temporary exhibitions. The second study is (mainly) from a cultural studies perspective by Manja Leyk (2010) who discusses the building from a phenomenological tradition through the experiencing body and

12 On the relation between body and architecture and the diverse theoretical discussions of it with regard to architecture see also Hansmann and Geipel (2019).

the condition and effect of bodily movement. While the first dissertation focuses on the object the second concentrates on the subject.

The architect Imke Woelk argues that the architecture of the Neue Nationalgalerie emphasises the use of the building. Woelk refers to Umberto Eco's concept of 'openness' to point out the interdependency of building and use. The building of the Neue Nationalgalerie is to a certain extent unfinished until its usage starts, Woelk argues. Woelk attempts to discuss the performance of the building based on traditional architectural methodologies like the study and production of plans and diagrams as well as through a collection of photographs of almost all exhibitions up to the time in which she was writing. With an extensive vocabulary for key characteristics of the monospace, she builds up systematic categories to define spatial elements in the open plan. Regrettably, the project stops at the level of interior furnishing and does not consider the lived reality, something that is obviously challenged by Woelk's historical approach, but that could have shown how the monospace becomes 'finished'—or better yet, how it never possibly can.

While the spatial model and its bodily relation remains largely unthematised in the work of Imke Woelk, Manja Leyk on the contrary sets out from it. Leyk builds her analyses of the Neue Nationalgalerie on the concept of 'lived space' (gelebter Raum), a term she takes up from Graf von Dürckheim. Any human interaction with an existing built space produces further spaces. Leyk thus shifts the perspective from space as a container to a constant processual lived space, which she understands as a shared universal space experienced by different bodies. The specific focus here is on the relationship between human beings and the built environment using the case study of the Neue Nationalgalerie. Leyk observed and recorded on video visitor behaviour and supplemented and compared this with her own experiences. From her data, she depicts specific scenes and gives the reader an insight into the sensory impressions, such as vastness and narrowness, attraction and repulsion, through which the visitor of the building establishes a relationship to the architecture. The experiencing subject creates the access and point of analysis for an architecture that alternates between inner self and external observation. As Leyk notes, the observation reaches its limits in the interior of the Neue Nationalgalerie, in grasping the complexity of the forms of movement. Therefore, her case study focuses largely on the exterior.

The 'unfinished' character that Woelk emphasises hints that the objective world—neither in its numbers and measurements nor stylistic periods or historical context—is all that makes up architecture. Moreover, it is simply inadequate for understanding a monospace. If we look at a monospace, we have to deal with the relationship between architecture, space and body, in relation to its temporality. Leyk

approaches this relation by means of the phenomenological body.[13] This account seems to acknowledge temporality as it turns to the lived space. Studying the building from the standpoint of the subject, as Leyk does, adds a world of sensory impressions as well as an interpretative frame to the built setting. The relationship between human beings and the built environment here is established in the subject and while we connect to time and body we move around the object, albeit from a distance.[14] Turning to the world of sensory impressions seems to lack direct contact with the building and rather tell us something about human perspectives.

Nevertheless, to understand the mutual entanglements of people and architecture, it is important to overcome the common distinction of objective and subjective space. Somewhere at the interstices between these is the reality of architecture. There are scholars who attempt to overcome this distinction and who demand that we acknowledge the multiple dimensions involved in the life of a building (Latour and Yaneva 2008). In order to understand the question of multiple dimensions, we should first insure that of the three traditional dimensions of architecture have been taken into account. Let us take a look at the prevailing approach to space within the discipline of architecture, which forms the implicit or explicit basis of the work of architects and architectural historians and theorists.

2.2
Which Space? Stability versus Flux

Space in architecture is a surprisingly young phenomenon, as the term 'space' did not exist within architectural discourse before 1890 (Forty 2004). Closely connected with the development of Modernism, its importance within architectural discourse grew rapidly:

13 For an introduction to the divergent philosophical movement of phenomenology and a selection of texts, see Dünne and Günzel (2006, particularly 105–92). The challenge of capturing space and describing it led to a differentiated vocabulary within phenomenology. For example with Herrmann Schmitz, who built up a distinction between the sphere of emotion (Gefühlsraum) (Schmitz 2005a), felt body space (Leibraum) (Schmitz 2005b) and atmosphere (Schmitz 2014) to oppose, amongst other things, a rational and geometric view, and approaches from the social sciences.

14 Building on the work of Hermann Schmitz, the concept of new aesthetics as developed by Gernot Böhme tries to bridge the dichotomy between object and subject in perception by developing atmospheres created by things and people. Atmosphere here is theorised as 'thinglike, belonging to the thing in that things articulate their presence through qualities' and 'they are subjectlike, belong to subjects in that they are sensed in bodily presence by human beings […].' (Böhme 1993, 122)

> What distinguishes architecture from painting and sculpture is its spatial quality. In this, and only in this, no other artist can emulate the architect. Thus the history of architecture is primarily a history of man shaping space, and the historian must keep spatial problems always in the foreground. (Pevsner 1942, 7)

Space had become the 'essence' of architecture by the mid-20th century (Scott 1914; Giedion 1954 [1941]; Zevi 1957 [1948]). What space exactly was, however, remained disparate and varied depending on the interpretation. The term originated from a philosophical discourse in the 19th century and developed as an architectural category initially in Germany (Forty 2004). Without going into innumerable details here, I would like to highlight two fundamentally divergent approaches:

Architect and art historian Gottfried Semper develops in *Die vier Elemente der Baukunst* (1851, quoted here from the English edition 1989) a concept that concerns the primordial elements of architecture: to protect the fireplace three elements were grouped around it: 'the roof, the enclosure and the mound.' (Semper 1989, 102) The enclosure has a special significance in giving rise to the wall. Mats and carpets preceded, following Semper, the wall and dressed it also later as 'the visible boundaries of space' (ibid. 104). Architectural historian Adrian Forty sees Semper as an important figure who introduced space as a central category of Modernism and who influenced architects like Adolf Loos, H.P. Berlage or Peter Behrens in claiming that the task of architecture is to enclose space. Space here is 'a matter of enclosure' (Forty 2004, 258).

Art historian August Schmarsow in his essay *The Essence of Architectural Creation* in 1894 (Schmarsow 1994) presented another way of thinking about the very nature of architecture. He calls architecture 'creatress of space' (Raumgestalterin) (Schmarsow 1994, 288). Schmarsow locates the aesthetic value of architecture not in its materiality but in its 'sense of space' (Raumgefühl) and claims the physically experiencing body and its movement in space to be the source of architectural practice. Architecture here is determined by spatial experience that is located in the subject. The body becomes the origin of space. Schmarsow's ideas of the relation of body and space precede similar theories within phenomenology as we have already seen in the work of Leyk. This shifted the task of architecture from the creation of wall and boundary to the creation of void: 'constructed space is a kind of three-dimensional negative of the subject body's own sense of space' (Forty 2004, 261).

There are numerous other approaches to the topic of space in relation to architecture, e. g. the work of Hungarian artist Lâszlô Moholy-Nagy (1967 [1928]) offers a concept of space as a flowing continuum that changes with human movement or

Rudolf Arnheim (1977) who conceives space as tension.[15] Some of these notions of space are more drawn to the object, some more drawn to the subject. Notwithstanding versatile individual approaches, in practice '[i]n the hands and minds of architects, space is generally emptied, and with this is made available as something that can be directly manipulated as some kind of stuff.' (Till 2013, 118) By consequence space has 'objectlike qualities' and relates to stable, rigid, three dimensional buildings (Till 2013, 119).

Talking about action and movement in connection to this kind of common architectural understanding we can think of movement as an action *in* space.[16] Most commonly, we have walls, floor, and ceiling creating a room, an interior space that is shaped by the architect and can be measured, and perceived. This kind of architectural understanding of space relies on an absolute understanding of space, as introduced above (Chapter 1).

The idea of the container, as a three-dimensional object, that contains space, builds on Euclid's geometry. In 300 BCE, the Greek mathematician developed the notion of physical body defined by length, depth, and width (Mainzer 2010). The Roman architect and military engineer Marcus Vitruvius Pollio used these principles of geometry in his *De Architectura*. It is also in the first book of *De Architectura* that he postulates that a structure has to meet the three demands of *firmitas*, *utilitas*, and *venustras*: 'durability', 'convenience', and 'beauty' (Vitruvius Pollio 1914, 16–17). It seems that these ancient ideals still characterise common architectural practice and understanding. However, such ideals—and particularly convenience and beauty—indicate the relationship between buildings and people.

When turning to the question of space we seek to gain access to the complex entanglement of buildings and people. The traditional architectural understanding of space as it is concerned with the object engenders a focus on materiality, form and style while excluding the processes architecture is involved in. '[T]he problem with buildings is that they look desperately static. It seems almost impossible to grasp them as movement, as flight, as a series of transformations.' (Latour and Yaneva 2008, 80) Yaneva and Latour place the blame partly on the production of perspectival space invented in the Renaissance. Drawing 'a building in the perspective space [...] you begin to believe that when dealing with static objects, Euclidean space is a realist description.' (Ibid. 81) Yet, where to locate all

15 An extensive compilation of central texts has been collected in Architektur, Raum und Theory (Denk, Schröder, and Schützeichel 2016).

16 Talking about movement in space, amongst the early philosophical approaches, *The Problem of Form in the Fine Arts* (1893) by Adolf Hildebrand definitely deserves mention. He suggests that space is 'the means of talking about movement, in terms of the kinetic bodily experience of the subject', as Adrian Forty puts it (2004, 262). For a general introduction to 'motion' in architecture see Jormakka (2002, 2005). Additionally, on the relation between the moving body and architectural layout see art theorist and perceptual psychologist Rudolph Arnheim (Arnheim 1977).

the different requirements, legal, economic, social, political, logistical, etc. which a project is constantly negotiating in its production and afterwards? This is what Yaneva and Latour ask. 'You need only to think for one minute, before confessing that Euclidian space is the space in which buildings are *drawn* on paper but not the environment in which buildings are *built*—and even less the world in which they are *lived*.' (Ibid. 82; original emphasis)

What possibilities does space offer when turning to the question of the relation of architecture to the social? With a view to the history of spatial theory, there are a great number of spatial concepts and approaches. However, the debate about the different concepts of space can be ordered along the fundamental distinction between absolutist-substantivalist and relativist-relationalist concepts of space as sociologist Markus Schroer points out (Schroer 2006). This opposition can be found in the history of space in philosophy and natural science and serves implicitly or explicitly as a point of departure for today's spatial considerations in the social sciences, as Schroer elucidates. Einstein's explanation is helpful in this regard:

> These two concepts of space may be contrasted as follows: (a) space as positional quality of the world of material objects; (b) space as container of all material objects. In case (a), space without a material object is inconceivable. In case (b), a material object can only be conceived as existing in space [...]. (Einstein 1954, xiv)

A relational space thus comes into being through the relation of places, things or people. Within social science the notion of a relational space is slightly different as there it is conceived as constituted by social operations. In the wake of globalisation and urbanisation this idea became widespread in the course of the *spatial turn* which introduced a more active understanding of space within the humanities and social science (Döring and Thielmann 2008). While the term *spatial turn* goes back to the book *Postmodern Geographies* (2011 [1989]) by human geographer Edward W. Soja, Soja's reading was in fact drawn from French philosopher Michel Foucault and particularly French Marxist sociologist and philosopher Henri Lefebvre who are regarded as the actual founders of this turn to space (Döring 2010). At the outset of his first chapter, Soja uses two quotes from Foucault (Soja 2011, 10):

> Did it start with Bergson, or before? Space was treated as the dead, the fixed, the undialectical, the immobile. Time, on the contrary, was richness, fecundity, life, dialectic. (Foucault 1980, 70)

In the course of the many small turns that the humanities and social sciences have passed through, the notion of space as backdrop, as a dead and fixed entity was challenged. Gradually an understanding came to prevail of space no longer

thought of as a solid, passive container but connected to the social and thus with the idea of process, of dynamic and motion. In this case, space is created out of a relative relation between bodies. As bodies are in motion space becomes ephemeral and constantly changing.

In the second quote, Foucault then suggests the 'present epoch will perhaps be above all the epoch of space' (1986, 22)—a commitment towards the era of space, which might sound old-fashioned to architects—after all, they had conquered space decades ago. As there is a certain consensus on space as the *essence* of architecture then the *spatial turn* as a recurring interest in space, at first glance, has not much to offer by way of architectural debate. On second glance, however, we can say that it has brought people and architecture closer to each other. They can share the moment of *making* space.

2.2.1 Space as Practice

While in absolute space a motion is not conceivable other than *in* space, with relational space we can consider movement as an action *with* space.[17] Space here is created in interaction, in the living architectural process, which involves objects, materials and people. In this instance, buildings do not reside *in* space cutting off a slice of absolute space to statically contain it they instead become part of a process. This is something essential to understand. Thus, space does not exist independently of bodies but is connected to operations or practices—it is never homogeneous. As such space has a bridging quality 'between the realm of architectural scholarship and the theorization of space and social processes in other fields.' (Crysler, Cairns, and Heynen 2012, 14)

French theorist Michel de Certeau took a step in this direction (Certeau 1984 [1980]). In Chapter VII of his book *Walking in the City* he turned particularly to the everyday practice of using the urban space and contrasts the structure and view of official planners who act in the state's interest to discipline and control citizens, with the unpredictable transformations that arise from use.

> First, if it is true that a spatial order organizes an ensemble of possibilities (e.g., by a place in which one can move) and interdictions (e.g., by a wall that prevents one from going further), then the walker actualizes some of these possibilities. In that way, he makes them exist as well as emerge. But he also moves them about and he invents others, since the crossing, drifting away, or improvisation of walking privilege, transform or abandon spatial elements. (Ibid. 98)

17 On mobility as a practice and its creation of space in geography see Cresswell and Merriman (2011).

Here, we can witness how the built environment and people become enmeshed. De Certeau's interest, however, is with the power of narrative and the story that takes place to make people connect to places by walking through them in a similar way as a speech act is performed.[18] While we gain an idea of the process involved with buildings, we do not get rid of a built environment as a framework and symbols that distance people and materials from each other. Rather than witnessing a doing in common, De Certeau's space relies on the space-reading subject who is entangled with signs and memories. Cultural theorist Ian Buchanan points out with regard to De Certeau's approach that 'the life of the city, the constellation of lives that make a city what it is, the actual experience of the city, in other words, is not contained in the concept of the city.' (Buchanan 2000, 110) This duality between lived reality and concept is one that we also face in relation to the monospace: As long as we stick to the *concept* of monospace we cannot grasp much of its living processes. Turning to the social we get a sense that architecture exists in a much broader network.

Lefebvre famously stated in *The Production of Space* that '(Social) space is a (social) product' (Lefebvre 1991 [1974], 26). In doing so, he laid the basis for the *spatial turn*. His concept builds on a complex of different elements: *spatial practice/perceived space*, *representations of space/conceived space*, and *representational space/lived space* (ibid. 38–39). Lefebvre's approach to space was driven by his interest and studies of everyday life and the phenomenon of urbanisation (Schmid 2005).[19] It is part of his project to critique 'abstract space'. That said, he does so in tying it to a critique of capitalism (Lefebvre 1991, 53). And thus 'Lefebvre's view of spatial practice, although it includes the aspect of action, is very much under the impression of capitalist structural constraints.' German Sociologist Martina Löw points out and identifies his notion of action as 'rather [a] behaviour under the condition of capitalism' (Löw 2008, 28). To understand space with Lefebvre as a 'produced' space brings architects and planners, buildings and the people dwelling in those buildings closer to each other. In addition, it expresses the temporality of space, its dynamic. Herein lies the chance to abandon a fixed architectural object in space. Yet, Lefebvre's space is always to be understood as part of his Marxist thinking and to be read in relation to his concept of society.

Amongst the contemporary approaches and theories on space with an explicit reference to architecture the work of German sociologist Martina Löw stands out. She presents in *Raumsoziologie* (2001; quoted here from the English edition 2016) a space-theoretical concept, understanding space also as a processual phenomenon. Space for Löw is constituted in interaction. She distinguished in this interaction two interwoven however analytically isolated processes, 'synthesis' and 'spacing':

18 For speech act as a performative utterance see Austin (1972).

19 In the late 1950s Lefebvre was in close contact with the Situationist International (Ross and Lefebvre 1997).

> Space is constituted as a synthesis of social goods, other people, and places in imagination, through perception and memories, but also in spacing by means of the physical placement (building, surveying, deploying) of these goods and people at places in relation to other goods and people. (Löw 2008, 225)

While spacing is shared between nonhuman and human, Löw gives humans a superior position with regard to the aspect of synthesis, in which 'social goods and people are integrated to yield space.' (Ibid. 151) Löw's first theoretical point of departure is Anthony Giddens theory of structure, which is based on a duality of structure (object) and action (subject); secondly, Pierre Bourdieu, who emphasises the body as intermediary between structure and action; and thirdly, on Reinhard Kreckel who stresses the linkage between matter and symbolism (ibid. 7). Löw succeeds in bridging the material and social world and integrates space into the context of action. Nevertheless she relies on the central figure of a space-constituting subject (ibid. 151).

As sociologist and cultural theorist Andreas Reckwitz emphasises (2003), turning to practices is about negotiating what 'action' is and what 'actors' are, and consequently about the understanding of the 'social'. Thus, when turning to practice with respect to space the question of agency arises. Agency is traditionally conceptualised in social science through the dichotomy of structure and action: structure comprising the way in which society is organised (e.g., limiting free action) and action as the way individuals act independently. Discussion is about the relationship between these two—who determines or dominates what or whom. As emphasised earlier, the extent to which a human-centred focus in practice with the material world should actually be abandoned is contentious ground in the broad field of practice-based theory (Chapter 1). Sociologist Thomas Gieryn elaborates on the relation of structure and agency by comparing accounts of architecture by Anthony Giddens and Pierre Bourdieu, both sociologists (Gieryn 2002). While each would agree that buildings are an 'element of structuration and reproduction' (ibid. 37)—they shape while also being shaped—Gieryn attests that Giddens has a more actor-theoretical attitude (stressing human involvement) and Bourdieu a more structural emphasis. In this sense, the different approaches, even those that explicitly claim to avoid a deterministic attitude of cause and effect, often tend in one direction or the other.[20]

From the point of view of architecture, which has a long tradition and focuses on materiality, it seems important not to lose contact with this very material world buildings are made of. To take a path that refers to the perception of the

20 See also the literature overview by architectural theorist Hilde Heynen (2013), especially under her third category: 'space as stage'.

built environment, emphasising levels of memory and imagination or deciphering architecture in its social reality of larger social systems, understanding it as embodiment or mirror of society, seems ultimately to pull architecture out of focus. Yet, focusing on the materiality, as discussed previously, does not help either in grasping the reality of monospace in its social entanglements. There must be a path somewhere in between.

ANT differs crucially from more traditional sociology in that it rejects a separate social *context*, such as society, through which architecture is to be explained (Latour 2005; Yaneva 2012); it takes a stance between subject and object. As research methodology it is rooted in the study of laboratories and thus pays close attention to the material, epistemic and social dimension of such object rich settings (Latour and Woolgar 1979). Developing an explicit interest in the involvement of objects in practice, ANT suggests an alternative way to the classic dualistic divide of subject and object; it offers to architecture the possibility 'of seeing, hearing, sensing and then analysing the social life of things—and thus of caring about, rather than neglecting them' (Mol 2010, 255). Turning to processes with ANT thus seems fruitful for understanding social space *with* architecture.

> "Objective" time and "subjective" time are like taxes exacted from what peoples the world, they are not all that these multitudes do and see and mean and want. We are not forced to choose forever between losing either the feeling of time or the structural features of the world. Processes are no more in time than in space. Process is a third term […]. (Latour 1997, 172)

Approaching process with ANT provides the possibility of thinking a non-reductive interrelation between objects and humans and to account for the complexity that emerges in reality. A complexity that is particularly evident in monospace buildings.

Architects in general and particularly in Modernism assume that they have an influence on how the human community interacts and we will come back to this later. They do so contrary to a broad art historical, cultural and social scientific point of view (Delitz 2010), as mentioned previously. That said, it still seems important to thematise architecture's agency. With ANT we can acknowledge this agency without falling into a deterministic stance by re-locating it in the complex interconnections that architecture holds. In the following, we thus turn to the concept of spacing, as elaborated by Latour, and explore it along with the idea of agency as provided by ANT.

2.2.2 Spacing: A Networked Space

If we think of a building as a field of possibilities, allowing, hindering and fostering certain 'events',[21] then we can trace this by following the movements and interactions between objects and human bodies. Space, as a result, is actively created during these multiple interactions. Let us have a look at something, which takes us back to when I approached my case study, the Sainsbury Centre for Visual Arts, for the first time. It is a little ethnographically-inspired account recaptured from my notes and will give not only an insight into what spacing is about and how we can trace it but furthermore provides a first glimpse into how I work with my empirical data in the empirical chapters below (Chapter 4–6).

A first visit

Fig. 2.1

Date: 27.04.2016

Location: Sainsbury Centre for Visual Arts, Norwich

> I am a first time visitor. I approach the building from the university campus and walk directly to the museum entrance.

21 The term 'event' refers back to Alfred N. Whitehead and is used in the context of ANT to acknowledge that both humans and nonhumans create experiences together (Yaneva 2017, 168).

> The sliding doors open. I enter the transparent cylinder—air blows down on me. I have to stop for a second before the next sliding doors open. Then I am in. I stop right behind the doors. It is smaller than I thought. My shoes make a squeaking noise on the rubber floor.
> Glass railings to the left and right guide me in the direction of the smooth white reception—I cannot fully see the person sitting behind it. I have to step closer to do so.
> The receptionist welcomes me and explains that the Living Area contains the permanent exhibition. It is for free. At 11 am and 2 pm they offer guided tours a little display tells me. For the temporary exhibitions—'Giacometti' downstairs, and a photography exhibition on the second mezzanine—I will need to purchase a ticket.
> I cannot survey the whole inner room. I decide to explore the living area first and take a tour the next day.
> I leave the reception, follow its circular shape to the right and walk into the art gallery. I step onto the soft grey carpet that separates this area from the entrance area. I hesitate.
> I look up at the ceiling—grey metal strips in layers—I follow them with my eyes.
> Then I look down the path that is loosely defined by artworks in front of white walls. Then a little sculpture catches my attention. I walk around the display box and stop again in front of it, looking directly at it. A very small label with white text states: 'Figure of a walking hippopotamus. Dynasty XII (c. 1880 BC), Egypt, Faience, 1973. UEA 306'.
> I turn around, follow the panel in front of me until its end, look around the corner and walk on. Stooping to read a label, I now recognise that I am in front of Henry Moor's 'Mother and Child'. I change direction. Slowly I start meandering around, exploring the art collection of Lisa and Robert Sainsbury.

This walk is not a simple walk from A to B. Many different ingredients direct it: sliding doors, glass railings, artworks, labels, etc. My walk is a meandering, but it also speeds up and slows down, and unexpected events happen. Entering the building, the sliding doors set my pace. It seems like I am walking too fast for them, as they open with a little delay. Speeding up again, as the reception is prominently located in front of me, and the two glass railings to the left and the right do not give me much of an option to take a different path, I walk straight to the counter. Here I gain some basic information about where I am allowed to move and which areas are restricted. Considering that it is late in the afternoon and there is not much time left until they close, I decide to visit the Living Area, which is free of charge. The change of material, from the dark rubber floor to the soft carpet in the exhibition area, the freestanding display boxes and the white panels are all

active elements in my walk. This walk is spaced by all of the different ingredients that take part in it. We will explore the building, the exhibition and several of the elements mentioned here later in more detail. Let us focus for the time being on the relation of my walk to the objects, materials, signs, and oral information, etc., which are in a sense taking me for a walk.

One could argue, that this kind of walk is characteristic of sightseeing. It is a tour to make a study of the building. Concerned with exploration and open to experience, only in this kind of situation can we deliberately let ourselves be guided. Japanese architectural historian Mitsue Inoue describes this kind of experience as characteristic of what he calls 'movement space': 'In movement space, fragmentary spaces are connected like links in a chain or beads on a string' (Inoue 1985, 170), an experience of 'continual change, the unknown of what was and what will be' (ibid. 171). Inoue connected this kind of experience to 'winding corridors' and 'circling paths' (ibid.). Sharing the idea of continual change, I nevertheless argue that this kind of experience is neither bound to the activity of sightseeing nor to circling paths as such. It is a characteristic of making space, of 'spacing', which as a concept stresses the processual dimension of the world.

Thus, I do not enter space when entering the building. There is no space contained inside the box, space is what emerges in movement and to put it more generally space is what emerges out of the course of action. Thus, there is never only one space, but innumerable spatial processes. The activity of 'spacing', and not its final product, 'space' as such, is the focus that follows non-linear processes, which always evolve around different hybrid-human-nonhuman constellations. Crucial to this point is to pose the question of agency. Who takes part in spacing?

2.3
Agency: Who Else Is Acting?

'When we act, who else is acting? How many agents are also present?' These are questions that Bruno Latour has posed (2005, 43). As he points out, '[a]ction is not done under the full control of consciousness; action should rather be felt as a node, a knot, and a conglomerate of many surprising sets of agencies that have to be slowly disentangled.' (Ibid. 44) Thus, when I enter the Sainsbury Centre it is not only I as a human that acts. By using the ANT approach we can acknowledge that there are multiple materials and objects, views and sounds that guide me, or better, I walk *with* these manifold actors.[22] Following the principle of 'methodological symmetry', ANT does not differentiate between experience and action—action is

22 For an introduction to the term actor, which is not subject to a fixed definition in ANT see Mol (2010, particularly 255–57). For an introduction of the term actor in the context of a general introduction into ANT and a useful collection of arti-

an attribute to experience (Belliger and Krieger 2006b, 35).[23] This distinction conventionally allows for the separation of subject and object. Following a tradition of the American pragmatists of the early 20th century ANT acknowledges the active role that materiality plays in experience. Here, experience is not tied to the subject in a phenomenological manner, but used 'as an umbrella term to overcome the epistemological split between subject and object' (Jay 2006, 12). Following ANT, actors do not need to have intentionality or a free will. Therefore they are humans and nonhumans, materials, objects, techniques, texts, rules, etc.

To understand Latour's concept of spacing it is important to clarify how 'agency' emerges and is shared by humans, nonhumans and *hybrid* human/nonhumans alike then we can draw a line to other processual concepts of space along with this definition. Actors establish and modify relations with other actors, and in doing so they form a network. Agency is distributed in these networks. An actor never acts alone, but through other actors. Hence an actor can be understood as a knot of countless associations. While walking, I am guided by the material world that forms barriers and thresholds and others that simply re-direct my movement in an unobstructed way. I am drawn to the little hippo figure. I encircle the free-standing case, as it allows me to do so. Actors can be challenging and mal-functioning—the entrance door especially raises my attention—it is in particular the mal-functioning or dis-functioning that makes us aware enough to actually recognise the spatial and temporal engagement of a specific actor.[24] In the course of walking, I am not fully in control, and I am not fully aware of who else is acting. My movement is not wholly conscious. Hence, re-collecting my trajectory, I have to slowly disentangle with whom I have walked in order to render the set of other agencies visible. Following ANT, it is important to carefully map out who contributed to a course of action, and who and what made a difference in order to avoid ready-made causal explanations:

> An invisible agency that makes no difference, produces no transformation, leaves no trace, and enters no account is *not* an agency. Period. Either it does something or it does not. If you mention an agency, you have to provide the account of its action, and to do so you need to make more

cles see Belliger and Krieger (2006a). For a list of ANT terms see Akrich and Latour (1992) and Yaneva (2017, 167–70).

23 Experience 'can encompass what is being experienced as well as the subjective process of experiencing it' as historian Martin Jay explains. In his book *Songs of Experience* he also provides insight into the contested ideas of experience according to different traditions and thinkers (Jay 2006, here 12).

24 We tend to take technical objects for granted, as black boxes, as Latour explains and it is only a crisis, their malfunctioning, that reminds us of the very existence of these technical objects (Latour 1994).

> or less explicit which trials have produced which observable traces […]. (Latour 2005, 53; original emphasis)

Predictable or expected actors may arise, but also others that have so far gone unnoticed and, at best, are surprising. It is less about cause and effect relations than about a network that allows the actor in its ability to act in its relations. This allows for the circumvention of a deterministic understanding of the relation between architecture and the social. We do not need to understand networks in terms of power relations but can take them as trajectories, as a re-directing or opening up of new possibilities.[25]

This question of control, of who acts, can also be addressed by the theory of attachment as formulated by French sociologist Antoine Hennion (2010). Hennion explores the world of the amateur, a world that is equally one of love as well as lack, or non-professionalism, which forces us to shift focus from the 'autonomy' of the subject to 'the precise nature of that which *makes us be*', the 'faire-faire' as Bruno Latour calls it (1999a, 22 ff.). While we easily get stuck with the question of who is in control or who is the agent that causes the other to act, both Hennion and Latour offer a solution by switching focus to the quality of the boundary.[26] Agency, a capacity to act, emerges from within the boundary, from inside heterogeneous relations.

This leads to another point: networks are not necessarily stable. The network of my walk only lasts as long as the relating takes place. Here, space (in its fundamental processual understanding) emerges. Actors participate in multiple networks, their role may differ in each of them, and this makes it complex to grasp them. Nevertheless, it allows for understanding an actor in its complexity and multiplicity. Building on De Saussure's relational understanding of semiotics, Annemarie Mol explains that ANT applied 'this semiotic understanding of relatedness […] to the rest of reality.' (Mol 2010, 257) She gives the following example:

> Thus it is not simply the term, but the very phenomenon of "fish" that is taken to exist thanks to its relations. A fish depends on, is constituted by, the water it swims in, the plankton or little fish that it eats, the right temperature and pH, and so on. (Ibid.)

Following the actors is not about examining them in their essence or by their being but understanding their relatedness (we will touch on this in Chapter 4). Following their contribution to practices, which emerge in networks, gives us an

25 See Latour (1994) for an example of how people and guns form together a (new) programme of action which neither had independent of the other.

26 See also Gomart and Hennion (1999) on the work necessary to immerse oneself in the art and Albertsen and Diken (2004) on art and ANT.

insight into spacing. John Law speaks of 'network space' (2002). I use the term 'spacing' following Latour (1997), however, to shift away from the noun, space, in order to stress the processual character by using present continuous: i.e. spacing involves work.

When turning to spacing and the attempt to understand the making of space in the shared agencies of humans and nonhumans, ANT leaves behind the idea of a greater social context in which architecture happens. Likewise, ANT negates any determination of the social through architecture. Instead architecture is part of the making of the social (Yaneva 2009c). When the decision is made between a lift or a staircase, Yaneva provides an insight that shows how this does not mean to 'choose between mobility and immobility, activity and laziness, exercised control and self-control' but to 'be led to share agency with them in a different way.' (Ibid. 274) We will explore the different ways of sharing agency when turning to the world of the building in practice (Chapter 4–6).

Before turning to the components of inquiry, let me provide a brief note on the critique we have to anticipate. The project *Spatial Agency* under the lead of Tatjana Schneider and Jeremy Till, follows a quite similar approach like this study in shifting the attention away from architecture's traditional focus on the object. That said, Schneider and Till take up a different position with regards to space (picking up Lefebvre) and agency. They point out that Gidden's theory of agency (which they assume to be one of the most relevant) is incapable of acknowledging an indirect way of acting and thus cannot deal with the relation of architect–building–user, since Gidden's (human) agent would interact directly (Schneider and Till 2009). However, buildings mediate the architect's intentions. Continuing they indeed see a solution in turning to ANT's concept of agency, yet, and this is a frequent critique that ANT encounters, they criticise a lack of intentionality. Schneider and Till consider it necessary to 'assert the basic principle of human purpose in architectural agency' (ibid. 99), also because their interest is to demand the social responsibility of the architect.

Using ANT to approach architecture may come at a cost: i.e. it may well be the case that I do not protect or treat architects well and account for all their effort (or failure of it). On the contrary, I may call all of this into question. Even if the human genius is marginalised, ANT offers something different for understanding the connectivity of architecture and the social and here the building as an actor comes to the fore.

ANT suggests, a symmetrical approach that takes humans as much as nonhumans equally into account. Here we can witness them together in their 'doing', here we can understand how the specific qualities of a building emerge and what difference it makes. Thus, spacing is about the connectivity of architecture and the social and in doing so it contributes to re-thinking architecture's relations.

Of course, we are used to dealing with the physical world, its forms and materials in architecture. And, of course, architects are aware of the complex worlds that buildings create. However, to explicitly turn to the complexity in use and to make the work that creates space visible, to acknowledge it, and thus to leave behind a 'container thinking' asks a lot from architects, since it shakes the grounds of the discipline (Chapter 1). My approach thus will be different from traditional architectural analysis yet starts from this common basis.

A monospace is to a certain extent unfinished until its usage starts, Woelk points out with respect to the Neue Nationalgalerie in Berlin (2010). Turning to the Sainsbury Centre for Visual Arts, let us start to get to know this 'unfinished' object and its many contexts in which it is commonly presented first. Based on my empirical material, we then follow different courses of action within and with the Sainsbury Centre. Where is the work that needs to be done to produce space? What are the many spatial practices and how can we see them? Spacing is a very active mode of spatial production, a world in flux. How and where can we witness spacing?

Thus, this book picks up the trail to investigate the complex interrelation of the social and architecture in the typology of monospace, and in particular in the Sainsbury Centre, to show the challenges, negotiations and possibilities that emerge at the intersection of architecture and social life, when questioning traditional norms.

2.4
Components of the Inquiry

My account is to make spacing visible and analyse the social life of the building. In the empirical investigation, I ask how the process of spacing takes place, how people and building and the many objects and materials encounter one another and act together. As we can follow the enactment of networks ANT provides tools to trace the work of producing space. These networks consist of actors of all types, materialities and sizes—human and nonhuman. ANT's method of inquiry as it is rooted in STS is based on ethnography. Previous ethnographies into the field of architectural practice have shown how we can trace the entanglement of humans and nonhumans (Houdart and Minato 2009; Yaneva 2009a, 2009b). Likewise, I draw on ANT to focus on the process of spacing. Yet we begin with the description of the static architectural object along with plans and diagrams, collecting the existing dominant perspectives on the building to then better understand how ANT can contribute to the comprehension of a building in action.

Concerned with the Sainsbury Centre for Visual Arts *in use*, there are three components to this inquiry: (a) ethnographic observation of the daily routines at

the Sainsbury Centre focusing on the bodies, artefacts and actions; (b) conduct interviews of three types, semi-structured strategic interview, walking interviews and sketching interviews; (c) compiled visual records, plan data and archival materials.

(a) Over the course of two years in 2016 and 2017, I embedded myself for several weeks equipped with ANT-inspired ethnographic tools in the Sainsbury Centre. I approached the building as an architectural researcher who worked for several years in an interdisciplinary research cluster in close relation to sociologists and ethnographers. The participatory observations focused on mundane routines and rhythms, object related actions, rearrangements of material settings, and aspects of durability. The following questions were addressed in this context: How does the layout of the building relate to courses of action? What relationships arise between the shell and internal processes? How is the building structured and which material or immaterial actors (e.g. visitor rules, environmental restrictions) are at work here? Which temporalities become visible? How are objects mobilised in daily processes and in museum knowledge transfer? Which elements do which work and how do they rely on the help of others? What problems arise and what are (surprising) solutions and substitute actions? How does the Sainsbury Centre relate to the wider network of university, local community and museums in the UK?

In the course of my observations I took tours with volunteer guides during the permanent exhibition, joined a Mini-studio (education programme for small children), explored the handling collection and unwrapped objects from Papua New Guinea, climbed onto the trusses of the deep roof and wandered through the different layers of the shell. I joined the team at the reception and followed the dismantling of an exhibition. Above all I was concerned with the mundane activities of exploring the exhibitions, visiting and sitting in the school area, eating lunch in the restaurant and learning about the different activities possible with the building, just as I have done with many other monospace buildings before and after. Sitting down, taking notes, making sketches, walking around were key to my inquiry during every visit. Such participatory observing was driven by my interest in people, the artefacts and their interaction. This includes documenting movements and different types of interaction in words, photography or graphics.

During these observations it is the monospace that allowed me to trace the spacing. In a monospace, what happens here is affecting what happens over there. The monospace allows for a high level of connectivity to different activities (for better or worse). In the case of my research, this is a huge advantage. I have joined people at their working places in some cases particularly for the purpose of observation and in many cases for the purpose of an interview. While conducting the interviews (many of which took place in the East End Café or in the Modern Life Restaurant) the monospace kept me in contact with many other activities. Thus,

while conducting an interview in the Café the monospace enabled me to follow a group of children entering the building from downstairs guided by a singer and the sound of a ukulele (I would approach the education team later and learn in detail about their various activities of taking objects, materials or instruments for sessions into the Living Area). Things that take place behind closed doors in other buildings, where I as a researcher have to ask for permission to be allowed to have access, or of which I would never have known, are revealed to me by the monospace. Being there, the monospace is connecting me to all these activities, putting me immediately into the situation to be able to ask questions about specific events or courses of action. However, this does not mean that there were no closed doors for me and that I was not shown limits, for example with regard to security work.

(b) Next to 30 semi-structures in-depth interviews (b.1) with employees of the Sainsbury Centre Institute, academics and PhD students from the department of Art History and World Art Studies and the Sainsbury Research Unit, the lightning designer and an artist who exhibited in the building recently, the study builds additionally on 32 sketching interviews (b.2) and 2 strategic walking interviews (b.3), which proved to be particularly useful to approach such a complex and materially rich world as a building in practice is. While all participants who have a long-term engagement with the Sainsbury Centre and gave specific answers referring to their role and position were able to choose whether they wished to be mentioned in a pseudonymous form or by name, all temporary visitors and students who took part in sketching interviews were directly pseudonymised. All interviews were recorded on audio. All in-depth interviews have been fully transcribed and all sketching and walking interviews have been partially transcribed by third person. During the first research visit my student assistant at that time, Maria Lisenko, supported me and mainly engaged in approaching people to take part in sketching interviews (see Chapter 4).

(b.1) After a first explorative visit, I approached the Sainsbury Centre Institute, with a research request. Open-minded and supportive of my request, a week of back-to-back interviews with the institution's staff from all departments was arranged. The semi-structured explorative interviews, which normally lasted between 30 minutes to 1 hour, addressed questions about scope and responsibility, typical tasks and description of a working week, relation of the building and objects to these tasks, team organisation, relation to the university and broader networks. While the first 12 interviews where set up for me, afterwards I started snowballing from these people I already knew to approach other members of the institute or the department of Art History and World Art Studies. Some of the interviewees I approached several times with follow-up interviews to clarify or approach new questions or to organise participatory observation sessions, such as for the dismantling of the Rana Begum exhibition in autumn 2017 (Chapter 6).

(b.2) Next to the in-depth interviews, I asked interviewees to sketch the Sainsbury Centre and to draw their movements while talking and explaining it. This approach is based on the research methodology of mental maps which is mainly used in geography and psychology (Gould and White 1974; Downs and Stea 1977; Sommer and Aitkens 1982). While the more substantial amount of mapping research is concerned with geographic and urban environments, Kevin Lynch (1960) was one of the first architects who addressed the question of perception and its mental representations in the context of architecture and urban planning. Choosing a methodology that is commonly applied to research mental spatial representations, spatial orientation and knowledge might be surprising. However, it is important to point out that in the interviews people describe the building based on their experiences. The sketches are not simply illustrations but an analytical tool, showing the engagements of the people and explaining some of the arguments made. This proved to be particularly successful when approaching visitors or people who are only temporarily at the Centre for a short interview. Without having the opportunity to follow visitors one-to-one over a long period of time, and to observe their interactions with the objects, here, trajectories and the participation of the material world in particular became visible during the interview. We explore the procedure and the enhancing capacity of sketching interviews at length in Chapter 5. While in-depth interviews were pre-arranged, people who only took part in a sketching interview were approached directly somewhere in the exhibition area, or café and asked if they would like to participate.

(b.3) Another specific form of interview I used is the walking interview. Here, I asked for a tour throughout the building without suggesting a specific path. Thus, the interview is conducted while walking and guided by the interviewee and, as I will argue, additionally by the building and the many objects (Chapter 4). This form of interview is helpful to approach buildings in detail, particularly from the ANT point of view. A walking interview is a methodology known in the field of ethnographic research and used both amongst social scientists and geographers valued for the rich data it produces in connection to the environment (J. Evans and Jones 2011; Anderson 2004). This method is also known as 'walk and talk interview' and closely related to 'go-along' interviews as coined by Kusenbach (2003), which rather follow interviewees in the sense of participatory observation. Like the mental map interview, it is a methodology that is thus far particularly valued for its ability to discover the human meaning and understanding of environments (Anderson 2004). Furthermore, Kusenbach argues for the phenomenological sensibility this form of interview brings to ethnography (2003). In contrast to previous human-centred approaches, I examine its suitability in the ANT context by highlighting the active participation of the 'walking setting' in the course of the interview. While these kinds of interview are often used in neighbourhood and environmental research particularly concerned with what is said at which place,

where the connection of movement, location and interview poses specific challenges,[27] I applied this approach at a manageable distance (the building) and speed (by foot). Two participants were chosen due to their specific in-depth knowledge of the building, the first, Calvin Winner, for his specific long-engagement with the exhibition areas and the second, Trevor Smith, for his in-depth technical knowledge about the building and more specifically the lighting. In Chapter 4, I draw extensively from the first walking interview and there I discuss the methodology in more depth and combine it with diagrammatic drawings. The second interview contributes particularly to Chapter 6, which is concerned with the lighting of the building and the building's active participation in that process.

(c) I compiled and reviewed the published literature and plan data on the building, visual records and archival materials, newspaper reports, quantitative sources about visitors and some published and unpublished scientific reports on the building. I reviewed archival materials on the building in the photographic collection of the UEA, the Robert Sainsbury Library, and the UEA Archive.

For the qualitative data analysis, I use the software MAXQDA and analysed the interview according to open keywords (e.g. issues about light, locations in the building) and later on increasingly according to key themes (e.g. 'working with…'). The visual data (e.g., plans, sections, photographs) I use as a basis for my own diagrammatic analyses.

While my study started from a distance, by reading about the building and studying the floor plans, I moved slowly closer. Beginning with the first interview sessions in autumn 2016, I learned from others about their engagements with the building and experienced the building myself. During my third stay in spring 2017, I began more explicitly to observe. Digesting the material in between the research sessions, in summer and autumn 2017, I finally focused on the Rana Begum exhibition and produced pieces of thick description. These go to the core of the research, into specific interactions between objects and humans during the visiting and during the dismantling of the exhibition (see Chapter 6).

With the next chapter we embark on a journey to the Sainsbury Centre. While we could understand my trajectory into this world as one zooming-in to a more proximate distance, I would rather consider it a study with growing intensity towards the processual character of the building. Thus, we slowly gain a better grasp and insight by refraining from understanding a building as a single passive object that contains space. Instead we learn to trace what architecture does in the entangled networks of multiple actors.

27 See Evans and Jones (2011) and their approach on spatial transcripts enhanced with GIS (Geographic information system).