BIRKHÄUSER

The City as Architecture

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Birkhäuser
Basel

1 Urban Design is Architecture

Architectural urbanism, as the name suggests, aims to reunite architecture and urbanism. Its starting point is architecture. This is because urbanism has lost sight of architecture. *Urban design* is adrift from urban planning, traffic planning, real estate and municipal policy. While in former times architects considered themselves entirely responsible for creating cities—a stance that has received justified criticism—today architecture seems to have largely abandoned this terrain.

Who makes the city?

This question has been raised by various cultural actors in the city. To which the answer is: we make the city. All of us. We can all be involved. This is to be understood as a declaration of war on those who have the power to produce cities, because they have the money, property, political and economic influence, and control the discourse. Architecture usually fails to appear in this discourse at all, on either side of the divide. Since the technical and economic processes of urban planning as well as the subtle processes of the spatial organisation of an urban society and the social necessities of communal political action are often far removed from architecture, the discipline of urban planning has also largely diverged from architecture. Other disciplines, such as geography, sociology, economics, and ethnology, also deal with the analytical problem areas of urbanism. Academic urbanism persists in the description and analysis of urban phenomena and developments, considering the spatial dimension as only one of many. As applied theory, that is, as the practice of urban planning/spatial planning, urbanism thus concentrates on the political control and regulation level and on the organisation of processes.

For their part, many architects retreat to the confines of building construction: equating architecture to the building and only thereafter to the city. Even on the juries for urban design competitions, the talk is not of architecture these days because, it is held, we still have no idea what sort of buildings will one day be built at the location in question. The preference, therefore, is for discussion of systems, infrastructure, supply, sustainability, functionality, or economy, and the quest for a 'robust structure'. In line with popular prejudice, architecture is synonymous with buildings, the built object. Beyond the building walls, the landscape architect is in turn responsible for the horticultural design of the surrounding area and for managing the interfaces between buildings and their surroundings, so consigning the scope and expertise of landscape architecture to the same fatal reduction.

On the other hand, urban planners concentrate on the moderation and organisation of processes resulting from the necessary reconciliation of the most diverse interests,

concerns, and spatial demands of the social actors in a city or region. Urban planning is thus dominated by process and conflict management. The cumbersome instruments of land-use planning and development planning are steadily diminishing in influence, thereby only further restricting the actual process of negotiating consensus in urban societies. The range of responsibilities is constantly expanding and at the same time diversifying; there are ever more tasks to be mastered, from environmental management to social and local provision of essential services. The principle inherent in planning law of weighing up, the consideration of one concern against another, offers some latitude and requires decision-making power.

This unquestionably results in specific urban spaces. The decades-long prioritisation of individual transport has fundamentally changed urban spaces. Emissions control and its legal instrumental regulation and classification also have far-reaching spatial effects. The high quality of life in German cities is not least due to a very high standard of local government and public services. However, the architectural quality of urban spaces has been subordinated.

In dealing with contemporary urban landscapes, an architectural understanding of the city and its spaces is not treated as a matter of concern. Society creates its spaces without architects and without enhancing them with qualities of space to which architecture could contribute. The conscious articulation of space has escaped urbanism. This indeed is the task of architecture.

In this context, there are those who retain a great interest in the spatial quality of the city and who, above all, become publicly active. In many artistic disciplines—in the broadest sense—interest in cities has increased significantly in recent years, and the focus has explicitly shifted to cities. This is evident from the latest thematic focuses of the Documenta in Kassel, where the curators present distinctly urbanist programmes to the public. The Venice Art Biennale regularly shows works that could just as well be shown at the Architecture Biennale. The Goethe Institute brings together local art projects and attracts international attention with platforms such as We-Traders or Actopolis. The border between art, political activities, and the playful joy of intervening in urban spaces has become permeable.

In the safe and orderly cities of Germany, artists are providing enlightened disruption and provocation, seeking to activate public space as a field for debate. In the traumatised cities of the Balkans, on the other hand, the interest in public space is expressed completely differently: the artist and curator Danijela Dugandžić insists on the necessity for “healthy places” in Sarajevo and is developing the project for a secure and tranquil park on the site of a former hospital.[1]

The anonymous artists' collective Geheimagentur asks: "What if we could build a new city?" to emphasise the utopian element of their performances. The curators of Urbane Künste Ruhr, an organisation that emerged from the activities for the Essen Capital of Culture, refer to Henri Lefebvre: "The art of living in the city as a work of art. (...) In other words, the future of art is not artistic, but urban."[2] The culture of civic engagement unfolding in parallel is also opening up and making practical use of new fields of experimentation in art in the context of the city, "art that changes urban space".[3] Architects are involved in many of these projects, which are only mentioned here as examples, working at the interfaces of architecture, temporary installations, performances, or performative actions.

Architectural urbanism

If "architecture is the art of the articulation of spaces",[4] as Umberto Eco says, this also applies to the spaces of the city. So if one considers architecture at root as a form of cultural expression through the comprehensive physical design of spatial conditions, then confining architecture to the construction and spaces of buildings alone is an indefensible reduction. It is time to reunite architecture and urbanism. To this end, we must ask what architecture can achieve and how its potential can be made beneficial for the city. Against this background, the performative view of architecture plays a particularly important role. The performative connection between form, subject, perception, and creation of space is crucial to this understanding of architecture (Chapters 3–5). Christopher Dell interprets the creation of this connection as an architectural strategy that he would like to call the "*urbanist turn*".[5] The *spatial turn* in cultural studies is thus followed by the *urbanist turn* in architecture. This is intended from the architectural point of view, which then opens itself anew to the process of the urban, the urban project: urbanist architecture.

If one considers the same thing from the reverse perspective, it is a question of treating urbanism architecturally, treating, for example, the spatial structure of urban landscapes as an area of architecture: architectural urbanism. But if architecture, conversely, is to bring about an *architectural turn* in urbanism, it cannot be reduced to object or form. Rather, it is to be understood fundamentally as the design of spaces, as the design of spatial situations. In spatial situations, apart from the actual buildings—the solid substrate—people are involved through their movements, their everyday and political actions, their perception and interpretation. "Cities for people"[6] are characterised by the fact that they focus on architecture in this comprehensive sense. For architecture focuses on the cultural treatment of space and provides a set of instruments

1 Both projects *Actopolis* 2015–2017 **2** *Urbane Künste Ruhr* (The Ruhr Urban Arts) programme poster May to November 2015 **3** Ibid. **4** Eco 1968/1986, p. 71, referring to Bruno Zevi **5** Dell 2007, p. 136 **6** Gehl 2010

for this purpose. This is dealt with in detail in the following chapters. Architecture and urbanism, the combination of two disciplines, aims to reconceptualise the architectural for urbanism as 'architectural urbanism'.

The architecture of the city

The expression 'the architecture of the city' is linguistically ambiguous, while 'the buildings of the city' (*genitivus subjectivus*) is limited to architectural objects, and risks missing the architectural character of the city. In this book, however, the expression is strictly understood in the sense of an architectural conception of the city as a whole, its architectural form, and its architectural design (*genitivus objectivus*): the city as architecture.

What is the architecture of the city? Is there anything to add fifty years after Aldo Rossi's book[7] of the same name? Today, it is above all the context of urbanist and architectural discourses that demands a different evaluation of the arguments. At that time, in the 1960s, it was primarily a question of defying naive functionalism and the neglect of history in modernist urban development. Today, half a century later, other discursive contexts make it necessary to revisit the architecture of the city. The historical heritage of European cities no longer needs to be defended, except for those of the more recent architectural history of the 1970s and 1980s, which have not yet been ennobled as a heritage. There is, on the contrary, a strong social trend towards the reconstruction of past architectures.[8] The semiotic understanding of architecture, its role, transporting meaning, telling stories, symbolising social issues, has also become common property. What is problematic in these times is the growing demand for strong images and the instrumentalisation of architecture as *signature architecture*, from which many local politicians promise a Bilbao effect. Against this background, we feel it is imperative to focus on the situational character of architecture, regardless of size and scale. Another problem is the general loss of importance of urban architecture in relation to the mechanisms of the property sector, the dominance of economics and judicature. Today, the 'architecture of the city' suffers from a reductive interpretation of what it means.

However, as with other cultural practices, the architecture of the city is structured according to certain characteristics and laws. The mastery of structural, morphological, and typological laws of spatial formation is the prerequisite for working with the architectural—from the interior, to the individual building, to the city and the landscape. If urbanism is interpreted as urban research, it may be regarded as a general concern with the city and the urban, the city as a social, cultural, economic artefact. Were this the case, architectural urbanism would simply be architecturally oriented urban research. However, architectural urbanism is not limited to the theory of the

city, but extends to the methodological practice of architecture as a profession. This method consists in designing. Design releases the specific potential of practice. Design as a method of creative invention and problem solving—subsumed under the keyword 'design-thinking'—for problems that do not allow a yes or no, a right or wrong, is now valued in many disciplines and is an intrinsic competence in architecture.

Understanding the city as architecture need not be limited to the profession: Bernard Rudofsky's book *Architecture without Architects*[9] has opened our eyes to architectural qualities beyond high culture. Today we can therefore discover architectural qualities in a favela and incorporate them into an urban design, a spatial development strategy. For this reason alone, the tabula rasa approach is no solution. Designing, the architectural methodological competence that goes beyond the profession, opens up a broad field of action, especially in those tricky situations referred to in design theory as "wicked problems".[10]

Urban spaces

Architectural urbanism places architecture at the centre of its theory and practice. As urbanism, however, it thematises the city, the urban, including urbanity and the specific cultures of the urban. A certain type of ambivalence is constitutive for the urban: distance and proximity, exclusion and integration, tolerance towards strangers and familiarity with home, freedom and welfare, heterogeneity and homogeneity, anonymity and community. The urban is initially attributed to the first category of each conceptual pair, whose inherent hardness is to be balanced again by the second, equally important characteristic. In describing urbanity, urbanism moves in a diffuse, conflict-prone field of theories. From Georg Simmel to Richard Sennett, urban sociology has been concerned with the cultivated treatment of the foreign and the other, which is made possible in the city.

This basically positive evaluation of the city's performance is interpreted as typically urban; at the same time it has a downside: urban arrogance, a blasé attitude and ignorance towards one's neighbour. Cities develop a habitus that not only makes the close coexistence with strangers bearable, but also cultivates it in its own forms of appearance. Richard Sennett describes this urban dialogue among strangers with a certain sympathy: "In a milieu of strangers, the people who witness one's actions, declarations, and professions usually have no knowledge of one's history, and no experience of similar actions, declarations, and professions in one's past. Thus, it becomes difficult for this audience to judge, by an external standard of experience with a particular person, whether he is to be believed or not in a given situation. The knowledge on which

7 Rossi 1966 **8** Buttlar 2010; Nerdinger 2010 **9** Rudofsky 1964 **10** Rittel/Webber 1973

belief can be based is confined to the frame of the immediate situation."[11] The decisive factor is the performance of this situation, in which language, gestures, movement, and clothing all play a role. "Appearances like this have an 'urban' quality. The city is a settlement in which such problems of enactment are most likely to arise as a matter of routine."[12] This interpretation of social behaviour in urban situations is linked to an architectural theory that describes the city as a stage or a drama, and explicitly views the spaces of the city from this scenic perspective.

As early as the 1920s, the Chicago School of Sociology defined urbanity by the terms "size, density, and heterogeneity",[13] not only as a social description of society in the city, but also as a specific spatial expression of society. With the spatial focus, the polarity of pairs of terms—through which we initially sought to grasp the urban—is expanded in favour of a complex heterogeneity. For the urban and for urbanity there are now almost as many definitions as there are authors, but spatial criteria for urbanity are increasingly coming into focus, among which are centrality, diversity, density, accessibility or adaptability, and the flexible use of space. These terms include architectural facts that are amenable to architectural urbanism.

This brings architecture back into play. Architecture is responsible for the articulation of urban spaces in all dimensions that are accessible to spatial experience and perception. Urban development and landscape architecture are explicitly concerned with the design of intermediate spaces, open spaces, public spaces, urban spaces, and landscape spaces. Architecture provides the appropriate productive access to our entire spatial environment—from the doorstep to the mountains in the distance. It creates culturally shaped, designed space for the development of individual and social life processes in an urban society. It is not only about the prestige spaces of an urban society and those intended for special events, but also about the spaces of everyday life. The questions that arise today concern how the spatial effects of the transformations of peripheries and urban regions can be integrated into an architecture of the urban. Here in particular, the theory and practice of architectural urbanism are sorely lacking.

11 Sennett 1974/1977, p. 39 **12** Ibid. **13** Wirth 1938, quoted after Berking/Löw 2008, p. 18

2 What Constitutes the 'Architectural'?

"The time has come to conceive of architecture urbanistically and of urbanism architecturally", declared Aldo van Eyck, voicing a concern that can be traced all the way back to Leon Battista Alberti.[14] But before we can determine what constitutes the architectural component of architectural urbanism, we must first consider what makes architecture 'architectural'. Definitions that equate this merely with the mass of all built structures, or with the entirety of activities undertaken by architects, fail to capture the specific character of the architectural. Architecture is not simply the sum of all disciplines involved in the creation of buildings or cities. The quality of the 'architectural' derives from the characteristics that set architecture apart from other disciplines as a means of cultural production. In essence, this comprises the design of all concrete spatial situations in society using architectural means. This specific competency of architecture, which is far more than the synthesis of its constituent disciplines, is the focus of this book. It encompasses all scales, from the smallest detail to entire landscapes, and with it the inseparable relationship between individual building, urban environment, and open space. As such, what makes architecture 'architectural' is also what constitutes the 'architectural' component of the city. One cannot adequately capture its precise nature in a few sentences, however we can attempt an initial characterisation through the interplay of three aspects: firstly, the way in which architecture is perceived and experienced; secondly, the specific spatial phenomena that condition architecture; and thirdly, the particular structural systematics of architecture. In addition, we also emphasise the role of designing as the specific method of architecture.

A characteristic way of experiencing

We experience architecture in a particular way that is specific to architecture. This is not, in the first instance, because architecture is closely intertwined in manifold ways with many categories of society and social situations, although it is without doubt an expression of social ideas, aspirations, and ways of living. Projects are always the product of the social forces that give rise to them in the first place. In this sense, architecture is an expression of politics, economics, and culture. New social challenges such as increased mobility, the changing structure of social communities, or the need for sustainability bring forth new architectural solutions and responses. In the process, architecture enters into diverse relationships with lifestyle, fashion, and urban ethics, and in turn contributes to the construction of history and myths.

14 Eyck 1999, p. 89

What makes something specifically architectural, however, reveals itself in how we perceive architecture in contrast to other kinds of experiences. Architecture conditions our habitation of spaces at all scales in its practical as well as expressive dimensions. As such, we experience architecture neither purely as object, nor as image. In contrast to the objective reality in which a building is a mere object, and unlike the idealised reality of a pictorial work of art, the spatial reality of the architecture of the city arises in the moment we perceive it and is simultaneously our subjective reality. We also perceive ourselves as part of the architectural reality: architecture thus creates spatial **situations** (Chapter 3). To the extent that architecture creates settings for seeing and being seen, we can also draw parallels with **scenes** in the theatre. Urban theory has a long tradition of drawing analogies between the city, the stage, theatre, and drama. But while we do become aware of ourselves in the city, unlike a performance with actors and audience, we are simultaneously actors and our own audience (Chapter 4). In a **performative** act, we create an individual reality. The performative qualities of architecture reveal, from a further theoretical perspective, how architecture's ability to shape reality is only made manifest through the undertaking of an activity, in the creation of a situation. Space is produced through the practical use of architecture (Chapter 5). What characterises our experience of architecture and the city is not merely that we observe it, but that we play an active part in it. We will discuss the relationship between form and function that shapes this in terms of what we call architectural **capacity**, which is a product of the interplay between the clarity and distinctiveness of architectural form and the scope it provides for use and interpretation (Chapter 6). But what affects us most directly in this architectural reality, even before we begin to formulate a conscious reaction, is its **atmosphere**, especially in the context of the character of urban spaces. This is a product not just of its physical and spatial characteristics, but also of the situations and activities it plays host to (Chapter 7). Finally, the role that the actual **place** plays in defining the unmistakable character of an architectural reality is crucial. Architecture is capable of condensing and revealing the natural and artificial characteristics of a place so that we experience them with all our senses (Chapter 8). An equally fundamental and essential component of the 'architectural' is its grounding in a **concept**. It contributes to our experience, the possibility of intellectually tracing the origins of its architectural idea, avoiding the impression of arbitrariness. Moreover, it helps to facilitate orientation in the space of the city (Chapter 9).

The fundamental spatial phenomena

Our experience of architectural reality is not just a matter of the 'how' but also its actual content: architecture is concerned with specific spatial phenomena, the design of which sets architecture apart from other realms of reality. Accordingly, the work of producing architecture draws on a particular repertoire of design means. These we

examine in greater detail in the second part of this book (Chapters 10–17). Architecture and urban design are both creative disciplines. As such, architects and urban designers are responsible for defining the form of the city and the design of the urban realm. Urban planners who believe that efficient organisation of social, economic, and administrative factors and processes is a sufficient substitute for this creative work, neglect their responsibility to give architectural shape to the city.

These architectural means include numerous elements (such as form, construction, light, colour) that also play a role in other fields. However, a number of components are more fundamental to architecture than they are to any other discipline: these include the reciprocal interdependency of architectural masses and spaces. The city comprises houses and other building structures on the one hand, and streets, squares, courtyards, and gardens on the other. Space is made legible when framed or formed by architectural masses; the figure of a built mass in turn becomes apparent when set apart from the ground of its surroundings. Body-like masses provide resistance to our own bodies, while the empty spaces between them afford us space to move and see around and between them. In architecture, and in the architecture of the city in particular, the relationship between figure and ground that is so fundamental to our perception is articulated in three dimensions by the relationship between **space and object** (Chapter 10).

The means of screening is likewise characterised by a complementary interdependency. It regulates a fundamental relationship of architecture, that of **inside and outside** by separating but also simultaneously connecting the two. Urban spaces such as squares and streets can be perceived both as public interior spaces within the city or alternatively as outdoor space. To access them as interiors, one must cross a divide by passing through openings between inside and outside, that is, by crossing **boundaries and thresholds**. The **porosity** of boundaries and the ambivalence of thresholds offer particular potential for the architecture of urban spaces. Accordingly, screening can regulate the transition between neighbouring urban spaces, between quarters or built structures. Architecture likewise represents the means by which to articulate the relationship between the interior of a city and its surroundings (Chapters 11, 12 and 13).

The individual character of a work of architecture or a city derives from a combination of permanence and stability and the particular features of the place. Its rootedness in place gives it a sense of presence. But as a spatial totality, it cannot be appraised from a single, static position; our experience of architecture and cities, as well as how we use them, unfolds as we pass through them, continually changing our position. Even though we typically think of architecture as something static, permanent, and stable, **movement** in and through space is essential for our comprehension of it, especially in urban situations. Architecture, despite its permanent rootedness in a place, is

therefore always also a sequence of spatial units linked by movement into a temporal progression (Chapter 14).

Materiality and the material substance of architecture create the conditions that enable us to perceive spaces with all our senses. As such, they contribute to giving urban spaces a distinctive character. This is not solely due to the direct tangible presence and appearance of actual things, but also to their indirect influence on the materiality of the environment. Air, water, earth, rain, sun, warmth, shadow, coolness, etc. are not just parameters that contribute to healthy living conditions in cities, but are also a material basis for spatial atmospheres and the specific qualities of concrete places (Chapter 15).

The counterpart to concrete sensory experience is the sphere of **signs**. The architecture of the city overflows with signs and symbols; every architectural element can be read as a sign as well. Alongside the signs that aid orientation, the city as a system of signs makes its history legible or offers a range of different invitations or prompts. But architecture does not have to be read explicitly in terms of its signs: its **expression** is immediately vivid in its own right (Chapter 16). What makes the architecture of the city comprehensible and memorable, however, is the clarity and stringency of its spatial **structure**. Often shaped by prevailing topographical conditions, it serves as an underlying framework that on the one hand gives a city its specific character and shape, and on the other creates opportunities for continued development (Chapter 17).

Structural systematics

The aforementioned aspect of structural stringency reveals a characteristic that can be regarded as a quintessential feature of architecture. In a broad sense, we understand 'architecture' as a methodical construction in which a series of parts are assembled to form a whole, for example the separate parts of a contractual agreement or the components of a mechanical system. In this general sense, it can also refer to the careful elaboration of a theory, the well-constructed composition of a painting or a piece of music.

Given that this term is commonly used in non-architectural contexts to denote something that exhibits 'architectural' qualities, it follows that structural stringency is an essential characteristic of architecture proper. Spatial structures can consequently only truly be regarded as being 'architectural' when they exhibit this characteristic. Such structures go beyond the merely technical aspects of construction to also communicate the systematic interplay of the parts and the whole in a form that is outwardly legible. By expressing the existing structural order in its architectural design, it enables one to comprehend and intellectually grasp its structure. This quality can be readily understood by experts and laypeople alike and need not be spectacular.

Taking this a level further, one may expect architecture, by means of spatial structuring, to communicate not only an understanding of itself but also of its context and the wider world.

This characteristic quality of architecture, its structural systematics, recurs repeatedly throughout this book as an underlying thread that informs all aspects of what is architectural. In addition, structural systematics is also a fundamental aspect of a further key competency: that of architectural design.

Designing

In a time in which we have legitimate cause to question whether one can still talk about 'the city' as opposed to multiplicities of cities, of the urban realm and of spatial phenomena, it is all the more important that we highlight the competences and repertoires of architecture. The methodical competence of architecture, that of designing, is in this respect crucial (Chapter 18). Architectural urbanism is, after all, not just about analysis and interpretation; it is about the design of urban spaces. Multiple meanings, openness, "the possibility of surprise",[15] are all qualities that we can expect of the urban realm, and that can serve as parameters of design. And designing is a constructive method that is able to accommodate contradiction. This book therefore closes with a consideration of the potential of design.

15 Sennett 1990, p. 196

Competence of Architecture

3 A Unique Kind of Reality— *On Situations*

What we experience as architecture are spatial situations.[16] Of course, the term 'situation' is commonly used in an almost inflationary way for all sorts of things. Sometimes we are talking about the position of various buildings, at other times about a social situation, the municipal finance officer talks about the financial situation and the traffic planner about an intersection situation. Here, however, the term 'situation' is intended to convey the fact that architecture is always experienced in the reciprocal interaction of structural spatial elements with the activities of all those who inhabit and move in urban space. Nobody experiences the architecture of the city merely as a physical arrangement of buildings and open spaces. Nor is the experience of the city limited to the possibilities of use, service, or social conditions; the two aspects coincide: inhabiting and moving, action and encounter are prerequisites for the perception of buildings and open spaces as architecture. They would otherwise be regarded merely as objects, as purely material structures. These prerequisites only make a building what it is experienced as. A gate, for example, must be opened, closed, and passed through so that it can be experienced as architecture. An underground station is perceived in rush hour as another architecture than late at night.

On the concept of situation

To regard architecture as a constellation of spatial situations may not seem self-evident at first. Historically, the main task of architecture has long been to erect buildings and to design them as solid objects. The art historian Heinrich Wölfflin, for example, defined architecture as the "art of bodily masses".[17] It is precisely in urban design that a view is still prevalent today according to which the architecture of the city is primarily regarded as the structural mass of houses and other buildings.

By contrast, at the beginning of the twentieth century a change of perspective took place, through which space came to the fore as the main medium of architecture, founded particularly on the aesthetic theories of August Schmarsow. Hereafter, the spatiality of all experience as a general human condition of existence also forms the bedrock of the architectural experience of space. In fact, we are not only confronted with buildings in the city, but we move between them in a spatial continuum that also includes one's personal space. As Schmarsow puts it: "As soon as from the residua of

16 The Latin origin of the expression already establishes a connection both to the architecture (Latin *situs*, built, situated, living, residing) and to the place (Latin *situs*, geographical location, site plan, region). **17** Wölfflin 1888, p. 63

sensual experience, to which the muscular feelings of our body, the sensitivity of our skin as well as the construction of our whole body also contribute, the result, which we call our spatial form of intuition, converges—the space, which surrounds us wherever we are, which we from now on always erect around us and imagine necessary, more necessary than the form of our body,—(...) so the precious core is also given, the capital founded as it were on architectural creation (...)."[18] Of course, we still perceive buildings as essential elements of architecture. Since, however, the architecture of the city does not primarily shape our everyday practices through the presence of buildings, but through the design of the entire spatial environment, our perception of them is not limited to the contemplation of objects, but claims our entire sensorium, which also includes proprioceptive perception and our physical motor activity. "We sense the organic structure of space not only with the eye—which breaks it down into images—but through movement with our entire corporality. Thus we live in the organism, we become, as it were, a part of it. These are double sensual impressions that we experience, an enriching bond, which in this sense is unique to architecture."[19] In making this claim, the city architect Fritz Schumacher goes one step further and includes the subject of perception in the description of architectural space. When we perceive the space of the city, we are normally already present in it, with all our activities, movements, and different forms of social action. Thus the situational character of architecture becomes clear, which goes beyond the confrontation with buildings and according to which architecture as a spatial experience must also be supplemented by the fact that its inhabitants co-determine the character of a situation. Thus architecture also proves to be a social discipline.

Now, however, it would be going too far to invert the perspective even further and understand architecture only or primarily as a social medium. Nevertheless, there is a widespread misconception that architecture, especially on the scale of the city and from an urbanist point of view, is primarily shaped by social, political, and economic determinants, with the role of its architectural form largely escaping attention. In fact, it is the interplay that counts: as a social discipline, architecture creates complex situations in which we participate on the one hand with our different sensitivities and motivations as well as through individual and collective action. On the other hand, architecture articulates and reflects situations through its forms and spaces, shaping them through their atmosphere and interpreting them through their symbolic character.

Architectural reality

It is not only in the concentrated contemplation of architecture, but also in everyday life that there are moments in which we turn to the architecture of our surroundings in its form. And these moments are probably decisive for the general and ongoing appreciation of this space because we immediately become aware of the influence that

architecture has on our general state of mind. We sometimes experience, for example, that in certain spaces we can unfold our senses to a greater extent and that our movement, our actions, our presence in space undergo a revaluation through the spatial form, which we do not have in other places. Even if we notice only incidentally, distractedly, how the space responds to our movement or our being here, we experience ourselves in a harmonious wholeness, the space appears made for us, designed in accordance with our actions.

Such observations are based on a special kind of perception, which is rooted in the fact that we become aware of our being in space, temporarily elevated from the narrow perspective of purely practical action. This is a typically aesthetic perception, and it raises the question of the aesthetic reality of architecture, as examined, for example, by the art historian Dagobert Frey. The situational character of architecture also becomes clear in a "determination of the nature of architecture" [20] which Frey undertook in the essay of the same title. The author explores the question of why something is "conceived architecturally or has an architectural effect", and notes that it consists in a special kind of aesthetic reality that differs from that of other cultural genres.

What is essential to an aesthetic perspective is that it sets something apart from practical reality and thus presents it to perception. But now the aesthetic reality of architecture, in contrast, for example, to the ideal world presented in the visual arts, coincides with the practical reality of our own spatial environment. Yet, according to Frey, "while architecture is lifted out of practical reality in aesthetic contemplation, the spatiotemporal connection with the contemplating subject, however, remains, it must itself be lifted out of its reality; in other words, we feel, as a distinctive phrase has it, as though 'transported into another world'. We may (...) say that in architecture we are 'actors', while in the visual arts we remain 'spectators'." [21] We cannot penetrate into the world of a picture, nor do we find our sphere of life in a sculpture. "We experience architecture, on the other hand, only fully in the living movement, in looking around, walking around, in the interpenetration with its commensurate life." [22] Frey points out that this relationship to reality is based on a specific way of looking at things. However, an architectural work does not necessarily have to be subjected to this architectural approach. Frey's restriction is confirmed, for example, by the observation that in picturesque holiday resorts, say, the tourist—today usually with a glance at a mobile phone or camera display—"tends more towards a painterly view, that she seeks and prefers the random groupings and overlaps, the pictorial details, the 'picturesque angles'. Significantly, the essence of this painterly observation lies in the pictorial isolation and distancing. We do not experience the 'picturesque angle' in looking and

18 Schmarsow 1894, p. 11 **19** Schumacher 1926, p. 30 **20** Frey 1925/1946 **21** Op. cit., p. 98 **22** Ibid.

walking around as a space enclosing us; it is rather bound to a certain point of view, a certain cropping, from which it draws validity. Note how architecture, seen through a framing archway or window, immediately takes on a pictorial, painterly character. It is significant how the impression of something unreal immediately appears."[23]

The production of relational space

In contrast to such a limited view, we experience the city in the interplay of movement and action with the structural-spatial elements in a variety of living situations—and not only from an aesthetic perspective. The diversity of these situations depends largely on the different forms of our movement through the city, whether we walk, drive, or wander about, which goals we pursue or what we are preoccupied with. In this sense, dependence on situational conditions also forms the basis of concepts of relational space production. In the 1960s, Guy Debord and the situationists sought to trace the chance events and encounters that existed in urban geography and architecture. In the actions of the situationists, aimless wandering (*dérive*) was developed into a technique of the 'psychosocial' production of space. Henri Lefebvre's theory of space, on the other hand, emphasises that social space, including the space of the city, is continuously generated: *la production de l'espace*.[24] Space as a container in which we live and act is a model of thought that has long been discarded. Seen as relational space, on the other hand, it is a network of relationships. All social and cultural thinking and acting generates spatial relationships and reifies itself in objects that in turn have an effect on space. In this way, a city's unique architecture is created, in which social relationships leave their traces. The perceived space of the city (*espace perçu*) is created through diverse communicative relationships and spatial practices. It is also shaped by ideas, ideologies, scientific assumptions, "the space of scientists, spatial planners, urbanists, technocrats" (*espace conçu*). Beyond these long-term influences and processes, space emerges as lived space (*espace vécu*), mediated through physical activity directly in the here and now.[25]

It does make a difference whether a skateboarder enjoys gliding along the slight gradient of the long, tiled underpass or whether someone is forced to use it because they are denied a road crossing. The structural component is not unimportant. But: "The perceived–conceived–lived triad (…) loses all force if it is treated as an abstract 'model'. If it cannot grasp the concrete (as distinct from the 'immediate'), then its import is severely limited (…)".[26] Social space, as Lefebvre contemplates it, arises in a process of action between persons and groups, in a process of using things, in a process of daily and everyday life. Relational space production is not based on social space alone. Due to its situational character, the architecture of the city is also experienced as an interplay of different factors and relationships. Nevertheless, this characteristic of architecture is not exclusively relational. What we experience as the space of the city does

not emerge directly from human action alone. Equally constitutive are the structural 'concrete' things and also the architectural features of character, form, and the atmosphere of the spaces.

23 Op. cit., p. 99 **24** Lefebvre 1974/1992 **25** Lefebvre 1974/1992, pp. 38–39 **26** Op. cit., p. 40

4 See and Be Seen— *On Scenes*

In the architecture of its public spaces, the city forms the stage on which something is always performed and where one goes to see or be seen. It is the setting for both theatrical performances of power and the grand ceremonial, as well as the small performance, the staging of everyday events involving actors and spectators. "What is a City?" asked urban theorist Lewis Mumford. "The city fosters art and is art; the city creates the theater and is the theater. It is in the city, the city as theater, that man's more purposive activities are focused (...) The physical organisation of the city may (...) through the deliberate efforts of art, politics, and education, make the drama more richly significant, as a stage set, well-designed, intensifies and underlines the gestures of the actors and the action of the play."[27]

Critique of stage set and image

The architecture of the city is more than just a stage set or scenery, yet it is sometimes reduced to it. In an "economy of attention",[28] to which city marketing is subjected today, an attractive cityscape serves as scenery. As an image, it loses its spatiality in order to be distributed in print or digitally. The viewer's point of view is predetermined by this strategy: the tourist strives specifically for the places from which their expectation is confirmed and where the image, predigested by the media, seems to become reality. If one leaves the location of the staged or traditional gaze, disappointment sets in. These still images threaten to freeze the city, but the images themselves become the actual attractors: increasingly conspicuous, unique, authentic and exciting, they are intended to imprint themselves against the backdrop of a tremendous noise of images. To regard the city predominantly as an image, however, does not do justice to its dependence on presence. In seeing alone, reality shaped by architecture can only be partially experienced. As a spatial situation, on the other hand, it is first perceived with all the senses and in movement. Nevertheless, it can at the same time have a visual character, namely when we become aware of its spatiality through a special image imprinting power. Through architecture, spatial situations can be structured in such a way that they acquire a visual distinctness that makes it easier for us to make an 'image' of them.

Images in this sense are comprehensive spatial impressions and sequences that the wanderer through the city can pass through and memorise. They enrich cities with an aesthetic dimension that makes them remarkable in their everyday use. The condi-

27 Mumford 1937, no page reference **28** Franck 1998

tions for the memorability of an image of the city, especially with regard to the legibility of a spatial order and orientation in the city, have been scrutinised by Kevin Lynch in *The Image of the City*.[29] But Lynch's claim exceeds mere visual function: "Moving elements in a city, and in particular the people and their activities, are as important as the stationary physical parts. We are not simply observers of this spectacle, but are ourselves a part of it, on the stage with the other participants."[30] This is not just about the image of the city and its legibility, but about the spaces and life within the spaces of the city.

Critique of staging

With the introduction of the 'urban design' interventions around 1970, the 'staging of the everyday world' seized upon the spatial scenery of the city. At the same time, the scenographic superficiality of these plans has been criticised: "The planner becomes a set designer who has to prepare for the entrances in changing scenes. Urban design is understood as a kind of dramaturgy that is oriented less towards internal criteria of aesthetic traditions than towards the taste of a demanding and experience-hungry audience, which at the same time represents the actors."[31] The critique of urban design's 'staging' deplores the usurpation of the scenic by economic exploitation mechanisms. In this sense, 'staging' truly misses the chance to exploit the possibilities of experience in urban life.

'Worlds of experience', 'imagineering', 'scenography' are keywords for this endeavour, which has proliferated over the years, to achieve a certain kind of increase in attractiveness for places of commerce, service, but also culture and even living. It has been recognised that it is neither simply images that are important if one is to succeed in the competition for attention, nor providing a location that meets purely practical requirements. Rather, economic considerations demand qualities that go beyond that: in addition to theme worlds and theme parks, entire city districts are staged according to a certain narrative.

Just as these tendencies develop, largely driven by commercial interests, they often trigger defensive reactions among architects and planners with a traditional professional ethic. Disneyfication and the cult of the event do not denote fields of work for sophisticated architecture. In fact, the trend towards the creation of media worlds of experience is part of the increasing appropriation of all areas of life by the culture and consciousness industry, which does not stop at architecture for that matter. In our "experience society",[32] the theatricalisation of daily life is becoming ever more widespread. The spatial framework and the implementation of all these types of staging can become the subject of scenography, which has now extended its responsibility far beyond its original role in theatre to almost all areas of life.

The architecture of the city as scene

Yet the multisensory design of complex spatial situations has always belonged to the field of architecture. On the one hand, we are now observing a trend towards the production of scenographically animated worlds of experience in the field of commerce and event culture. On the other hand, the experience-generating potential of architecture has existed since time immemorial. One thing, however, clearly distinguishes architecture from the creation of artificial worlds of experience: while the theme park and scenographically charged architecture are intended to take the spectator through a narrative into a fantasy world whose suggestive power they cannot escape, architecture does not need a story. Its contents are not formulated by 'theming'; rather its highly complex theme is the everyday handling of space. Architects do not have to tell stories, but as a rule already find the theme in the task itself. Articulated by architectural means, every movement, every action in space can be experienced in an intense way. Architecture can draw on its historic competence to create an environment worth living in or experiencing: not the unique 'experience' dependent on extreme stimulation, but for the unfolding of life on all sensory levels, instrumentalised in designed space. Whether scenography merely dictates experiences or whether the scenic framework forms a space that increases the intensity of various events depends on the individual case. The characteristics that determine the performative potential of architecture are decisive (Chapter 5). These include the unpredictability and ambivalent significance of a situation, and possibly also its lasting transformative effect.

Richard Sennett has outlined how the scenic could be developed in the sense of a characteristic dimension of urbanity.[33] To regard ourselves as actors in space is a prerequisite for urban communication behaviour in the urban public sphere. Analogous to the theatrical scene, passers-by are involved in architectural situations in the city in various roles: as actors and audience. But unlike theatre and scenography, architecture is not necessarily about a performance in front of an audience. This is why we can also experience architecture in a scenic way when we do not perform in front of an audience, but when we are actors and our own audience at the same time. This is possible because humans are able to create a distance to themselves and their position in the world. "We not only live and experience, but we also experience our experience." So did Helmut Plessner describe this form of human experience of the world, choosing the term 'eccentricity' to denote it: "If the life of an animal is centric, then the life of humans, without being able to break through its centring, is at the same time external to it, eccentric."[34] And he asks: "What is my body that obeys my will, other than a moving figure that I see as the figure of another (...) actor on the scene and spectator at

29 Lynch 1960 **30** Op. cit., p. 2 **31** Durth 1977, pp. 37 f **32** Schulze 1993 **33** Sennett 1974 **34** Plessner 1928/1975, p. 292

the same time?"[35] Since our relationship to the world is always spatially shaped, our eccentric self-perception also has a genuinely spatial character. To become aware of oneself, to watch oneself means to become aware of oneself in spatial relationships, to see oneself through and within a spatial situation.

The architecturally designed space is a medium in which the characteristic gaze can be evoked, which puts ourselves and our actions in a special light, allowing us to watch ourselves on the stage of everyday life. It is neither about theatrical architecture nor about scenographically processed scenes. Rather, any designed space can potentially convey the impression that it is the setting for my actions. Thus it can already form a scenic framework that is capable of making my actions the object of my attention. This begins with the impression that a floor surface conveys when one walks on it. If square areas are given the character of carpeting by the pattern of the paving or by the covering ornaments, they can already turn stepping on them into a performance. For everyday events, the scenic space is what the pedestal is to an *objet trouvé*, triggering the aesthetic gaze and presenting it with a rewarding goal. The architecture of promenades and terraces, of public walkways or arcades, to name but a few examples, provides these scenes for seeing and being seen.

The act of ascending or descending a public stairway is dramaturgically heightened by, for example, the steps and gradients, the rhythm of the platform and the changes of direction, through narrowing and widening perspectives, making it the subject of an intense experience in which every step is worth paying attention to, following movements like a performance. The classic example of this is undoubtedly the Spanish Steps in Rome, with flights of stairs suitable for swaying movements and with podiums and platforms for actors and audience, divided by podiums or individual steps into smaller performance levels. Many other dramaturgically designed staircases are also laid out in more or less theatrical form or have cultic significance, such as the *ghats* on the Ganges. Other urban spaces can also unfold scenic drama, such as the network of alleys and *campi* in Venice, as W.G. Sebald's description makes clear: "As you enter into the heart of that city, you cannot tell what you will see next or indeed who will see you the very next moment. Scarcely has someone made an appearance than he has quit the stage again by another exit. These brief exhibitions are of an almost theatrical obscenity and at the same time have an air of conspiracy about them, into which one is drawn against one's will."[36]

Scenically interpreting the 'drama' of the urban is not synonymous with a demanding dramatisation or theatrical indulgence. An open scenic situation can even be created by a striking building facade that, in conjunction with a square in front of it, serves as the back wall of the stage for the spectacle of everyday urban life. The facade itself

can also become a stage with the possibility of appearances at windows and doors. Its bases, which have been shaped into benches, for example at the Residenz in Munich or the Palazzo Farnese in Rome, offer auditoriums for the events in front of them. Some squares are structured like an interplay of stage and grandstand, such as the inclined square in front of the Centre Pompidou in Paris.[37] It is primarily in the movement through the city that the dramaturgical possibilities of its architecture reveal themselves as contrasts of impressions "of the existing view and the emerging view", about which Gordon Cullen says: "In the normal way this is an accidental chain of events and whatever significance may arise out of the linking views will be fortuitous. Suppose, however, that we take over this linking as a branch of the art of relationship; then we are finding a tool with which human imagination can begin to mould the city into a coherent drama."[38]

35 Plessner 1923, p. 41 **36** Sebald 1999, p. 52 **37** Cf. place morphology in: Wolfrum 2015, pp. 10–15 **38** Cullen 1961, pp. 11–12

5 Architecture as Event— *On Performativity*

Architecture has a genuinely performative character. It unfolds its specific reality only in use. This assumption requires explanation. Exploring the 'rhizomatic' structure of the field of theory[39] that describes performativity, the case is made for the validity of the term as applied to architecture, showing it to be particularly productive in the field of urban architecture.

Event and use

In the cultural sciences, especially in theatre studies, performativity has long been so comprehensively addressed that a *performative turn* has also been noted in the deluge of *turns*.[40] Architectural theory and urban studies deal with the use of this term more cautiously. Where they focus on use, experience, social and cultural action, they tend to work with the concepts of scenic space or situation, also with the direct analogy to stage and theatrical performance. In cultural studies, philosophy, and the cultural sciences, however, the performative approach has been constantly further developed, so that today it has gained significance far beyond its origins in the philosophy of language, where the term was introduced in John L. Austin's Speech Act Theory as a distinction between performance and performative.[41]

Performance refers to the utterance of a sentence that has a certain meaning in a certain situation, if this meaning is in accord with the given situation, a state of affairs is merely confirmed. The sentence is descriptive, the statement can be true or false. Performative, on the other hand, refers to a situation in which the sentence uttered produces a new reality; the world is changed by the utterance of the sentence.[42] Examples repeatedly adduced include those of a marriage ceremony, in which the words of the clergyman or the registrar create the status of a marriage, or a promise that is binding and the non-compliance of which has consequences. Here it becomes clear that a social environment is necessary for the power of the statement to be able to have this profound effect at all. Language does not only mean, it generates. Performativity describes the transformative power of an action, beyond the general action reference of every utterance or deed. It is only in special instances that the question of the long-term effects of an action, structural or political consequences and effects arises; first and foremost performativity concerns the immediate effect in the here and now, notwithstanding that this can have long-term consequences. As was the case with the

39 Hempfer 2011, p. 13 **40** Bachmann-Medick 2006 **41** Austin 1955; Searle 1973 **42** Hempfer 2011, pp. 13–43

aforementioned example of the marriage ceremony. This aspect of effect in direct action is also of particular interest here.[43] "Within speech act theory, a performative is that discursive practice that enacts or produces what it names."[44] By speaking, one creates.

This fundamental point has subsequently been extended from language to other disciplines and cultural spheres, especially by Judith Butler, whose reference to Austin becomes clear in the quote above. Cultural practices generate a reality through speech but also through action.

The discourse on performativity has been extensively developed in theatre studies. Performance and performative coincide in theatre, but the discussion of the performative concentrates on the performance and its respective conditions. In a theatre performance, the text of the playwright is not merely recited, reproduced, remembered, or interpreted. Text, action, stage, space, and audience merge in the course of the performance into a completely new event. The performance may be called performative in that it constitutes a new reality. Theatre, according to Erika Fischer-Lichte, is the ultimate performative art.[45]

Not only in theatre, but also in other cultural areas, the focus is shifting further from the underlying (timeless) work to its performance, and further and more generally, from the work to the event. The philosopher Dieter Mersch, for example, explores this idea and describes a development in the fine arts that started to play a major role in the 1960s and which, as performance art, is also currently flourishing.[46] "Performative art is art without a work."[47] The concept of the performative emphasises event, process, project, happening. Mersch also clearly expands the field of application of the performative beyond art: performativity is a universal dimension of the cultural. "Each performative 'performance' sets something in motion, causes a caesura and fundamentally alters the conditions of what follows. Not only is the concept of the performative therefore relevant for the analysis of communications, but also for the study of life forms, artistic processes, political demonstrations, organisational forms, and economic transactions. In truth, it marks a *universal dimension of the cultural*."[48] The cultures of urban spaces in the broader sense can easily be inscribed in this argumentation. The philosopher Jörg Volbers marks the performative in social contexts and in the field of social practices through two basic characteristics: on the one hand, something is effected in implementation, whereby the peculiarities of bodily and spatial execution are of particular importance. On the other hand, such types of implementation take place in a public sphere that is the precondition for "being perceived and understood by others".[49]

This is constitutive for urban architecture as well: spatial situations are experienced in execution and the public sphere is in any case a precondition of urbanity.

The performative character of architecture

Erika Fischer-Lichte identifies four constitutive prerequisites of the performative with regard to the spaces of the city: it is unpredictable, ambivalent, dependent on the conditions of perception, and, crucially, it has the transformative power just discussed.[50] These characteristics combine the concept of relational space—a general spatial concept of urbanism—with that of the *situation* (Chapter 3) and that of the *scene* (Chapter 4) in architecture. It makes it clear how the architectural unfolds its effect in urban contexts. These four aspects will now be examined in detail, even though they are not easy to separate and often coincide in architectural situations.

Unpredictability: an architectural situation is always open and unpredictable, even if the structural, material object provides a framework for the architectural facts. A nineteenth-century city boulevard designed for promenading may be usurped by heavy traffic. Today one can lie around and play on the meadows of the English garden, which were once intended only to be looked upon. Even functionalist architecture, dedicated to a specific purpose, often proves suitable for other functions. Urban architecture rarely follows its original scheme. The concept of the capacity of architecture (Chapter 6) refers to its openness to unexpected uses without falling into arbitrariness. Aldo Rossi's theory of the city is largely based on the capacity of distinct architecture, its propensity for change and repurposing, which are largely unpredictable. A former parade ground can today become the meeting point for a cultural community. A former barracks is now an art academy, a bridge becomes a summer meeting place. In the process of the development of an urban society and its urban practices, the use of its built spaces also changes in an unpredictable way.

Ambivalence: architecture thus invites a variety of spatial situations. But none can ever be completely controlled by architecture. The use of architecture remains ambivalent, another facet of its openness. You can climb up a staircase, or sit on it, or meet on it. The prestige significance of a square may prevail during the day, but might it become the territory of a teenage gang in the late evening? A slight shift in the social context can turn an urban space from inviting to threatening, from formal to casual, from busy to sleepy. Time of day, season, weather, power relations, political events of the day, the habitus of different groups of passers-by—conditions can change in an instant, from one situation

43 Wolfrum/Brandis 2015 **44** Butler 1993, p. 13 **45** Fischer-Lichte 2004 and 2012 **46** Mersch 2002; Kertscher/Mersch 2003; Schütz 2013 **47** Mersch 2002, p. 45 **48** Mersch 2015, p. 43 **49** Volbers 2011, p. 146 **50** Fischer-Lichte 2015, p. 31; Fischer-Lichte 2012, pp. 73–129

to the next. Even if an urban space retains its intended purpose, the momentary events of a situation cannot be determined. It can escalate, perish, succeed, or fail.

Dependence on conditions of perception: the concrete subjective circumstances of perception are determinant. They each provide concrete prerequisites with different effects. Whether I come out of a dark underpass onto a square or to a bridge, or I perceive urban spaces as a car driver, from the tram, as a cyclist or pedestrian, they appear to be quite different spaces. The different conditions influence the spatial perception of a concrete architectural space. If I am on the move with a pram, a cast, or a wheelchair, each space may be experienced differently. Socialisation and personal disposition can also significantly shift perception. In public urban spaces that have no trees, sculptures, street furnishings or other installations, one person feels a *horror vacui*, while the other sees it as an expression of individual freedom from paternalism and an invitation to appropriation.

Transformative power: "The world is changed—as if by magic."[51] Architectural situations can exert a transformative power based on their architectural substance. On the one hand, architecture changes in character depending on its use, conditions of perception, and individual disposition. New social customs, or a new habitus of social interaction in urban society, can completely change the expression, meaning, even the naming of a space in the city. This can happen abruptly too: today, for example, a dramatic political demonstration took place on this square, which shapes its character for the next few years. On the other hand, the respective situation changes the participants. The characteristic atmosphere of a spatial situation, in which acoustics, light, or smell may be involved, changes the mood of passers-by. One crosses the *Hofgarten* in Munich on one's way to a professional appointment, which lifts one's mood. It makes a difference whether the route to work leads through a park or through overcrowded underground stations. This effect may last for hours. In particular, modes of movement evoked by architecture have these distinct effects, even if they remain below the threshold of consciousness.

An aesthetics of the performative can be drawn from art, theatre, cultural, and social practices, and related to architecture and especially to the city as architecture. In this way, the established analogy of the city as a stage and dramatic dialogue is given additional weight. For the architectural spaces of the city are not simply static stages on which urban society acts. Rather, they are an inherent part of the urban with all its events and imponderables.

Architecture is often described as a heavy, immovable medium: as "a fixation in the ground, an indentation of space",[52] a territorialisation, solidly walled and permanent,

immobile in its structures. One can only free oneself again from the bondage of the stones through demolition. The three chapters with the key terms situation, scene, performativity, on the other hand, pursue a theory of architecture[53] that emphasises its event and potential for action as an equivalent and complementary property to the physical presence of architecture in form, objecthood, and materiality. Thus architecture is not the antagonist of urbanity, but its ally. The same concern is pursued in the next chapter, which places distinctness and scope in relation to one another.

51 Fischer-Lichte 2015, p. 35 **52** Delitz 2015, p. 13 **53** Cf. the theoretical approach of Janson/Tigges 2013 and Wolfrum/Brandis 2015

6 Distinctness and Scope—*On Capacity*

Architecture invariably has to fulfil an array of practical and technical functions. The architecture of the city is tasked with regulating access, organising traffic flow, and providing and incorporating technical infrastructure. Even when one expands the notion of function to encompass other necessities of social life—space for political and cultural life, for commercial activities, social care, and housing as well as places for social interaction—fulfilling these functions does not on its own give rise to high-quality, well-formed urban spaces. The long-running debate on the relationship between form and content in architecture and design has not established whether *form follows function* as per the functionalist credo, whether form is defining for function, or whether the two mutually influence each other. In this context, the concept of capacity presents a promising alternative for both architecture and urban design.

How many people fit in a stadium? How many in an urban square? What is the capacity of an underground garage? These questions all concern the quantitative capacity of a volume. But capacity can denote more than quantitative aspects; it also has a qualitative meaning: that of capability and competence.[54] Architecture, too, is more than merely a container of people or a volume of a given size and numeric dimensions—it is more than just a receptacle for all manner of content (meanings, uses, social behaviour) with which it is filled.

Functional capacity

A textbook example of the functional capacity of architecture that most people are familiar with are the apartments built around the end of the nineteenth century. The form and arrangement of their rooms have a distinctive character while providing sufficient space for a wide range of everyday uses. They are neither defensively neutral, nor overly constrictive and functionally determined. The apartments function equally well as a family home, a shared apartment, or as an office. They can be elegant or chaotic in character, and sparsely or lavishly furnished. The neighbourhoods from the same period are similarly accommodating. Families with children, studios for creatives, shops, and restaurants all have no problem finding a home in such quarters, regardless of the original function of the streets, backyards, industrial buildings, or the once imposing air of its urban squares. That former factory buildings are well-suited as sites

54 Latin *capacitas*, capacity, mental comprehension; *capax*, capacious; able, apt, fit for, derived from *capere*, capture, take; take in, understand, etc.

for galleries or social events is not just a factor of their flexible spatial arrangement and large size, but also of the particular spatial character of industrial architecture and its own restrained aesthetics. Similarly, elements of the urban realm such as flights of steps, terraces, or bridges can serve, in addition to their declared function, as meeting places because they are both open to a wide range of uses and are also unique, either due to their location, *genius loci*, or scenic capability. Among the examples of buildings that exhibit exceptional architectural capacity are building types that have developed over time through habitual use, through the evolution of craftsmanship, and from regional roots, their original meaning becoming ever more eroded through successive layers of use and changing functions until they are perceived simply as being historically significant but without explicit function. Their typical quality lies primarily in their characteristic spatial figure and corresponding typical spatial experience, as exemplified, for instance, by a portico, an urban loggia, or arcade. These typologies differ from functional typologies in that they do not represent a specific functional purpose. Instead, they describe a distinct, recognisable pattern that embodies a certain formal potential within a particular spatial structure that can be employed in a very general way for characteristic forms of movements and activities. These distinct patterns also exhibit a high degree of adaptability and openness; a capacity that allows them to accommodate ever new uses and meanings within the framework of its structure.

Aldo Rossi cites the *Palazzo della Ragione* as a favourite example, a building type in Padua that one also finds in other towns in northern Italy.[55] With its open portico at ground level and large vaulted hall above, it is, through the linking of these two components with their respective atmospheres and spatial gestures, an example of a specific interaction of forms, meanings, and spatial experiences. Over the course of history, this type, through its combination of spaces, has lent specific meaning to a diverse range of uses: on the ground floor a market, a court room, or food hall, through its openness and direct connection to the urban realm; on the upper floor a council chamber, museum, or concert hall—all concentrated gathering in the interior. Sometimes it is the singularity of architecture that allows it to serve the most diverse purposes. "The city of Split which grew within the walls of Diocletian's Palace gave new uses and new meanings to unchangeable forms. This is symbolic of the meaning of the architecture of the city, where the broadest adaptability to multiple functions corresponds to an extreme precision of form."[56]

While the functional capacity here encompasses other kinds of uses than those of the apartments mentioned earlier, in both cases (and many others like them) two factors work together: the functional capacity of architecture describes the interplay between the specific character of a space and the way this informs the space's use, and its openness to accommodate different kinds of concrete usage. One could take this a step

further and assert that it is precisely because architectural space in its design and character acts as a 'crystalliser' that it has the capacity to accommodate perceptible shifts in use and purpose. Functionally neutral architecture—a third position frequently proposed today—is therefore not a viable alternative. The call for greater flexibility in architecture has only grown stronger over the last fifty or sixty years. Capacity by contrast means two things: firstly, not the strict definition of a specific function but rather the affordance of scope for a certain spectrum of uses and activities. And secondly, not neutral indeterminism and flexibility, but spatial distinctness that suggests a general direction for the kinds of activities within it.

Capacity reveals itself in the interplay of these two factors: scope and distinctness. Spaces with functional capacity are on the one hand open to a range of different possible uses, and on the other, restrict this range to those that are suitable. This happens not by limiting their usage to specific patterns of use, but rather in terms of general direction, through the way they lend themselves to general kinds of uses: through their movement patterns, spatial gesture, and atmosphere, they lend any activity that takes place within them a certain character and make deviations meaningful.

Semantic capacity

The concept of capacity in architecture is not simply functional. Architecture, likewise, does not exist solely to serve a function. Rather it provides culturally formed space, not just for things and uses, but space that is capable of articulating and giving meaning to complex living processes.

In this respect, Christian Norberg-Schulz alludes to a further variety of architectural capacity when he says that: "the forms possess symbolising capacities, but they become active and real only through a semantic correlation with building tasks".[57] Based on this, the scholar of architectural semiotics Bernhard Schneider introduced the concept of 'semantic capacity' as a critique of the architecture of the 1960s and its fixation with extreme flexibility, contradicting the prevailing idea that maximum formal flexibility offers the greatest possible potential to invest space with meaning. When systems are semantically empty, they generate only the 'noise' of aesthetic arbitrariness. "Systems in which everything is possible, make any intervention meaningless from the outset."[58] On the contrary, architecture that aspires to accommodate the users' acts of appropriation must offer a high degree of aesthetic complexity. The urban design of residential areas, for example, does not offer residents opportunities for appropriation by being absolutely neutral so that any activity is possible. Instead, a certain

55 For more on the architectural concept of 'type', see Rossi 1977 **56** Rossi 1966/1973, p. 7 **57** Norberg-Schulz 1965, pp. 176–177 **58** Schneider 1971, p. 17

level of aesthetic predetermination creates the conditions that lend everyday activities a sense of spatial singularity. The possibility that users must first overcome a degree of initial resistance, to get used to unfamiliar, not expressionless forms, can even be favourable. Semantic capacity, therefore, refers to the potential of architecture to endow everyday practice in all its contrasting manifestations with meaning—also as it changes over time.

Architecture cannot develop this potential, however, if it does not embrace its fundamental role in articulating space. The argument that the less defined architecture is, the more open it is to different uses, is a fallacy that resurfaces repeatedly in architectural and particularly urbanist discourse. If one were to understand the constitution of space solely as a contingent product of social practice against the background of a diffuse environment that is itself the product of the erratic nature of society, the result would not be openness, but arbitrariness. Not language, just noise. Architectural substance is vitally necessary in order to invest it—through performative acts—with new or old meanings.

Architectural capacity

Just as capacity cannot be considered purely in terms of practical use, so too the addition by the semiotic aspects of expression and meaning is not yet sufficient. A further dimension is crucial. As we experience the architecture of the city not by carrying out certain functions or reading its meanings, but contribute to architectural reality in a broad sense through our own physical participation in it, we can see ourselves as actors within a scene that surrounds us. Key to this are the parallels between architectural structures and basic patterns of human use and occupation: the dimensions, scale, flow of movement, rhythms, fields of tension, spatial axes, directions—in short, the various latent structures that define the 'force field' of architectural space act as a framework within which we the residents and users move, orient ourselves and take up position. If we consider this scenic moment of experiencing architecture, the scenic capacity takes priority over the functional and semantic capacities. Here too, the scenic experience of architecture is not one of neutral settings, but of spaces of distinct character and definition. These functional, semantic, and scenic dimensions characterise the principal aspects of the architectural capacity of spatial situations at all scales.

The various characteristics of architectural capacity exist in a field of tension between substance and contingency. This tension is fundamental to the definition of capacity. On the side of substance stand articulated spaces, dense atmosphere, aesthetic complexity, architectural form, and materiality—that is, distinctness. On the side of contingency stand the performative act, openness, variability in use, receptiveness to

shifts in meaning, possibilities for appropriation—that is, scope. Capacity denotes the potential of architecture to acquire and accommodate different meanings and fictions, various uses and misuses, and commonalities and individualities.

7 The Beauty of the Big City— *On Atmosphere*

The Beauty of the Big City is the title of the renowned 1908 work by the Berlin architect August Endell, in which he countered the then usual hostility towards the big city with an interest in its aesthetic qualities. "For this is the astonishing thing that the great city, in spite of all the ugly buildings, in spite of the noise, in spite of everything that it can be blamed for, is a miracle of beauty and poetry for those who want to see it (...)".[59] To claim for the architecture of the city beauty, charm, grace, that is to say, qualities that correspond to the Latin *venustas* from the Vitruvian Triad of architectural characteristics, does not seem self-evident. "It is so wondrous: the squawk of ravens, the breath of the wind, the roar of the sea seem poetic, magnificent and noble. But the sounds of the city do not even seem worthy of attention, and yet they form a strange world, which must also make the city appear to the blind as a richly structured entity. One has only to listen once and eavesdrop on the voices of the city."[60] What is required for such esteem lies in the special kind of perception Endell demands. We confront the beautiful whenever we look at the city in that specifically aesthetic attitude that concentrates on phenomenal reality, without immediately leaping into functional reality. Something is not conceptually classified 'as something', rather it is a matter of experiencing the particular in its particularity and in the abundance of its characteristics.[61]

Urban aesthetics and atmosphere

Aesthetics understood in the sense of the Greek αἴσθησις, that is to say, as a general theory of perception, an architectural aesthetics, asks more precisely how we perceive and experience architecture. None of the five senses can be identified as the primary sense of perception for architecture, such as seeing for visual art, or hearing for music. Strictly speaking, the architecture of the city cannot be perceived by seeing, hearing, or touching alone; this would allow only individual qualities or elements to be perceived. To perceive our situation in urban space, we need a more comprehensive range in which all the senses are involved. What we perceive as the holistic character of such a situation is its atmosphere.

On the concept of atmosphere

Atmosphere is the expressiveness with which a situation created by architecture immediately affects us in its entirety. Atmospheres have an objective and a subjective side. On the one hand, they start from the spatial circumstances and their components;

59 Endell 1908, p. 23 **60** Op. cit., p. 31 **61** Seel 2000, p. 17, with reference to Alexander Gottlieb Baumgarten

on the other hand, they are, as it were, specific characters, which shape our subjective state through exposure to them and which, even when we share them with others, we in principle experience subjectively. While on the subjective side we are affectively impacted by them, on the objective side, atmospheres, although they can also be created by diffuse factors such as smells, sounds, or mists, are a product of architecture and urban planning. "And although they are not properties of the objects, they are apparently created by the properties of the objects in their interplay. In other words, atmospheres are something between subject and object. They are not something relational, but the relation itself."[62]

We can consciously perceive atmospheres, but we are particularly receptive to them in a state of undirected attention. All senses can be involved in their perception, they can be felt bodily by immersing ourselves in them, being seized by their character and letting them alter our mood. In a suggestive way, for example, cheerful atmospheres can cheer us up or entice us, and gloomy ones can seem hostile or depressing. However, it can also happen that our own state of mind is opposed to a spatial atmosphere that we find in a situation without wanting to become involved with it. We then feel this atmosphere clearly as well, but feel the contrast to our own condition as tension.

Atmospheric factors

We immediately perceive the character of urban spaces as their atmosphere even before we are able to recognise details, such as the expression of individual buildings or spatial forms, or other influences involved in the creation of the atmosphere. Nevertheless, a multitude of such factors can be distinguished and named. Even if atmospheres are not properties of objects, they are influenced by structural features, for example by their dimensions, materials, and the character of their forms. Almost all the perceptible properties of architecture are involved in the creation of atmospheres.

Although individual forms in their expressiveness—Rudolf Arnheim speaks of "visual forces"[63]—subordinate themselves to the holistic effect of atmospheres, they are often gesturally effective. When a building 'towers up' or a square 'broadens out', this naming through language expresses the active behaviour of the building and the square. Instead of standing tall, a building can also lie flat, duck, bend, lean against, or wedge itself somewhere in between; the square need not broaden out, but can extend, align, embrace a building, or encapsulate itself. In addition, landscapes are characterised by their own spatial gestures, such as the dramatic declivity of a slope, the swings of overland cables and power pylons pulling into the distance, or the majestically rotating assembly of a wind energy park.

All these dynamic attributes are at first expressive properties of individual spatial components. However, it will often not be possible to separate them from an overall spatial gesture, even though this only unfolds in the atmosphere of a total situation, in which it also influences our behaviour. There are situations that are driven in their entire atmosphere by a gestural impulse, in which certain movements are stimulated by the dynamic expression of the structural form. In such cases, the spectrum of senses with which we receive these impressions also includes our own kinaesthetic perception of movement. This is particularly decisive for the effect of urban spatial conditions on our well-being. The philosopher Gernot Böhme, who has studied atmospheres in depth, cites examples of this: "It makes a difference whether one walks through narrow alleys or over wide esplanades, whether angular, rising streets or long, clearly visible alignments are typical of a city, whether one suddenly encounters a little church between skyscrapers or is suddenly confronted by a wide square on emerging from an alleyway".[64]

The atmospheric effect of materiality, which comes into play through the materials used in buildings, facades, or floor coverings, can be seen both in the immediate sensory perception and in associative impressions (Chapter 15). Plants, shrubs, and water play a special role as natural factors. Particularly in the landscape, special atmospheres prevail, such as the subdued atmosphere of a wide expanse of water in calm weather, the disturbing, mysterious effect of a dense wood, or the shimmering atmosphere of a cleared alluvial plain with fine grass. The interplay of specific materials and climate components often forms an essential part of a local or regional atmosphere.

Atmospheric components also include the non-representational influences of sound, smell, and especially of light and darkness. Although mostly only indirectly produced by architecture, an atmosphere created by sound produces particularly intense effects by subliminally shaping spatial situations in an astonishingly strong and enveloping way. With sound, we no longer perceive something specific in the distance as something present there, but are enveloped, penetrated by the sound, whose identifying quality now recedes behind its predominantly subliminal atmospheric effect. In spite of the effect sound has on us, we are often not aware of its existence, but only notice its presence retrospectively when we focus our attention on it. However, our lack of control over the emotional effects of such perceptions also makes us susceptible to mood manipulation.

The same applies to the subliminal effect of odour. Apart from the widening or restricting effect of air quality in individual urban areas, odours emanate from certain

62 Böhme 2001, p. 54 **63** Arnheim 1977 **64** Böhme 2006, p. 134

building materials, in the open space from plants and earth. They are supplemented in a multisensory way by sight and touch. In addition, there are the olfactory traces of habitation and use, so that places, buildings, and rooms acquire their own olfactory character from the totality of these components, which makes them unmistakable and allows them to be identified through their odour alone, such as underground stations, industrial estates, or certain residential areas. Entire districts can be clearly distinguished from each other by their olfactory identity.

It is not only the atmospheres caused by the typical lighting atmosphere of weather, day, and seasons, such as the twilight of dusk or the atmosphere of a thunderstorm, that are based on lighting conditions. The architecture of the city contributes to this by shading, reflecting, tinting, and filtering the light. Harsh contrasts of light and shadow can create magical effects, as Giorgio de Chirico, for example, conveys in his paintings. At night, sophisticated artificial light transforms the city. "The city is constituted in the medium of illuminative atmosphere in a 'second' reality,"[65] says urban researcher Jürgen Hasse. Depending on the type of lighting, a 'soft atmosphere' may be created, for example through Christmas lighting, a festive atmosphere, or sometimes an eerie atmosphere. Some cities—above all Lyon—have developed comprehensive lighting schemes to enhance the attractiveness of the city at night.

The fact that colours and tactile impressions or sounds not only possess their respective sensory quality, but also a far-reaching expressive quality and above all an atmospheric effect, is due to synaesthesia or intermodal qualities, that is to say, the interaction of impressions from different sensory areas in a common sensory experience.

As an expression of entire situations, the atmospheres of the city are also shaped by the activities of the people in it. In interaction with the structural structures of the urban space, the various types of human activity and movement already contribute to this. The different rhythms of movement, whether passers-by are predominantly passing by or strolling, and at which times of the day they are travelling, shape the atmospheric character of urban spaces, as do similar rhythms of urban life. "Thus one not only knows about the boundaries between quarters from maps and the history of a city, one also feels them in its outward and inward movement."[66]

The complex character of atmospheres

The interaction of all these factors results in the complex phenomenon of an overall atmosphere that is at least as influential for the respective area of a city as buildings, use, traffic, or social structure, all of which, of course, play a role as influences. "Thus we talk of the oppressive atmosphere of a dilapidated housing estate, the hectic atmosphere of a railway station or the relaxed atmosphere of an urban green space."[67] For

the new *HafenCity* in Hamburg, the allure of water plays a special role. Targeted lines of sight offer views through or onto the Elbe, the water surfaces of the harbour basins reflect the light, ebb and flow create a daily rhythm, and one hears the ships and the nearby harbour. This creates an atmosphere of maritime character. The creation of open spaces and promenades with a clear view of the water and the sky creates a feeling of expanse and the "amphibious character" (Fritz Schumacher) of the seaport city becomes tangible.

Architects possess special skills in dealing with atmospheres. For this reason, especially on the scale of the city, they must take account of the fact that the aesthetic treatment of architecture is not primarily a matter of designing objects, but of working with atmospheres. Jürgen Hasse, however, warns: "In a concealed (and secretive) way, atmospheres can unfold their mood-generating power unchecked and without contradiction as long as a non-verbal relationship to them prevails."[68]

65 Hasse 2012, p. 21 **66** Op. cit., p. 53 **67** Op. cit., p. 7 **68** Op. cit., p. 8

8 Spaces with Qualities— *On Places*

In contrast to the general category of space, 'place' refers to the actual point where something is located or happens. "It is this particular place in contrast to another. For this reason, places cannot be exchanged, as one exchanges points and positions; at most one moves to another place."[69] The conscious or intuitive idea of our active arrangement of places is the basis of our practical orientation in space. As a philosophical, ethnological, and spatial-sociological figure of thought, 'place' is linked to architecture in a variety of ways. Places describe the local in contrast to the global network, in which all architecture is also integrated today. According to the ethnologist Marc Augé, in a place one experiences what has evolved over time, which can therefore be read in a variety of ways, and at some point becomes familiar and creates bonds. In this sense, he delimits 'places' from 'non-places', which are identical everywhere and interchangeable, which do not convey identity and history. Both ascriptions, however, are nowhere found in pure culture. Non-places for some may be places for others. "Vocabulary has a central role here because it is what weaves the tissue of habits, educates the gaze, informs the landscape." Here Marc Augé refers to Vincent Descombes's notion of 'rhetorical territory': "The sign of being at home is the ability to make oneself understood without too much difficulty, and to follow the reasoning of others without any need for long explanations. The rhetorical country of a character ends where his interlocutors no longer understand the reasons he gives for his deeds and actions, the criticism he makes, or the enthusiasms he displays."[70] On this understanding, place is not static and conservative, but closely interwoven with social communication, events, and activities. Against this background, cities are specific places. Since the end of the twentieth century, media communications (telepolis) and globalisation (the generic city) have claimed all our attention; urban studies is now once again interested in the unique qualities of each particular city.

Uniqueness and character

"Cities can be recognised by their gait, like people."[71] Hamburg, Berlin, Cologne, or Frankfurt—we can recognise every German, every European city with eyes closed, as Robert Musil claims with regard to Vienna. Cities have their own life and character, which make them recognisable and shape the collective and individual places of life. This can also be discerned by strangers, it having to do with the physical and material structure that leads to the individual shape of the city, which makes public spaces

69 Bollnow 1963, p. 39 **70** Augé 1995, p. 108 **71** Musil 1930–42/1980, p. 9

distinctive and characterises something like the personality of the respective city. Behind the surface of a city, its buildings, its streets, its peripheries, its wastelands, and its geographical features, there is something hidden that makes it unique.

Each city has its own character as a totality which is more than the sum of its parts. Thus a city is shaped by the totality of the people, institutions, and spaces that operate there. An urban identity emerges that reconciles the external impact and inner self-image of the urban community.[72] Under the term "inherent logic", sociologists Helmuth Berking, Martina Löw, and Georgios Terizakis examine "the hidden structures of cities as tacitly effective prereflexive processes of the constitution of meaning (doxa) and its physical and cognitive inscription (habitus), which are usually applied on site".[73] In this context, architecture is understood as a form of expression of social forms of life, comparable to festivals, ways of speaking, fashions, or local economies. But at the same time, architecture has a retroactive effect; it makes things possible, because architectural spaces are, one way or another, where place-specific behaviour develops. In Venice, people usually walk, in Copenhagen they ride bicycles, in Trieste they meet at the pier in the evening.

Genius loci

It is customary to describe the individual character of a city as a 'genius loci'.[74] Since the architecture of the Enlightenment and the inception of landscape gardening in the eighteenth century, the interaction between architecture and landscape has featured prominently—the idea of using architecture not only to transform the location, but also to release its inherent qualities. This is what makes Rafael Moneo a part of the contemporary repertoire: "The place is always an expectant reality. It waits for the event of building, through which its otherwise hidden qualities become manifest."[75]

In his book *Genius Loci*, Christian Norberg-Schulz stresses the added value that places have beyond the mere localisation of functions. What remains interesting in his reflections to this day are the attempts and approaches to grasp the "total phenomenon" of a place: character and atmosphere are the key concepts. Landscape, light, expanse, surface relief, terrain, vegetation, water, sky, these concrete things are the elements that contribute to it. Character and atmosphere refer to the complex qualities of architectural spaces, be they interiors, urban spaces, or landscapes. The character of a place can be made vivid through the sensitive use of its features in the architectural conception. The spatial structures that exist there can be made clear by concentrating, reinforcing, and supplementing as well as by contrasting settings.

Permanence and collective memory

Aldo Rossi repeatedly uses the term "soul of the city"[76] to describe the overall quality of urban architecture. He interprets the city or urban design phenomena as a collective work of art, following the example of Lewis Mumford: "They are made of matter and yet they are more than this matter, at the same time something conditional and something conditioning."[77] Monuments, that is to say, important public buildings, play a decisive role as 'primary elements'. They serve as anchor points for collective memory in the spatial structure of the city and are an indispensable part of the 'permanence' of cities. The streets and city maps also have the task of shaping the city through their architectural distinctness, while their concrete functions change continually throughout history. The original Italian edition of Rossi's book contains an abundance of illustrations (Lucca, Florence, Rome, Split, etc.) showing the historical imprints of today's cities dating back to antiquity. This was preceded by the meticulous study of the fabric of the city, the *tessuto urbano,* and its theoretical revaluation by Saverio Muratori. Schooled by this discourse, it is a matter of course for us to read the structures of a city in which texture and monuments have complementary meanings, like a text, or, occasionally, a palimpsest.

Maurice Halbwachs' concept of collective memory is one of the foundations of these urbanist theories.[78] The collective life of an urban society inscribes itself in the physical things, houses, and urban spaces that condense into a collective memory. The concrete city is an arrangement of spaces in which history and stories are stored. Manifest and hidden, familiar and still retaining the excitement of discovery. The more of these stories I know, the more the spaces of my city speak to me. They are part of my biography and come back to life every time I walk through the city. "(...) our habitual images of the external world are inseparable from our self".[79] The permanence of the familiar spaces around people affords us the necessary security to endure the social changes that follow a faster rhythm of time.

Individual place

Why do urban designers constantly have to deal with the bitter resistance of affected residents to planned changes, even when an objective improvement of the situation is in prospect—for example in the form of a new park in the neighbourhood? Halbwachs' reflections offer plausible explanations: changes in the collective space are also experienced as an intervention in the extended private sphere of the ego.

"The loss of the place is like the loss of another person, the last other person, of the ghost who welcomes you back when you come home alone," says the homeless man in

72 Ipsen/Kühn 1994 **73** Berking/Löw 2008, p. 42 **74** Pieper 1984, pp. 38–59 **75** Moneo 1993, pp. 13–17 **76** Rossi 1966/1984, p. 20, p. 39 **77** Op. cit., p. 21 **78** Halbwachs 1950/1980 **79** Op. cit., p. 128

an essay by Marc Augé.[80] The spheres of the place surround the individual like onion shells, experienced with diminishing intensity as part of the individual: the body, the clothes, the bed, the apartment, the house, the street, the pub, the neighbourhood, the city, the landscape of the region. At certain levels, personal space overlaps with that of other people. The city with its complex spaces forms an immense abundance of overlapping and also contradictory memory spaces of different times, meanings, groups, formalities, and intensities, which are all anchored in the physical architecture.

Context

The actual place is also that of a tangible physical environment.[81] Wind and weather, position of the sun, seasons, pollutions of all kinds are place-specific and have in the past produced typical architectures, influenced urban layouts, generated preferred locations, shaped territories. The dangers of earthquakes, floods, storms, or local disasters, and the effects of climate change, have created an awareness of the fragility of the physical environment. Their consideration will lead to a locally refined architecture of the city in terms of robustness. The question of where and how one can build is a criterion of design. At the scale of the individual house, individual neighbourhoods and landscapes, and also at the scale of entire cities, designs are again made with a specific reference to place. Twenty years ago, architects still believed they could ignore references to specific places in a globally networked and increasingly media-oriented world, but for these solid reasons we are now observing a trend back to contextual architectural design.

If the idea of the 'specific' is decisive for places, further questions arise: to what extent can the typical local features of a place be created architecturally in a globalised culture? What role can the regional context play without serving folkloric clichés? How can a city find its own expression? Is this precisely one of the tasks of urbanism? The less we are dependent on local context, since it no longer represents a compelling restriction in the globalised production of cities, the more urgently it seems to be demanded as a cultural expression. The more context must be produced. Producing context—a paradoxical figure of thought?

Architecture is always part of a context and at the same time forms context. It is dependent on the context and at the same time it changes and interprets it. It cannot escape this interaction. For even if the local context is ignored, every architectural intervention and every arbitrary setting generates its new contextual references. Rem Koolhaas describes the demonstrative non-reaction of megastructures to the context with the words: "Bigness is no longer part of any urban tissue. It exists; at most, it coexists. Its subtext is fuck context."[82] This phrase was misinterpreted everywhere as "Fuck the context!" and thus understood as the cynicism of an architectural attitude

that is only related to itself. But is that ever feasible: is a totally self-referential architectural setting possible?

Take airports, for example: today a new airport is usually logistically internationally networked and displays typologically generic architecture. It is not oriented towards a local, but only towards an international context and forms an inner autistic world locally. Proximity to settlements is avoided, parking lots, hangars, runways, and safety lanes create distance. But once this machine, this 'non-place', is placed in a concrete location, the entire region gradually realigns itself to this strong spatial magnet. Local contextual references build up: new traffic connections emerge, temporal proximity becomes a locational advantage, former hinterlands of cities are reoriented volte-face. The airport becomes the arrival and reception point in a region. The subtext here is: produce context.

This ambivalence of the contextuality of architecture long determined the discourse and led to a general uncertainty regarding what we can call 'context' and what 'place' might be in a globalised world. At the same time, we notice a need in society for historical and regional building forms. The reconstruction of castles and the new construction of old towns are only specific escalations of this trend. Let us not leave the satisfaction of the longing for concrete places to the image production of a market-oriented signature architecture! We can concentrate on the ability of architecture to organise physical spatial relationships, to create 'spaces with qualities' in their own context, which is always a local one.

80 Augé 2013, p. 24 **81** Valena 1994, p. 12 **82** Koolhaas/Mau 1995, p. 502

9 Fox and Hedgehog— *On Concepts*

An architectural concept goes beyond the fulfilment of technical requirements and functional needs by investing that which Theodor W. Adorno calls "architectural fantasy", but orients itself towards the building task and project, following the demand that "something can occur to the artist out of the space itself; this cannot be something arbitrary in space and indifferent towards space".[83] Every conception is at the same time an interpretation of the project and of the factual necessities, which is why it is not insignificant for the understanding of the built result to comprehend the intentions of the concept. The architecture of the city must therefore not only appear as a collection of individual objects and things—houses, streets, green spaces, or brownfields—but must become discernible as a spatial structure in which the objects interact with human activities in a rationally comprehensible way. In the successful case, a spatial concept can be perceived as an expression of social conditions, not somehow only as an achieved sediment of sociality, but also as recognisable conceptuality. Architecturally conceived urban design should be perceptible to all as a thoughtful preparation of spatial situations.

Concepts of modernity

To pursue an architectural concept of the city does not in any way mean to subordinate all forms of urban life and spatial expression to it. The possibility of all-encompassing access to the shape of entire cities has always existed in history, and up to the modern age it also constituted an architectural agenda. However, the times in which architecture was understood as a comprehensive model of society, and thus also that of a modernist 'total design', are over. With his utopian vision of *Broadacre City*, Frank Lloyd Wright even believed he was making political administration superfluous. Le Corbusier was ruthless in his opposition to existing architecture and urban diversity. Ludwig Hilberseimer intended to tear down all of Chicago and fundamentally reshape it in accordance with a modernist conception of the city.[84] This series of examples could be continued ad infinitum. "Cities do not develop according to the scores that architects compose for them. This simple and sobering fact has remained a constant companion to urban design in the twentieth century across all models and theoretical approaches."[85] As a consequence of this criticism, the term 'Leitbild' was also taboo for a long time.[86] But the baby was thrown out with the bathwater because conceptual

83 Adorno (1970) 1979, pp. 37–38. **84** Le Corbusier 1929; Hilberseimer 1955/1963; Wright 1958 **85** Eisinger 2005, p. 9 **86** Adorno 1970

design on a larger scale has been lost and is only slowly being re-evaluated. In regional or citywide contexts, architectural design has only recently found its way back into spatial planning. Regional landscape parks in the 1990s and the competition for the *Métropole du Grand Paris* 2010 are examples, even though they provoke little public discussion about architecture, but rather about energy, sustainability, ecology, infrastructure, regional imbalances, or quality of life in general. Architects no longer presume to produce a single architectural concept for an entire city or even an urban region. But we could expect something more than today's popular 'robust structures', which are awarded first prizes in competitions simply because they leave all options open.

The stubborn legacy of modernism

Land-use plans often only reflect the status quo that has developed under the paradigm of modern planning law. The conflicts and contradictions of the city are tamed functionally: in urban design, the legacy of architectural modernity still dominates. Separation of urban areas by type of use is practised internationally under the term 'zoning'.[87] A strategy of reducing the diversity of a city to spatially separable social functions has—in a spirit of tidying up, separating, and purifying—permeated urban design and urban planning to the present day. A land-use plan rarely provides a distinctive spatial concept for the city, but rather regulates the balance of power and the conflicts between clashing uses. No explicit architectural objectives are associated with this. The effect, however, is the codification of a generic urban concept whose hundred-year-old roots lie in the reaction to the dramatic environmental conditions of the industrial age.

Concepts that seek to overcome modernity and focus on core cities, such as 'urbanity through density' or 'the European city', easily succumb again to the danger of simplifying homogenisation. Density alone does not lead to urbanity. The slogan employed in the early 1960s against the subdivided and disaggregated city (in German: *gegliederte und aufgelockerte Stadt*) legitimated problematic residential housing construction. The 'European city' in turn threatens to lose sight of urban agglomerations and urban landscapes. On the other hand, approaches that focus on urban agglomeration phenomena, such as 'città diffusa' or 'Zwischenstadt'[88] have so far been limited to the analysis of contemporary urban phenomena. They still lack conceptual force.

Architectural concepts

To speak of 'concepts' in all possible planning approaches testifies to an inflationary use of the term. An urban design concept, however, is the central object of the architectural design on the scale of the city, that is, of creative work. The urban design, not as a reification through the drawing, but as an intellectual concept, is the decisive instance in which the harmonious combination of all components and their appropriate design is articulated in such a way that people feel themselves addressed. It is intended to

give them the experience of an urban spatial situation as made for them. It is not the urban spatial structure as such that appeals to us, but the design intention articulated by it. The more sophisticated the articulation of this formulation, the more complex our experiential understanding of the situation as meaningful. We participate in the creative act of space creation in the execution of concrete actions in urban space.

Identity—picture—image

Often the expectation of architecture on a larger scale is limited to providing pictures. What we need, however, are not always the same renderings with young people cheerfully striding about under decorative clouds floating over blossoming trees. Only now and then do pictures offer visionary or critical potential.

We need pictures. But in another sense—namely to develop a common idea. Visualisations can thus convey an inner picture that the trained eye rediscovers in the spatial environment. This is where the problematic understanding of identity once again comes into play. Identity is necessarily associated with an image the city has of itself. In this image, self-image and external representation must not only coincide, but—if one is to speak of identity—they must also be communicable, the image must be amenable to mediation.

The necessary development for this takes time, as evidenced by the discussion about new regional identities, which often prove intractably difficult to establish, even though planning authorities and politicians strive to create them. But identity cannot simply be conjured up; it is more than just an image to be instantiated by city marketing, or a corporate identity to be invoked by smart advertising. Identity presupposes consistency and agreement with oneself, a coherent internal image of oneself. At the same time it proves to be problematic, Janus-faced. Consistency as a condition of identity must exclude many things: the disparate and the non-integratable, the repressed and the secretive, the taboo and the spontaneous, the non-communicable and the meaningless. The opponents of identity are difference and the Other. Thanks to the superficial way in which the term identity is abraded in urban planning, one tends to overlook the value of its flip side: in the warm mantle of identity, urban society barricades itself against the new, the foreign, and change. As positive and necessary as this self-assurance is, it has something of stagnation and stasis in it.

Doing justice to the diversity of the city

The characteristic of cities, which we refer to as urbanity, is essentially based on their heterogeneity and at the same time on their ability to accommodate the differences

87 ISOCARP 2008 **88** Sieverts 1997

between their components. It is based on the precarious balance between the unknown and the familiar, between the alien and the native, between the public and the private.[89] This is why spatial conditions cannot simply be lumped together. The city as architecture must accord with this diversity and be socially flexible. The skill in architecture lies precisely in being both contingent and distinct. What is therefore important is an architectural concept appropriate to the complex situation, which captures the divergent factors in a meaningful spatial structure.

In fact, different spatial concepts overlap in cities and are often recognisable as such as in a palimpsest. Some, especially historical concepts, need to be respected, but for those that follow a different spatial logic, it is necessary to know them if one is to 'ride the tiger'. Colin Rowe and Fred Koetter recall lsaiah Berlin's famous parable: "The fox knows many things, but the hedgehog knows one big thing."[90] This remains valid: belief in the one big idea—the hedgehog—has had its day. Everything depends on the foxes, who "deal with a multitude of stimuli"[91] that actively promote the diversity of the city: the collage city. But Rowe and Koetter also warn that populists "who attack a hedgehog doctrine, as foxes tend to, become hedgehogs themselves precisely by dint of attacking it".[92] The technique of collage is not a method that submits itself to neoliberal laissez-faire. Rather, it operates in the balance between structure and event, necessity and chance. Thus this chapter is also concerned with the interplay of conscious architectural articulation and diversity in dealing with urban spaces, with distinctness and scope.

Complex tactical concepts

Since the failure of modernist urban concepts, 'reflexive modernism' has repeatedly sought and brought into play new architectural concepts that can do justice to the diversity of the city. The sophistication and complexity of urban phenomena and structures cannot be articulated by simple, regular configurations. "Complex structure can be housed but not expressed by simple shape," notes Rudolf Arnheim.[93] In principle, an architectural order should not be too transparent. Its predictability provides perception with the pleasure of constantly fulfilled expectation, which generates sufficiently contingent variation through the modalities of the situation. Nevertheless, the interest in the composition and structure is intensified in perception when it is not directly open to the senses and understanding, when it is not immediately recognisable in all contexts, only becoming accessible indirectly or via a process. As Robert Venturi emphasises in *Complexity and Contradiction*: "In a really complex building or an urban design situation, the eye does not want to be satisfied too quickly, not too easily, in its search for the unity of a whole."[94]

An urban design concept is easily accused of accepting only holistic solutions, although its success can only prove itself over time and is therefore often doomed to

failure. Incrementalist approaches, such as those developed in Germany by Karl Ganser in the course of the *IBA Emscherpark*, evade this danger by acting selectively, associatively, pragmatically, and also provisionally. Experiment and error, acupuncture as a method, are played off against modernist totalising design. The Smithsons had already propagated conglomerate ordering as an architectural concept of fuzziness. "For the feeling we experience of a fabric being ordered, when we do not understand the place at a glance or do not know the building, we are using the words 'conglomerate ordering'."[95] Alison and Peter Smithson, however, can hardly be assumed to have acted as architects without a concept.

89 Simmel 1908; Sennett 1990; Baecker 2015 **90** Rowe/Koetter 1978, p. 91 **91** Op. cit., p. 92 **92** Op. cit., p. 98 **93** Arnheim 1977/2009, p. 165 **94** Venturi 1966, p. 105 **95** Smithson 1986/87

Architectural Repertoire

10 The Intervolumetric City— *On Space and Object*

Starting with modernity, 'space' has become the guiding concept in architectural theory. Since the *spatial turn*, however, it has become apparent in culture and the social sciences how diffuse the diversity of what can be understood by 'space' is: mathematical, medial, political, social, or discursive spaces, etc. Certain relational notions of space are also relevant for architecture and urban design. Concepts of space such as perception, movement, or space of action, and particularly the concept of social space, have significance for the city as architecture. Architectural space is to be regarded as "lived space",[96] as a sphere that we create through our life processes in their interplay with architecture. The interaction with structural spatial elements is always decisive here, albeit in a spectrum ranging from utensils to the formation of land. What is to be avoided is an overly narrow idea of architectural space, which is limited to the enclosure of an interior. It must be supplemented by an understanding of space as a system of relationships between objects, and between subject and object, fundamentally perceptible as spatiality.

Buildings are surrounded by space

Among the manifold relationships in which space plays a role in architecture, its relationship to the solid volume of buildings is to be treated as a special topic, which is why in this chapter space is discussed in its fundamental relationship to objects. The special relationship between the structural object and space is one of the constituent interrelations in architecture. In urban design, the disastrous technical separation of responsibilities for building architecture, landscape architecture, and urban planning deviates from the close mutual relationship between buildings and their surroundings. But buildings are always experienced under the conditions of the spatial environment. Space, in turn, can only be perceived indirectly. What we directly see and feel, what directs our movement, are structural bodies with their different forms, openings, arrangements, and interstices. But although we primarily perceive physical elements, walls, columns, building structures up to the block, and 'city corpus', one product of this perception is the architectural space.

A free-standing building also has multiple spatial relationships with its surroundings, creating space around it. Such connections have long been acknowledged, especially through the investigations of the art historian and psychologist Rudolf Arnheim.

96 Dürckheim 1932/2005; cf. also the concept of 'espace vécu' in Lefebvre 1974/1992

Nevertheless, these perceptually potent "visual forces"[97] are often not taken account of in urban planning. What is usually treated separately in planning as open space actually forms a common 'visual image' together with the neighbouring buildings to which the space in between with its own perceptual form also belongs. The space around a building or between buildings does not have to be regarded as a diffuse background or empty remnant, but can be perceived as a figure. And it is not homogeneous, but is dominated by gradients of energy. A person who stays and moves in it is exposed to forces and tensions. If, however, a building is considered in isolation during planning, the forces of repulsion and attraction, pressure and tension in its surroundings are often ignored. Convex structures are surrounded by concentric force fields with which they push towards us, while concave forms take us into their embrace. Structures influence the surrounding space according to their shape and position, buildings occupy a space, mark and defend it.

As soon as several buildings come together in close proximity, the diversity of spatial relationships increases. Not only does it consist of a dynamic relationship between different building sizes, but the space between buildings also appears in different "densities", depending on the distance involved. This term of Arnheim's has only indirectly to do with actual building density. Rather, it refers to the increase or decrease in pressure that someone feels in an intermediate space; it appears denser when the distance between buildings seems reduced, or conversely, thinned out when the distance between buildings is increased. In addition to distances, the dimensions and shapes of the buildings as well as the character of the free space itself also play a role. If a building is removed or a new one added, it is possible that all relations shift. In this force field, we participate with our body in the play of forces while the buildings are also active contributors.

Convex structures form concave spaces

Building masses can form closed squares or other concave urban spaces; the feeling of being inside plays a special role in terms of presence in urban space (Chapter 11). However, the perception of concave spatial figures is always a result of the interplay with the mass effect of the buildings at the peripheries. Rudolf Arnheim describes the relationship between the centrifugal expansion force of figures of squares, and the counterforce of the building masses limiting them, as a sensitive balance of forces. Against the concave contour of a square, for example, the convex figure of a building emerges powerfully. The visitor to Santa Maria della Pace in Rome, for instance, is confronted by the porch of the church on the concave forecourt. In other cases, such as the Seagram Building in New York, the building is recessed, and the square in front of it becomes a reference zone in front of the building as a forecourt, allowing one to step back from it. When buildings face each other frontally, they create a tension that one is exposed to in the space between, as between the fronts of Friedrich Weinbrenner's city

church and town hall on the market square of Karlsruhe, and even across the length of a square, as in Murcia between Rafael Moneo's town hall and the front of the cathedral.

However, it is related to density in the sense described above that the effectiveness of such relationships and forces diminishes when the distances between the buildings become too great. If no spatial structure is created by other elements, the space appears to be unformed. This is now nevertheless connected with the building density. On the other hand, it would be a mistake to believe that a purely quantitative increase in the building density provides a solution. Even though the motto 'urbanity through density' has been circulating since the early 1960s, it must be borne in mind that density is at best a necessary prerequisite, but not a sufficient condition, for a concise formation of urban space. At least as decisive is the arrangement of the building masses in a scale appropriate to the location and in corresponding proportions. In our old cities, where a sufficiently dense built-up area already exists, the spatial forces described can also have an effect on contemporary buildings, such as on Jakobsplatz in Munich, where there is an intriguing interplay of physical structures between the open space of the square and the new Jewish community buildings, framed by the stable contours of the largely closed peripheral buildings.

With sufficient compositional care, it is also possible to form perceptible interior figures by means of individual buildings, as can be seen from the grouping of structures in the Economist Building in London by Alison and Peter Smithson. In Copenhagen, the West 8 masterplan for the port conversion of *Amerika Plads,* or that of Entasis for the former *Carlsberg* brewery, are based on the dense arrangement of large building volumes, whose interspaces constitute the core of the design as public spaces.

The surfaces of buildings, whether space-containing or hermetic, are the boundaries of their bodily mass and at the same time the boundaries of the urban space they form. They are the places where object and space touch and are claimed by both as boundaries. The contest of contours is conducted on the surfaces. Here object and space become perceptible to the senses. We touch surfaces with our eyes, follow them in their relief, their protrusions and recesses. The gaze wanders, for example, over the convex outer side of a building, goes around it, but also glides over to the surfaces of the neighbouring buildings, which form the contour of a square with it, and now moves on to the concave inner side of the boundary of the space. The surfaces thus create the connection between concavity and convexity in a 'space-object-continuum' in which (convex) outer sides merge into (concave) inner sides and vice versa. The interplay of convexity and concavity is a characteristic form of the meshing of object and space.

97 Arnheim 1977

The figure-ground relationship of space and object

Since the advent of the modern age, however, the perception of the connection between buildings and urban spaces has been made more difficult in the loosely built city due to overly large and uniform distances. One pattern of perception of the relationship between buildings and urban space is the figure-ground relationship. In the city, building structures and blocks stand out as figures from the background of the surrounding space, thereby revealing their shape. Conversely, an urban space can only be grasped as a spatial form if it stands out as a distinct figure against the building mass of its surroundings, which in turn forms the background. The latter is the precondition for our moving through designed spaces in the city. But since the spatial distances between the individual buildings have become equal to the dimensions of streets and urban spaces due to emissions restrictions and shading regulations, identifiable figures of urban spaces hardly emerge from the monotony of building masses and interspaces. One risks losing oneself between the buildings, while the individual building instead comes to the fore as a figure. The surrounding space may then profit mainly from the quality of the building architecture, as in Berlin's *Hansaviertel*, or from a particularly careful landscape design, as in this case in the extension of the *Tiergarten*.

However, the completely free-standing building is hardly in a position to participate in the spatial setting, which plays a role in the quality of urban spaces. If it is primarily a matter of a representative effect, possibly underlined by the sculptural effect of signature architecture, which is intended to achieve a landmark effect, then the building is usually exposed in such a way that it can be well seen from all sides. It requires special care to achieve integration into the spatial environment and shape an inviting urban space. On the other hand, the plasticity and sculptural quality of a building are particularly suitable means of establishing spatial relationships on different planes and of shaping and structuring the surrounding space as a counter form.

On a larger scale, individual buildings can play a special role. They are able to connect important places and key locations in the city through a network of relationships. As orientation and pivotal points in the urban structure, they are guiding elements and destination points on a route. Depending on the context, the creation of near and distant references in different directions may require different scales to be considered. Which urban or landscape scale applies depends on whether the surrounding area and street space, the city as a whole, or the landscape in the distance, constitute the reference. In the city, for example, towers that appear isolated at close range can establish a system of their own scale via the relationships between their locations, through which they interact as landmarks at a greater distance.

One of the foundations of the city's architecture is the art of forming urban spaces with objects and masses. The skilful arrangement of physical masses with their edges and fronts, leaps and curves, their juxtaposition, densification, or centring, form the repertoire of the countless possibilities for the formation of urban space. The role of buildings vis-à-vis movement cannot be separated from this. As the spatial edges of open spaces and streets, building contours guide or prevent movement, lead it in different directions, or allow it to come to rest through closed spatial settings. Through their arrangement they form joints and thresholds, through their distances they form constrictions and dilations, and through their arrangement form linear axes and sequences (Chapter 12).

In the interplay of object and space, it is not only buildings that form the physical component; plant masses are just as effective in forming space, be it as volume, or in the function of walls in the form of protective rows of trees, or canopies in the form of treetops. This is one of the formative tasks that landscape architecture assumes in urban design.

The space-object continuum

In the architecture of a city, space and object do not have to be perceived as opposites, nor do they have to be sharply separated from each other. In urban design in particular, a variety of transitions between them is more important. They stand in relation to each other not only in terms of complementarity, but also in terms of continuity. The common medium of spaces outside and inside objects has been addressed by Fritz Schumacher: "In characterising the essence of architecture, we must therefore be aware that we are dealing with the design of incorporated spaces through the design of objects in connection with higher-level spaces. (...) Architecture is the art of designing spaces in dual ways through the design of objects."[98] In the words of Bernhard Hoesli: "Object and space are mutually dependent, they are equal, kindred and interchangeable—they communicate."[99] Hoesli was one of those theorists who in the 1970s explored this space-object continuum in detail. The book *Collage City*[100] by Colin Rowe and Fred Koetter, which Hoesli translated, as well as *Transparency*[101] by Colin Rowe and Robert Slutzky, to which he wrote an authoritative addition, are key documents in a discussion that at that time occupied a considerable space in architecture and urban design theory. "The unpleasant state of texture" (Rowe/Koetter) in the modern city was traced back to the rigid relationship between space and object, "the Cartesian rational, sharp-edged city model of the contrast between hollow and solid", as the city historian Paul Hofer put it. In contrast, he advocated "the densely intertwined, multilayered city of the intermeshing of hollow and solid, of building mass and spatial

98 Schumacher 1926, pp. 22–33 **99** Hoesli 1979, p. 29 **100** Rowe/Koetter 1978/1984 **101** Rowe/Slutzky 1964

form".[102] The "object fixation" (Hoesli),[103] which impedes an urban city form, is, however, still virulent in urban design.

In the space-object continuum, the figure-ground relationship of object and space is ambiguous. In contrast to the differentiation of a spatial figure or an object figure from its respective background, ambiguous figure-ground relationships and staggered transitions between building masses and public spaces give rise to a variety of interspaces and graduated possibilities of rest and movement. This ambivalence is expressed through the representation of the urban spatial structure in the special form of a figure-ground plan in the style of Giambattista Nolli's Plan of Rome. The public interiors within the black building mass are depicted in white in the same way as the squares and streets. This ambivalent allocation of black and white in the figure-ground plan corresponds to the fundamental possibility of being able to locate oneself in a position that lies simultaneously inside and outside an object, such as in the covered exterior spaces of terraces, porticoes, atria, galleries, or arcades.[104] Paul Hofer saw this as the prerequisite for "the incessantly communicating, 'intervolumetric', complementarily interlocking city".[105]

In such a city, in his words, "the structures are not armoured, but staggered, permeable, layered. The boundary between hollow and solid is no longer a flat wall with punched out openings, but space containing, a zone of interpenetration. Building and open space interlace."[106] Since the space-containing shell also has its own mass volume, it is a wall mass and wall space at the same time. In their porous state, as it were, spaces containing facades or other space-containing components represent a peculiar intermediate position between mass and space (Chapter 13). They belong to the interior and the exterior at the same time, and form neither their flowing connection nor their separation, but have an additional function for both sides. They create transitions of form and create opportunities for being half indoors, half outdoors, as well as offering protection while being part of the public sphere of the urban space.

Inversion and incorporation

A special form of the enmeshment of object and space and, hand in hand with it, of interior and exterior spaces is the inversion: invaginations create 'interior spaces', such as the inner courtyard, the *rue intérieure* leading through the building, or the shopping arcade, whereas a structural extension in front of the house turns part of the interior space outwards.

A further means of permeating object and space is incorporation, through which one building is embraced by the body of another, is incorporated into another, such as Bramante's Tempietto in the monastery complex of San Pietro in Montorio. In relation to

the monastery, the courtyard is inside, but in relation to the Tempietto, it is outside. In the city, such nested bodies and spatial figures can be found on different levels of scale and can be traversed in stages, from the city in the landscape to the individual object in an inner courtyard. As passers-by negotiate the city and its buildings, they change from scale to scale between objects and spaces, between inside and outside.

102 Hofer 1979, p. 23 **103** Hoesli 1979 **104** The chapter on the relationship and the transitions between inside and outside (Chapter 11) and that on borders and thresholds (Chapter 12) deal with this topic further **105** Hofer 1979, p. 24 **106** Op. cit.

11 The Outside is the Inside of Outside—*On Inside and Outside*

"No spatial problem is more characteristic of the architect's work than the need to see outside and inside in relation—that is, synoptically, as elements of the same conception."[107] One might think that the architecture of the city is basically only about exterior space. In fact, however, the relationship between inside and outside is also constitutive of architecture on the scale of the city. In spite of the difference to the spatial structure of a building, the systems theorist Dirk Baecker makes the fundamental claim that, "it is architecture if one can enter and exit, and if the conditions change with this possibility of entry and exit".[108] With regard to urban design, Baecker stresses: "The movement in the interior with a view to an exterior and vice versa, as well as the alternation between interior and exterior, first create what we call an architectural space."[109]

Forms of screening

It is common for us to identify an interior by the delimitation of a human experiential space and at the same time by the exclusion from the spatial continuum of the surrounding space by means of screening. In general, however, the phenomenon can also be seen in the relationship between every area of space that gradually closes off or opens up in relation to another. Not only do regular spatial separations such as walls become effective as screens, but also enclosures of the most diverse, sometimes subtle kinds, thresholds, steps, or border lines that are traversed (Chapter 12). The perimeter of a territory can be soft and flowing, distinguished only by a smooth level difference, in a zoning by light and shadow or by material changes. Even the eaves of a canopy or the edge of a limited floor area indicate a boundary between inside and outside. One senses that one enters an interior as soon as one steps under the roof or onto the floor. Surfaces highlighted by a valuable floor covering or ornate paving, such as the newer squares created in Barcelona or the Explanada in Alicante, give the impression of entering a special space, even without the space having a structural enclosure.

When one enters the vicinity of a building, the radiation of its warmth, the shadow or the brightness of an illuminated facade, one enters the interior of a perceptible sphere of influence that stands out from its surroundings. The range and character of such an area of space depends on the position, size, and design of a building, but also on its use and associated activities. A well-placed, distinct building is capable of bringing

107 Arnheim 1977, p. 91 **108** Baecker 1990, p. 83 **109** Baecker 2015, p. 70

together the otherwise randomly distributed buildings of an area as a coherent group, creating a location where, within the grouping, the relationships between the buildings and spaces become palpable, as can be seen in the example of La Défense in Paris, with the Grande Arche as the central structure.

Internal spatial continuity

The inner context of an area can also come about through spatial continuity, even if no physical boundary separates it from other areas. One basis for this is, for example, the topographical situation in the form of a valley, a river bend, a slope, or a hilltop. Districts or localities can become a spatial whole by means of identical structural features such as building type, scale, details and materials, road surfaces, and planting. Continuity within such areas is based on the whole situation in which uses, traffic conditions, and residents' activities are involved. It can be felt in the prevailing atmosphere, for example in the moods created by bustle or tranquillity, the climate and the typical smells, sounds, and noises from the buildings and on the street. On the one hand, these features reflect the common history of a place, and on the other, they also manifest the appropriation and performance by various social groups. A villa district as well as a favela are spaces that one 'enters' or 'leaves'. One says 'to go into town' when one means the centre of the city. Architecture is always involved in the creation of such inner continuity.

Familiar and unfamiliar

The quality of an interior is one of the characteristics of a residence that creates the conditions for what the philosopher Bernhard Waldenfels has described as the "affective anchoring" of the inhabitants and the "*Heimischwerden*" (being at home) in their "*Lebensort*" (habitat).[110] One may first think of the private residence or the territory of a private property, clearly separated from the public exterior by boundaries such as inner walls, outer walls, fences. Thanks, however, to the current trend towards the progressive extension of the private sphere into the public space, the inner space, perceived as private, is projected outwards to encompass urban neighbourhoods. In contrast to the interior of a neighbourhood, which can be recognised primarily through architectural continuity, the privatised territory, such as a gated community, is separated from the public exterior by sharp boundaries.

The tendency described here, however, contradicts the basic feature of urbanity in modernity, whereby the city differs from territory precisely in that it allows for the reconcilability of the heterogeneous. A refinement of this is proposed by Gerd Held: "The territory as a spatial structural principle relies on exclusion, the metropolis on inclusion. The one needs the border and in this way increases homogeneity within, the other negates the border and increases density and heterogeneity."[111] As such, the

city, without excluding the alien other by borders, might be characterised as a spatial totality of density and heterogeneity. By admitting the alien as that which is initially external for some, the external finds its place in the interior and vice versa, so to speak. In fact, the relationship of the familiar to the unfamiliar can be seen as a parallel to the genuine architectural relationship between inside and outside, as Dirk Baecker does when he views this relationship in the context of the city. He stresses that in architecture, inside and outside are never treated independently of each other, but always in context. The same applies to the way we deal with the familiar and the unfamiliar in the architecture of the city. "Architecture is complex, because every place must have reference points for inside and outside, for familiarity and unfamiliarity, be it merely to draw the distinction, be it to condition the passage to the other side of the distinction. The other side must run parallel; and it is impossible to reduce oneself to either side. However, without the existence of the unfamiliar (...), this complexity of architecture as conditioned by the urban would have no reference point. It would collapse or implode."[112]

The architecture of the city has the task of articulating the interplay of the unfamiliar and the external with the familiar and the internal, as well as the promotion of productive interactions. For this complex condition of the urban, it creates conducive spatial arrangements in order to reconcile competing tendencies towards integration and exclusion with the city as a whole.

'Heterotopias' are a special kind of exterior within the city. In the famous lecture "Of Other Spaces", Michel Foucault used this expression for places "(...) which are something like counter-sites, a kind of effectively enacted utopia in which the real sites, all the other real sites that can be found within the culture, are simultaneously represented, contested, and inverted. Places of this kind are outside of all places, even though it may be possible to indicate their location in reality."[113] Among them are the "heterotopias of deviation" into which one puts individuals whose behaviour deviates from the norm, such as psychiatric clinics or prisons. Cemeteries, on the other hand, form "the other city, where each family possesses its dark resting place".[114] The garden is traditionally a mirror of the world, a universalising heterotopy. Museums and libraries are simultaneously heterochronies in that they accumulate time, while festivities on fairgrounds, by contrast, briefly suspend time. Heterotopias are often only accessible under special conditions. They enclose the 'Other' in particular spaces and exclude it. Thus they form both inner spaces and externalisations.

110 Waldenfels 1985, p. 199 f **111** Berking/Löw 2008, p. 19. On this point, the distinction originally applied by Held to the differentiation of the metropolis from the territorial state can also be applied to its differentiation from internal territories **112** Baecker 2015, p. 71 **113** Foucault 1967/1991, p. 3 **114** Op. cit., p. 6

Inside and outside the city

On a large scale, the city as a whole can be contrasted with the world outside the city as an exterior. In addition to the railway station or the city airport terminal, which with their precincts today form the entrance to the city in place of city gates, the entrances to arterial roads in the city and motorway entrances are now also among the places where entering and leaving the city can be articulated architecturally (Chapter 12). In the city, the space of the surrounding landscape is particularly evident wherever it is drawn in by natural elements such as rivers, on whose banks and promenades one feels as if one has left the city. At the *Piazza Unità d'Italia* in Trieste, the Mediterranean Sea directly borders the city centre. The *Englischer Garten* in Munich or the *Hardtwald* in Karlsruhe extend from the surrounding countryside into the city centre. The architecture of the city reacts to the convergence of inside and outside by not only enclosing spaces inwards, but also by opening them outwards. A raised position, such as on the *Domberg* in Bamberg, connects a central square with its view to the distant, wide-open landscape outside the city; the inner city of Zurich turns towards the Alps across the lake.

Which areas of the city are enclosed, connected, or excluded by urban spaces also depends on the scale at which they are viewed. The *Piazza San Marco* in Venice, with its main square, corresponds in scale to a courtyard to the Basilica and an inner meeting room of the city, closed off from the urban environment. The adjoining *Piazzetta,* on the other hand, is the connection to the lagoon embankment and thus the reception area for boats. There, one arrives between the two columns, which suggest a gate. A further level of scale also includes the *Bacino di San Marco,* a large water forecourt enclosed by the swerving Riva, the church of *San Giorgio in Isola* and the headland of the *Dogana*.

Squares and streets

Since squares and streets usually have the most distinct characteristics of an interior, and have a special significance for the architecture of the city, they will be discussed in more detail here. Due to their closeness and distinct form, squares favour identification with a place. Many squares assume a centring function in the urban spatial structure. This is where one is led, this is where one arrives. Streets, too, are not simply thoroughfares for traffic, but can be turned into spaces of residence by architectural means and serve as a means of identification, not only in the case of major roads such as *Unter den Linden* or the *Champs Élysées*. The significance of streets and squares as spaces in which social life and the expression of political opinion find their place is undiminished in many cities despite the power of the public media. A number of factors already mentioned by Camillo Sitte[115] are decisive when it comes to perceiving the space of a square or a street as an interior. For example, he cites the main condition

of a square as its being sufficiently closed. A clearly closed effect on the square only occurs when the gaps between the peripheral buildings are not too large, for example when the roads leading into the square are arranged in the form of windmill vanes, preventing one from looking out.[116] In the progression of street facades, one's gaze can be caught by a broken sightline in such a way that the space temporarily closes off and is only restored when one has drawn near.

How closed a square appears also depends on the ratio between the square area and the height of the surrounding walls. If the distance between the walls becomes too large, they no longer secure the cohesion of the figure of the square, and its unity is lost. A square or street is also perceived as an interior, especially if the facades, due to the traces of habitation for example, are designed as the walls of interior rooms, or if the pavement, inlaid with ornamentation, resembles a carpet. The *Plaza Mayor* in Salamanca is lent the atmosphere of a banqueting hall by the fine attention to detail and the uniform reddish sandstone of the facades. The concave spatial effect is additionally reinforced in cross-section when the floor declines towards the centre, as in the *Königsplatz* in Munich and especially on the *Campo* in Siena, or when a large, overhanging roof closes off a little of the space overhead. Squares with such a high degree of closure, especially if they are only accessible through individual passageways or narrow alleyways, appear as city interiors. Small dimensions are sometimes referred to as a 'city room'. With very large dimensions, on the other hand, the room loses the character of an interior; its expansion is perceived as width, as in the Square of the Three Powers in Brasília, for example.

However, if the walls of the square are not closed and have large gaps, the spatial figure can still emerge, since incomplete contour fragments in accordance with the principles of perception theory visually supplement the complete shape of a figure. In the arrangement of four trees in the square, four small facade sections, or the corners of buildings, for example, we recognise a complete quadrangular spatial design. Even with only a few individual buildings, a square can be defined as an interior space if, at the corners of the square, one building at a time pushes itself beyond the corner and thus closes the space in at least one direction to the eye, as Mies van der Rohe, for example, accomplished with the *Federal Center* in Chicago.

The exterior as a counterpart to the interior of a square or street is either the solid mass of buildings (Chapter 10), or there are other exterior spaces that a square delimits or opens up. Urban spaces can appear introverted and at the same time exposed, the *Piazza del Campidoglio* in Rome is focused on the centre of the square, but also provides

115 Sitte 1889/1965 **116** Op. cit., pp. 40 ff

a view over the city outside the square and is visible from it. Closed squares are often separated from other squares and streets by narrow passages, gates, bends, and so on, which can themselves be perceived as interior, and at the same time connected and networked with them.

Since streets and squares are usually interlinked, we seldom experience them independently of one another. They form sequences and groups (Chapter 14). As we cross the city, we can see how the differences and similarities in size and character influence each other in their effect. The respective spatial context also determines how interior and exterior space define each other and relate to each other.

Opening up and opened up

A particular characteristic of many spatial structures in architecture is the hierarchical structure of spaces that make accessible as well as being accessible, which are grouped on different scale levels, the rooms in the apartment, the apartments in the building, the buildings in the urban space and so on, although most spaces are both access creating and accessible. Each level corresponds to the length of stay, the degree of closure, and certain forms of activity. The system of movement spaces such as streets, paths, and corridors also forms such a hierarchy. Georg and Dorothea Franck see the "epitome of architectural space" in this "cascade of levels", which extends through all scales from the spaces of the city to the cupboards and compartments of a room.[117]

Ambiguity and 'transparency'

Through the incorporation of interlocking courtyards of different sizes, as for example in the Forbidden City, the imperial palace in Beijing, one has the strange experience of walking out of the courtyard finding oneself inside again on the outside. An ambiguous effect of inside and outside can also come about through inversion, for example by turning the exterior space of the rotunda in Stirling's Stuttgart State Gallery into an interior space and leading the public path around it through the building. Borders and transitional spaces, such as arcades or loggias, form a separate spatial category that emerges from the overlapping of exterior space and interior space. Walter Benjamin in turn describes the building type of the arcades as streets that become interiors, "dream houses of the collective". But "arcades are houses or passages having no outside—like the dream".[118]

Colin Rowe and Robert Slutzky[119] describe a special form of superimposition of different spatial figures or spatial systems as "transparency" in the "phenomenal sense", in so far as one spatial figure 'shines through' the other: if spatial figures are not clearly defined by contours or boundary elements, certain places or subspaces can be simultaneously assigned to two or more systems in urban space. Architecture thus mediates

between the structures of different historical periods or urban spatial arrangements, but also between different uses and atmospheres.

Benedikt Loderer[120] makes clear that the interpretation of the relationship between inside and outside changes depending on the perspective when he says: "the interior of the exterior space is the exterior of the interior space". The context and the constellation of the respective situation determine how such ambiguous relationships are experienced from inside and outside.

117 Franck/Franck 2008, p. 30 **118** Benjamin 1927–40/1999, p. 406 **119** Rowe/Slutzky 1964/1997 **120** Loderer 1981

12 Still Here While Being There— *On Boundaries and Thresholds*

"Auf der Mauer, auf der Lauer sitzt 'ne kleine Wanze …"
German nursery rhyme

Humans draw spatial boundaries to structure their world, to establish conditions of stability, to differentiate between social spheres, to demarcate territories, to exercise power. Georg Simmel speaks of the "incomparable solidity and lucidity that the processes of social boundary-making obtain through their spatialisation",[121] suggesting that "every boundary is a mental, more exactly, a sociological occurrence; however, by its investment in a border in space the mutual relationship acquires, from its positive and negative sides, a clarity and security—indeed also often a rigidity—that tends to remain denied to it as long as the encountering and partitioning of powers and rights is not yet projected into a physical form, and thus always persists, so to speak, in the *status nascens*".[122] The city abounds with such hidden boundaries between social spaces, spheres of dominance and resistance, social distinctions and rituals. As they unfold their communicative effects they become recognisable to the attentive mind. With his intervention "Zone" in Münster in 2007, the artist Mark Wallinger drew attention to the Jewish sabbatical boundary *Eruv*, which is barely perceptible to members of other denominations because it makes use of everyday objects. "What are you doing here? (…) Do you know the rules? Are you an intruder? (…) Are you afraid?"[123]

The territory of a juvenile gang is a no-go area for other juveniles, but safe for their mothers. Territories of social elites are regulated by financial strength, dress codes, address lists, networks. In Europe, city boundaries are registered on maps. They regulate the territory of a municipality. They scarcely play a role in the everyday life of the inhabitants of an urban region. Nor are they visible. Even public spaces have boundaries. What building or urban space is so radically public that anyone can access it at any time? The sociologist Walter Siebel suggests that social conventions have always produced restrictions that understand public spaces as fields of exclusion, and that they continue to do so.[124] All these spaces are superimposed upon each other; their borders are in a state of instability and have the tendency to drift. In many instances they are not articulated in an architectural sense, even though their delicate traces might have materialised, over time, as engravings in the urban fabric.

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121 Simmel 1908, p. 625 **122** Ibid. **123** Wallinger 2007, p. 257 **124** Siebel/Wehrheim 2003, p. 4

Then again, territories are clearly demarcated in many other instances to emphasise their solidity and lucidity. Their borders are organised according to legally, economically, and socially induced requirements of inclusion or exclusion. Property rights are defined through entries in land registers and fixed in place by means of survey points; built structures stabilise territorial boundaries, produce cohesive inner spaces, and exert control over access to space. Private spheres are shielded and claims to property asserted by emphasising their enclosures. This is the visible world of boundaries, markings in space that are constructed to deny or limit access in the service of a regulated exclusivity: walls, fences, hedges, signs, posts, barriers, doors and gates, front gardens, legal separation distances, infrastructure corridors. Some boundaries are extensive, so that they establish territories in their own right, others could be as thin as a line, which become effective as a barrier tape or as a kerb that makes it impossible for wheelchair users to pass. The Berlin Wall, at the other end of the scale again, conceived as the ultimate instrument of exclusion, surrounded West Berlin as a wide and inaccessible belt for almost thirty years. Nicosia continues to have what is referred to as a territorial buffer zone: an extreme kind of hermetically sealed border architecture, devoid of any porosity or permeability.

Drawing from the writings of Gerd Held, Helmuth Berking suggests that, "territory as a spatio-structural principle is based on exclusion, the city on inclusion. The former needs the boundary and in this way increases interior homogeneity, the latter negates the boundary and increases density and heterogeneity".[125] Based on these spatio-structural conceptualisations of the modern condition, the city could be conceived of as a spatial entity of density and heterogeneity that does not exclude strangeness. In being open to strangeness and otherness, as something that, for some, might initially be associated with the external, the external becomes internalised and vice versa. However, even if we were to follow this notion through, the principles of territorial and urban spatiality would still interfere with each other. Boundary conditions, on these premises, are also architectural problems, for they need to organise and articulate situations of enclosure, exclusion, deferment, in-betweenness, and communication in multiple ways.

August Schmarsow suggests that the marking of a boundary could be seen as the first step towards the architectural articulation of space: "Traces of footprints in the sand or a shallow groove drawn with a stick are further stages in the representation of continuous boundaries."[126] Architecture is always concerned, if we understand the shielding of an inner space from an outer space as one of its basic tasks, with the physical articulation of territorial borders that we establish around dwellings, buildings, and city quarters. Architecture makes borders visible, and, in so doing, makes them accessible

to practical human experience. We may understand the architecture of the city as one of boundaries and boundary spaces. They constitute one of five elements in the "mental maps" we construct of the built environment, as proposed by Kevin Lynch in his research on the *The Image of the City*.[127]

The architectural potential of boundaries

It is time to focus on the quality of these boundaries rather than developing them as mere barriers or defences. "The boundary is a membrane, skin, shared interface, and an intersection, through which exchange can be intensified. Understanding the boundary as active spatial medium means to conceive of architecture as an active "membrane".[128] Yet, the production of physical distance and of dedicated buffer zones between potentially conflicting uses is still regarded as a viable way to deal with urban conflicts. Partition is still the prevailing instrument of functionalist modernity. In colonial cities, an empty space, euphemistically defined as a *cordon sanitaire*, separated the residential quarter of the colonisers from the colonised local population. While these and other motives have disappeared from planning thought, new borders have been established, for instance through the construction of sound barrier systems, which then separate different parts of the city from each other. Segregation continues to be effective in zoning legislation as a standard in functionalist urban planning practice. Though we are very critical of these buffer zones of modernist planning, abandoning the concept of boundaries does not seem to be an option. However, the in-between spaces have the greatest urban potential in cities.

In the words of Martin Heidegger, "A boundary is not that at which something stops but, as the Greeks recognised, a boundary is that from which something *begins its presencing*." He understands space as that which is embedded into its boundaries and as the place which is produced by it.[129] While the boundary acts as a barrier, it also defines and expresses what it encloses. This meaning of boundaries must not be overlooked; it forbids dropping all boundaries.

On boundaries and peripheries

The boundary of the city itself is no longer clearly defined today, the municipal city boundary remains invisible. The familiar historical image of a city as a perceptible figure in the landscape dissolves into the urban landscape unless topographical obstacles such as coasts, mountains, and rivers continue to assume the function of boundaries. Most of the time, the periphery is now shaped by the fractal geometries of the cities, which have an inherent tendency to multiply peripheral locations in which the

125 Berking 2008, p. 19 **126** Schmarsow 1894, p. 12 **127** Lynch 1960/1965; Lynch 1981 **128** Teyssot 2008 **129** Heidegger 1952/2008, p. 152

buildings and larger open spaces intertwine. In researching these peripheral zones, Klaus Humpert found that they were preferred residential areas and recommended not striving for the closed form of the urban structure but, on the contrary, creating as many inner and outer edges as possible.[130] Soft perimeters replace hermetic boundaries. Both separate here from there, inside from outside. The characteristic of fractal structures, however, is not soft, but extended perimeters, the multiplication of the perimeter fold. This results in residential areas with the double advantage of city and landscape, protected living space and a sweeping view. Kurt Tucholsky summed this up a long time ago: to the front, the Baltic Sea, to the back, Friedrichstrasse.

Separating and connecting

Enclosure and exclusion, between defining what is internal as opposed to what is external, stand in mutually ambivalent relation to one another. Serving the need for complete protection of private areas, boundaries as defensive bulwarks are nowadays also to be found within cities. Advanced security systems, the boundary walls of gated communities, or barricaded residential buildings, have replaced the former city walls. Individual needs for security beyond the confines of the private home are projected into the public realm. Where do spheres of private influence and control begin? For changes that are located outside, but close enough to residential properties, may result in feelings that private boundaries have been violated, even if the changes are comparatively small. Every boundary is malleable and vulnerable, in so far as it may be overcome by the media, by environmental influences, or by violation; this is counteracted by a tendency to reinforcement. Even if the dwelling is understood as a spatial immune-system,[131] intended to provide complete isolation, it still has to allow for communication with the outside world. Establishing the necessary balance between isolation and integration, between protective measures and intentional transit, between closure and controlled opening, is one of the tasks of architecture. Architecture is able to articulate the ambivalent relations between shielding and contact, enclosure and opening, separation and connection.

Based on the example of “bridge and door”, Georg Simmel explains how fundamental the mutual relationship between separating and connecting as concepts of thought and action actually is, suggesting that humans “must first conceive intellectually of the merely indifferent existence of two river banks as something separated in order to connect them by means of a bridge”.[132] The bridge illustrates the task of connecting in an immediate way, which is fundamental to our understanding of its aesthetic value. “And a human being is likewise a bordering creature who has no border. The enclosure of their domestic being by the door means, to be sure, that they have separated out a piece from the uninterrupted unity of natural being. But just as the formless limitation takes on a shape, its limitedness finds its significance and dignity only

in that which the mobility of the door illustrates: in the possibility at any moment of stepping out of this limitation into freedom."[133] As a spatially effective instrument, the door makes it possible to open and close a boundary; its threshold is a space that belongs to both sides.

The ambiguity of the threshold

It is the threshold through which the boundary is not only overcome, but enriched, architecturally defining a space that belongs to two spheres simultaneously. The door to the house acts as the threshold to the city—passing through the door means to be, for a brief moment, still inside the house while breathing the air of the city. The street is public, but we perceive it as *my street*, in which we feel at home while relating to the city. This ambivalence of the threshold lends itself easily to other scales in the city. Even though we do not enter the city through town gates any more, train stations and airports continue to fulfil the role of transit spaces. The authors of a threshold atlas[134] concentrate on microarchitectures (such as door locks or windows), which all operate within the basic urban problematic of proximity and distance. At the other end of the scale, we also perceive sections of the cultural landscape as transitional spaces when we approach the built city by car via the country road. The Mediterranean is seen as one of the gateways to Europe, and could thus be interpreted as a vast threshold space.

Thresholds decelerate, control, and ritualise the acts of exiting and entering. The moment of passage is experienced as a situation. The communicative relationship between inside and outside may be articulated in such a way that thresholds slow down movement while we leave a space, or make leaving a sequence; or they raise our expectations on entering a space. The passage between two different urban spaces becomes recognisable by means of its articulation; it is thresholds to which we may connect our *mental maps*. Thresholds are spaces of discontinuity, and, at the same time, connecting spaces and spaces of communication; they are "simultaneously symbols and mediators of passage".[135] This has contributed to the word *Schwelle* having many different connotations in the German language. It is a meaningful act to pass across a threshold. Sometimes boundaries are unrecognisable unless we cross them.

Hence, thresholds are spaces of passage—we are still here while being already there; we participate in two different spheres, but their relationship and presence shifts with each step we take. At the same time, we are within a space in its own right, we are neither still here, nor are we yet there. Situations of this kind have a performative

130 Humpert 1992 **131** Sloterdijk 2004, pp. 501–567 **132** Simmel 1909/1957, p. 6, Heidegger as well addresses the bridge as gathering place in *Building. Dwelling. Thinking.* **133** Op. cit., p. 7 **134** Stalder et al. 2009 **135** Mircea Eliade, quoted from Bollnow 1963, p. 158 f

power; sometimes they make us feel uneasy, sometimes they are desirable places to be. The feelings evoked when crossing a threshold are consequential in that they directly translate into our actions: when we feel intimidated we may choose not to enter a public building, a restaurant, or a park; or we make a detour around an urban district through which we do not wish to pass. Some buildings are deliberately designed to minimise feelings of uneasiness as much as possible. Solid walls are replaced by glass, everything appears as if it is fully accessible to our gaze; instead of doors they feature strips of hot air. They abandon the distinction between inside and outside, and reduce architecture to a climatic envelope that is hardly visible. Therewith, the idea that the threshold could be architecturally articulated is lost, and with it the possibility that it could offer moments of deceleration and in-betweenness that are of a unique quality.

Example: bridges

Bridges are thresholds par excellence. In Munich at the end of the nineteenth century, within a brief period a large number of bridges were built across the river Isar to connect the neighbourhoods of artisans and workers in the east with the city in the west. It was an urban political, engineering, and architectural programme that provided the city with new connections. In addition, the bridges brought the border area of the river, which they span, into the centre and into view. Once a flood-stricken and painstakingly tamed terrain, it was now developed into a park that ran through the entire city and was redesigned again at the beginning of the century according to the contemporary idea of nature. Many cities situated on rivers have a similar history: the bridges bring the neighbourhoods on the other side into the centre of the city, the river is transformed from the danger area to which the city had turned its back, from the boundary area into an active space in-between. The city turns to face the river. Bank promenades emerge. A single new bridge can change the spatial structure of the entire urban area. In addition, the bridges themselves become performative spaces, where lingering predominates over transit, as for example with the *Dreirosenbrücke* in Basel (Steib+Steib 2004), whose very wide pavement in the direction of the centre is casually used as a lounge. In Rotterdam, the conversion of the port was initiated with the spectacular *Erasmus* bridge (Van Berkel & Bos 1998), the last bridge over the Rhine; connection, sign, and place all at the same time.

Example: ground floor

The zone of the ground floor in residential construction, in which the private sphere of living intersects with the public sphere of the city, is criminally neglected in our cities.[136] Usually, the outer wall together with the front door form the single boundary, thresholds are reduced to the bare minimum, the opportunities for lingering in the threshold space are made more difficult. The intermediate zone of the threshold has completely shrunk, in fact reduced to the threshold of the door. At this point alone,

there is an enormous backlog of architectural activity that cannot be excused by economic constraints. Spatially unfolding threshold situations as announcement, delay, introduction, invitation to stay and so on, in other words, articulating them creatively, is a genuine architectural challenge. This should also succeed in a small space. The elimination of the threshold spaces on ground floors not only impoverishes the architecture of the house, but also afflicts the architecture of the city. A store, an entrance zone, or a canopy also extend and serve the street, the space of the city. Thirty-eight kilometres of porticoes run through Bologna's old town, at the ground floor of the buildings, but are experienced as public space in the city. Their preservation and revival are valued as a successful urban redevelopment. The *Kabelwerk* quarter in Vienna was granted additional building rights on the upper floors in order to create generous entrance areas on the ground floor, and soft transitions to public street space.

Thresholds as urban spaces

An architecture of thresholds is indispensable for the spatial quality of cities, for thresholds are privileged places of urban life. Their ambivalence is their strength, beginning with a cushion on a window sill, a conversation in the front garden, or a farewell in the doorway. Sitting on walls, hanging around underneath sheltered canopies or on verandas, resting in street cafés and observing the scenery, sitting on stairs in front of entrances, sunbathing on balconies, lingering in foyers or entrance halls of stations—it is here that consequential encounters take place, for they occur incidentally. It is not no-man's-land, but land belonging to both sides. Even between city neighbourhoods, space-containing borders and active spaces play a role. On the one hand, Christopher Alexander advises creating identifiable neighbourhoods, however, for the *neighbourhood boundary*: "(...) make the boundary zone wide enough to contain meeting places for the common functions shared by several neighborhoods".[137] Urban corridors, broad promenades, plazas and squares, edges, boundaries, and membranes—ambivalent places seem to be necessary at every scale. The architecture of the city, could, in fact, be conceived as the art of thresholds.

136 Zoller 2014 **137** Alexander 1977, p. 90

13 Porosity— *On Interpenetration*

"*As porous as this stone is the architecture. Building and action interpenetrate in the courtyards, arcades, and stairways. In everything they preserve the scope to become a theatre of new, unforeseen constellations. The stamp of the definitive is avoided. No situation appears intended forever, no figure asserts its 'thus and not otherwise'.*"
Benjamin and Lacis 1925: pp. 165–166

Walter Benjamin and Asja Lacis describe Naples in an essay written in 1925. The peculiarity of the material of the landscape from which the city is built triggers the associations with which the two authors describe the architecture and life in that city:

"As porous as this stone is the architecture".[138] "The city is craggy".[139] But these crags are full of caves and voids and holes. Porous stone: full of the life of people, which is also shaped by the special character of this stone. The term 'porosity' with its extensive range of meanings has entered urban studies through this very beautiful text.[140] In Benjamin's *Selected Writings*, the report on Naples is contained in a chapter entitled *Denkbilder*. It includes further sketches of Moscow, Weimar, Paris, Marseille, but also small texts on activities such as eating, dreaming, or collecting. In this essay, the mental image (*Denkbild*) of 'porosity' is explained causally in terms of the perception of Naples as a place, and succeeds in grasping material, architecture, and urban life in equal proportion and in relating them each to the other. This rocky city built on and out of tuff is full of holes and caves. It is not the closed form of isolated objects viewed from a distance, but the mutual interpenetration of spaces that makes up their character.

Ernst Bloch, one of the few contemporaries to take up 'porosity', says of the south of Italy: "Things and people have no borders."[141] The fascination of the mental image 'porosity' is to this day to be found in its contrast to stable boundaries and the functionalistic purification of urban areas, which constitutes the urban development of modernity. Although Naples was in many ways a pre-modern city at the time of the visits of Benjamin, Lacis, Bloch, Adorno, Sohn-Rethel and others in the 1920s, 'porosity' was adapted much later as a counter-model to the modernist city; it became an expression for the critique of the city of functional modernism.

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138 Benjamin/Lacis 1925, p. 165 **139** Op. cit., p. 172 **140** Wolfrum 2018 **141** Bloch 1925, p. 512

Today's reflection of the text in various disciplines beyond urban studies (for example in media theory) concentrates above all on the idea of interpenetration.[142] For everything permeates everything else in this city: spaces, activities, profane and sacred, day and night, public and private. Interpenetration affects the entire conduct of life. Even the cafés are "true laboratories of this great process of intermingling".[143] Though Benjamin did not use the notion of porosity in his later writings literally, 'interpenetration' remains an important pattern in his thought.

'Porosity' is inspired by Naples as a mental image, but in the meantime the term has detached itself from this immediate context. At the same time, it continues to represent its ambivalences: distance and proximity, heterogeneity and homogeneity, anonymity and community. Meanwhile, 'porosity' has its own field of meaning. In the same way that the tag cloud 'porous city' is used today, typical urban connotations are highlighted:

— Interpenetration and multilayering of spaces
— Communication of spatial elements
— Threshold, in-between space, and ambiguous zones
— Permeability, spaciousness, and ambiguity of borders
— Coexistence, polyvalence, and sharing
— Blurring, ambivalence, and even weakness
— Provisional, incomplete, and even kaput
— Openness of processes concerning coincidence, rhythm, and time
— The *flâneur's* perspective and a performative approach

Benjamin and Lacis's reportage takes the gaze of the flâneur that we know from Benjamin's *Arcades Project*. Flâneurs penetrate the everyday life of the city, leaving Baedeker's monuments of art history aside. They observe how people use the spaces of the city and which spaces emerge from everyday use. 'Porosity' is one of the few terms in urbanism that refers to both physical and social space. In its programmatic turn from observational thought to urbanist concept, the term continues to encompass architectural features and qualities of the built environment on the one hand, and the socially produced space of a complex urban society on the other. This is its particular strength and the opportunity to deal explicitly with architecture in urbanist discourses.

The visualising aspect of the term is its key advantage. This helps to bridge the two worlds of our profession as urban designers and of urban everyday life. The characteristic of a *Denkbild* "in which conceptual and pictorial understanding interpenetrate"[144] turns out, for all its vagueness, to be highly productive. Porosity is one of the few terms with this complexity of double connotation yet which still opens a field of associations fit for purposeful action and room for manoeuvre.

The contemporary city is still trapped in the modernist planning paradigm of zoning and tidying up. When the art historian Dietrich Erben says that in the temporal simultaneity of the observed details the Naples essay appears as "exemplary of modernism", and the figure of threshold might be paradigmatic of this,[145] we must counter that the modern formal urban planning system is completely unaffected by the threshold paradigm. It is in the contradictory character of modernity, to which Max Horkheimer and Theodor W. Adorno referred in their *Dialectic of Enlightenment*,[146] that the liberation from constraints and limitations on the one hand is opposed by the instrumentalisation of reason and a technical-organisational efficiency on the other. The legal system of urban planning, however, is on the side of efficiency, it demands unambiguousness, is definite and rational. Thresholds are substituted by barriers, protective walls, and strict zoning regulations. Critical of established practice, however, 'porosity' underlines diversity and openness as positive goals in urban development. Thus the above tag cloud of connotations takes up the postmodern discourse, which has emphasised multiplicity against efficiency.

Threshold—transparency—continuum

The three previous chapters have already introduced architectural discourses that are paradigmatic of the architecture of the porous city: basically, the architecture of the city is the art of thresholds (Chapter 12). 'Transparency' is a special form of superimposing various spatial figures or spatial systems, in so far as "they are able to interpenetrate without an optical destruction of each other"[147] (Chapter 11). In the "incessantly communicating, 'intervolumetric', complementarily interlocking city",[148] space and solid form a continuum (Chapter 10).

Pores and particles

Morphologically speaking, we can now identify porosity as a characteristic of this continuum, as a characteristic of what the architectural theorist Bernhard Hoesli called "continuous space", "of which solid and void are (...) distinct but conceptually complementary aspects of the same medium (...)".[149]

One cannot perceive space as such, only things in space. But we can perceive the continuous mixture of solid and spatial volumes as a porous substance. As architects, we cannot deal directly with space itself. But we can operate with a 'material' that itself is both: mass and cavity, solid material, in which the holes are, however, already an essential component, which is what constitutes porosity. In a porous material there are pores only in connection with the surrounding mass. The origin of our word 'pore' from

142 Cf. A. Benjamin 2007; Fellmann 2014 **143** Benjamin/Lacis 1925, p. 172 **144** Erben 2018, p. 28 **145** Ibid. **146** Horkheimer/Adorno 1947 **147** Rowe/Slutzky 1964/1997, p. 22 **148** Hofer 1979, p. 24 **149** Hoesli 1997, p. 92

the root of the Greek word πειρειν is telling: 1. bore, pierce, 2. penetrate, pass through (it presupposes the resistance of a material). Pores always have an environment. But this environment is not simply another space in front of or behind; what is essential for porosity is the interplay between cavities and (solid) mass.

Arcades and porticoes, verandas, galleries, and courtyards are interim spaces within building volumes that can be read in various ways, as spatial intersections that are not terminated sharply by an exterior wall but only partially surrounded, built over, or partly closed off, semi-public, semi-private, half inside, half outside. They break down the strict division by which the exterior space is located outside the building volumes and the interior space within them.

In this way, compact architectural masses become perforated, dissected, they become increasingly porous and can finally dissolve into individual elements. Solid elements, which form architectural space, do not have to appear as compact masses, but can also contribute to the formation of space in quasi-scattered form. Seen in this way, porosity would not depend on whether spatial pores are distributed in the mass or mass particles in space. In any case, we would be dealing with the medium of a 'continuous space' across all scales, in which particles are now equivalent to pores. These can occur loosely or in high density, come physically close and even produce a certain narrowness.

But what happens when building masses are further dismembered and begin to spread as individual elements in the space of the city? Several particular observations can be made here, for example, in relation to the conditions of sight and movement. Otto Friedrich Bollnow made comparable observations about the forest: "It is rather the obstruction of vision by the things themselves, (...) which enclose us in their own realm, almost as if in a kind of inner space. The gaze penetrates only so far into the forest and then loses itself among the tree-trunks. (...) Man is enclosed in a narrow space, though this has no firm, assignable boundary. He can to a certain extent move freely. He can walk through the forest. But as soon as he enters it on one side, he finds no escape from the imprisonment of his gaze, nor finds open space again, for the narrow, observable area moves with him, like his shadow; he cannot get rid of his constriction, but remains enclosed in it."[150]

What at first seems like an obstacle turns out to be a condition of a specific state. It is the characteristic form of movement in such dispersed distributions of masses, a drifting movement that is not steered in directions determined by the architecture, but in which one can allow oneself to be swept about or can adopt an individual rhythm of movement and thus create spatial connections solely from their own movement.

Dispersions of elements of mass do not have sharp boundaries. Suddenly, one ends up inside and then unexpectedly is outside it again. They may perhaps permit architecture to dispense with boundaries or spatial partitions. Depending on the density of the dispersion, the entrance can also offer a certain resistance, rather like undergrowth or shrubs. On entering, one must confront the resistance it offers, to eat one's way in or through, so to speak. But once one has penetrated or plunged into the interior, such a form of shaping space permits continuously variable hybrid forms between separation and connection or of different states of spatial density.

Porosity as an urban agenda

In Naples, 'porosity' as a phenomenon is still present today and the word has entered the vocabulary of urbanism there as a matter of course. It is not surprising, therefore, that 'porosity' has its origins as an agenda in the urban discourse of Southern Europe.

Paola Viganò and Bernardo Secchi were at the vanguard of this approach, inspired by the metabolism of water and soil in the dispersed landscape of the Po Plain. They frequently apply and develop this agenda in different urbanised European regions, for example in *Flanders* and *Greater Paris*. They use 'porous city' almost as a general concept and spatial model, in which the "porousness of urban tissue" is only one of several desired target figures.[151] In the case of Paris, however, they began with the premise that there was a deficit in the urban structure: "(...) porosity emerged as a missing characteristic of the great Parisian agglomeration. An original set of maps highlighted spatial injustice in Greater Paris, selecting physical elements reinforcing separation and deepening distances and enclaves."[152] The Paris agglomeration is permeated by insurmountable spatial barriers and demarcations resulting in social separation and exclusion. They reveal this fundamental problem in the first step of their planning and then respond with a raft of strategies that oppose the centralised and fragmented character of the Paris region. The network of connections between the locations of the *Banlieue* outside the *Périphérique* forms the prelude, flanked by an isotropic infrastructure and a permeability of open spaces. In addition, there is a radically new focus on the metabolism of water and land, as well as on the palimpsest of historical and material traces and layers. The vision of the porous city for *Greater Paris* is one of connections, overlaps, and permeability.

Stavros Stavrides also sees the porous city as an alternative model to the modern city with its enclaves. He writes about porous borders, thresholds, passages, membranes, about osmosis and lived space. A city of threshold spaces opens itself to social and political concerns.[153] "Urban porosity can redefine the city as a network of thresholds

150 Bollnow 1963, p. 218 **151** Viganò 2009 **152** Viganò 2018, p. 52 **153** Stavrides 2007, p. 174

to be crossed, thresholds that potentially mediate between differing urban cultures, which become aware of each other through mutual acts of recognition and collaboration. Urban porosity can thus be the spatio-temporal form that an emancipating urban culture may take in the process of inhabitants reclaiming the city."[154] Stavrides further develops the idea of the 'porous city' into an emancipatory urban project. The agenda of the porous city thus goes far beyond the softening of modernist zoning in formal urban planning. The threshold spaces that are at the centre of the discourse could be a common good. They establish an emancipatory urban culture.

Last but not least, the abolition of established borders calls into question the rigid separation of technological, cultural, and natural systems that has developed in modernity. For in the Anthropocene, these divisions are becoming increasingly obsolete and obstructive. "Even so, the once-clear categories of inside and outside are beginning to break apart. Formerly, inside was city and culture, while outside was countryside, landscape, and nature."[155] The city can no longer be understood as a place of isolated culture and recklessly use nature and countryside both to supply itself and to dispose of its waste. City and landscape are not only associated in concepts referring to sprawl and urban landscapes, but they are also seen as fundamentally interpenetrating spheres. "Flows, connections and assemblages replace the concept of borders; and there is a growing interest in the type of connection, its components, its spatial expression and the social and natural processes related to it."[156] Hybrid architectures no longer distinguish between buildings, infrastructure, or landscape. Parks are public spaces in urban society, at the same time efficient retention spaces for large quantities of rainwater and places of biodiversity. The paradigms for urban design are fundamentally changing. Interpenetration instead of borders. The city in the Anthropocene can actually be nothing other than a porous city.

154 Stavrides 2018, p. 32 **155** Gieseke 2018, p. 202 **156** Ibid.

14 Walking in the City— *On Motion*

Architecture is all too often diminished to categories of the static, the fixed, and the stable. For this reason, too, it is easy to fail to grasp the architecture of the city as a constellation of situations shaped by a constant flow of activities and movements. On the other hand, in urban planning, spaces of mobility are reduced to certain modes of transport. A public discussion on urban design in participatory processes usually narrows within a few contributions to a few transport-related topics such as noise pollution or parking spaces. The development of roads and other transport routes into purely technically defined transit spaces also prevents them from being regarded and designed as architectural spaces.

Spaces of mobility

A brief review of the history of urban design, however, shows the profound influence the technology, economy, and culture of spaces of mobility have always had on the architecture of the city.[157] Railway stations, roadside alleys, and boulevards structured the exploding cities of the nineteenth century. Their construction was of course economically and politically strategically motivated, but it had a significant impact on the architecture of urban public spaces. The urban concepts developed by architects of the twentieth century celebrated the new possibilities for individual mobility. Le Corbusier's *Plan Voisin de Paris* was an example of the early radicalisation of car-friendly urban redevelopment.[158] In the face of the new challenges, streets, as elements of visionary urban architecture, took on a completely new meaning and form. In addition, transport as one of the four functions of the "functional city" of modernity[159] was spatially isolated. The streets of the city of modernity both created new relationships between the parts of the city and severed old ones. The social function of the street as a communicative public space was gradually eroded.

Although this was already deplored by the criticism of the city of modernity that began in the 1960s—for example by Jane Jacobs[160]—large monofunctional, purely technically optimised spaces of mobility still occupy extensive areas of cities today. An arterial road on the route of former country roads is usually designed for travel at 60 to 80 kph, devoid of any buildings, flanked by noise-protection barriers, and suitable for nothing other than the purpose of smooth transit. The driver is not even afforded a view, apart from the pitifully decorated noise-protection barriers.

157 Hain 2014 **158** Le Corbusier 1922/1964 **159** See CIAM 4 1933; Athens Charter 1941 **160** Jacobs 1961

But streets, paths, and squares are only secondarily areas of transportation. They are primarily spaces of public life in a city to which architectural urbanism must orient itself. One can linger in them for various purposes and activities, but above all one can meet people casually when in motion. Only then do they fulfil the requirements of urban spaces. The widely proclaimed 'right to the street' spells out the diverse political and social demands that an urban society places on its streets. The purely transport–functionalist differentiation and formation of street types has simply neglected these demands.

Pattern of steps

Virtually untouched by the functionalist impoverishment that dominates everyday life, there is a history of urban experience and urban sensuality that explicates walking in the city in myriad ways: "The patterns of steps shape the space. They weave places together. In that respect, pedestrian movements form one of these real systems whose existence in fact makes up the city. They are not localised; it is rather they that spatialise."[161] Michel de Certeau is one of many who see walking as the decisive medium of urban spatial production. "The act of walking is to the urban system what the speech act is to language or to the statements uttered."[162]

While from the pod of a moving vehicle the architecture of the city is reduced to fragments of perception, and, moreover, framed by the window as if it were a screen image,[163] pedestrians familiarise themselves with the city by walking, through the individual interpretation of its spatial structure as a personal reading. One urban form of movement is the purposeful crossing on the way to a particular destination, orienting oneself towards the network of paths, streets, and axes. Another typical form of movement in the city, however, is the leisurely stroll of the flâneur, in which the pedestrians let themselves be carried along and, by wandering around, continually refresh the differing possibilities inherent in the spatial order of a city.

In the 1960s, the situationists grouped around Guy Debord developed an urbanist method they called *la dérive*, an aimless wandering that took movement as perception and production of space. Benjamin wrote: "The city is the realisation of that ancient dream of humanity, the labyrinth. It is this reality to which the flâneur, without knowing it, devotes himself."[164] The flâneur's strolling without intentions through the boulevards and arcades of Paris at the turn of the century finds itself less than half a century later in the situationist practice of *dérive* and in the concept of the psychosocial production of space: psychogeography. Fifty years later, its resonance is still felt and continues to have a major influence on urbanism.[165] Through the routines of everyday life, the individual places and trajectories of movement, each of us conceives their own city, fragmented and yet embedded in diverse social and spatial contexts.

Modes of movement

The modes of movement prove to be decisive for the perception of urban spaces, which is why this perspective has increasingly been adopted in urban research and analysis. John Brinckerhoff Jackson's texts on landscape, for example, are based on his own extreme experience of travelling by motorbike.[166] This kind of perception and research cannot be conducted by sitting in libraries. Which is why Lucius Burckhardt also founded a science of strolling, which he calls "promenadology".[167] Francesco Careri describes walking as an aesthetic practice, as walkscapes,[168] and of course he takes his cue from the situationists. As does Iain Borden. In *Skateboarding, Space and the City,*[169] Borden traces the specific city experience of skateboarders; a different body-performance creates a different city. But he also designs places that offer the potential for spatial experience corresponding to the skateboarder's skills. Borden does not stop at the interpretation, but takes the step into architectural design.

In principle, a broader spectrum of spatial reality is opened up through the individual decision to move in the city. Every way of moving—whether in a wheelchair or pram, in pumps or jogging shoes, on a racing bike or as a *traceur* on a parkour—yields different experiences in the same city. These modes of movement and experience are reflected in widespread cultural mobility trends, so that, for example, cycling is currently being promoted again as fashionable and running as healthy. Albeit excruciatingly slowly, this is leading to new paradigms of traffic management and urban planning, the construction of privileged cycle paths or broad pavements, and the re-urbanisation of arterial roads: from car-friendly cities to walkable cities.

We become acquainted with a city less through its map than through movement. Fritz Schumacher has elaborated the point: "The art of space creation not only takes possession of our eye, but captures our whole body by influencing and directing its movements without us having to notice it. The design of the walls surrounding us plays a secondary role to the modelling of the floor. Ascending or descending, caesura through stairs, relaxation through horizontal surfaces, guidance to certain points of observation—all these are motor effects that control the rhythm of body movement in a very similar way as the forms of spatial design control the rhythm of eye movements."[170] A very slight gradient of one to two per cent, as is common practice for surface drainage purposes, is not perceived by most people. But over longer distances it induces clear effects: it is easier for a body to walk with the sloping gradient. In Munich, for example, this can be clearly observed on the *Marienplatz*, the slight gradient eastwards to the Isar

161 Certeau 1980/1984, p. 97 **162** Op. cit. **163** Appleyard et al. 1963; Houben/Calabrese 2003 **164** Benjamin 1940/1999, p. 429 **165** *Arch+* 183, 2007 **166** Jackson 1994 **167** Burckhardt 1995 **168** Careri 2002 **169** Borden 2001 **170** Schumacher 1942, p. 289

leads the visitor almost by default towards the *Viktualienmarkt*. Types of movement are helped or hindered by the respective architecture of urban spaces. In a city with arcades, it is possible to walk even in the rain, broad pavements allow additional uses, even if this simply involves stopping and looking. The network of streets and squares with their respective architectural characters is the central element of the city's architecture. It shapes the atmosphere, uniqueness, and specific urban lifestyle of each city.

Spatial sequences and rhythms

As urban spaces merging into one another, squares and streets connect segments of movement into sequences. An axial system, for example, provides directions for approaching an important destination. In Brasília, the monumental main axis of the *plano piloto* points to the imposing government buildings, which on arrival appear smaller than the grand gesture promises, before one is finally led to the Square of the Three Powers behind it. The historical sequences of squares often begin with former entrance squares to the city, just behind the city gate, such as the *Piazza del Popolo* in Rome and the *Königsplatz* in Munich, or aquatic arrival areas, such as the *Piazzetta* in Venice or the *Praça do Comércio* in Lisbon. As forecourts in relation to the city, they were equivalent to an antechamber, like the foyer of a building. In the wider spatial context, the squares and street sequences are composed of units that mesh with each other or separate from each other, form joints, and determine the dynamic structure of the urban spatial fabric through contrasts in size, form, and character.

By analogy with the understanding of gestures as body movements that express something, architecture can also communicate gesturally. The architectural gesture suggests that we follow a dynamic impulse with which a street or spatial figure draws our movement; it suggestively demonstrates possible movements that are only realised in the actual execution of the gestural form. Often we only perceive gestural impulses when we ourselves are already moving in the way prescribed. Architecturally, the gestural effect is brought about by the flow of the contours of a room, by gradients and steps, or by the rhythm of buildings. This stimulates, directs, accelerates, or brakes movements.

The separation and the transition between urban spaces either form constrictions between building edges, comparable to gates, or more or less flowing connections. Street courses, on the other hand, are subdivided into closed sections of space when their fronts curve or wind, become narrower or are staggered. Even the slightest bend in a road leads to its perspectival closure, which is protracted step by step.

In many cases, square walls do not form an unambiguous spatial boundary and only temporarily block the gaze, but as soon as one reaches them, direct it in a new direction

by tilting it and thus lead the movement to the next spatial unit. In other cases, by contrast, paths running along a continuous facade flow into and out of a square, or streets, allow a square to run out at the corners and integrate it into the wider street network. The dramaturgy of movement sequences profits from these contrasts: after being put under pressure by the extreme narrowing of a passageway, the following dilation is perceived as relaxation.

Theodor Fischer mastered this art of space creation. His urban design for Munich is still in effect today via a building code that has been in force for decades as 'graduated density zoning plan' (*Staffelbauordnung* 1904–1979).[171] Fischer was undoubtedly influenced by Camillo Sitte's 1889 book *Der Städtebau nach seinen künstlerischen Grundsätzen* (*Urban Design according to its Artistic Principles*), which he by no means dogmatically conceived as a doctrine of style. What was decisive at that time was the new aesthetic perception of urban spaces. Not least under Sitte's influence, urban design developed from an engineering to an architectural discipline at that time.

In the nineteenth century, physiological-psychological research led to great advances in scientific knowledge regarding the nature of spatial vision. Among other fields, this knowledge was incorporated into architectural theory, and Sitte's work was also influenced.[172] Even though he used the term 'artistic', neither liberal arts criteria nor individual taste was introduced into the emerging discipline of urban design. Instead, Sitte followed the then current architectural theory, which emphasised the design and perception of spatial facts in architecture in contrast to sculpture and image. Against this background, in the first decades of the twentieth century a number of productive urban designers—Fritz Schumacher has already been mentioned—understood urban design as architecture in the sense of the design of urban spaces. Theodor Fischer was one of them, and with his sequential street spaces he has shaped Munich to this day. In a lecture on urban architecture dedicated to the streets of the city, he says: "Here we come upon the need of aesthetics for the first time, a medium for the eyes, i.e. the appropriate end of a stretch of road in order to achieve the impression of space, with a very particular emphasis on movement. Our intention is not to linger on these extended streets but to promote movement in one direction."[173] Just one step aside and a new view opens up into the depths of the street, every step forward changes the perspective as a kinetic effect. Only when wandering through these spaces do they reveal their full charm.

According to Gordon Cullen, rhythm, punctuation, interruption, narrowing, fluctuation, closure, anticipation are elements "(...) concerned with our reactions to the posi-

171 Wolfrum et al. 2012 **172** Reiterer 2003 **173** Fischer 1920/2012, pp. 28 ff

tion of our body in its environment".[174] They all contribute to the sequences of movement that set the architecture of the city in motion. The city walker or the flâneur's progress through an exciting sequence of spatial impressions Cullen calls "serial vision".[175] This is specifically developed in the architectural design. "Our original aim is to manipulate the elements of the town so that an impact on the emotions is achieved. A long straight road has little impact because the initial view is soon digested and becomes monotonous. The human mind reacts to a contrast, to the difference between things, and when two pictures (the street and the courtyard) are in the mind at the same time, a vivid contrast is felt and the town becomes visible in a deeper sense. It comes alive through the drama of juxtaposition. Unless this happens, the town will slip past us featureless and inert."[176]

City as process

Movement, as discussed in this chapter so far, passes through spatial sequences as a succession of places in time. A different kind of relationship between space and time underlies the general processual conception of the city. The focus is thereby placed on the temporality of social processes or cultural events and their influence on the spaces of the city. A process-oriented urban planning even goes so far as to understand architectural designs as a contingent result of moderation processes, generally regarding temporal dynamics as a priority. One can see in this the long-lasting legacy of a modernity that prioritised time over space.

The situationists, too, completely refused to produce an oeuvre, radical opposition, and consistency in their agenda. An architectural urbanism without an oeuvre, however, with the sole focus on events, would dispense with the essential competences of architecture. An aesthetics of the performative, based on theatre, performance, and action, has, however, had a considerable influence on urbanism. Performative actions are integral to urbanist strategies. On the one hand, the boundaries between the performative arts and architecture are blurred, art is expanded into urban installations, or urban scenes are made the object of performative arts.[177] On the other hand, architectural interventions are conceived as ephemeral. The architects of the Raumlabor Berlin, for example, perform the city with pop-up hotels (Mannheim 2013), venues such as the "Kitchen Monument", or transitional apartments (Munich 2015). Both sides—art and architecture—use temporary installations in the sense of interventionist acupuncture or temporary actions to elevate overlooked spaces into the cultural memory of an urban society, or a performance to describe a place.

Architects as urbanists, however, seek actively to intervene in the production of cities by designing spaces architecturally, not merely to interpret them, or ironically or critically reflect them. Architectural urbanism can learn something from the freshness,

directness, and speed of performance art, while at the same time having to confront the tough, testing, and tenacious production methods of architecture. Ultimately, the aim is to turn the mobility spaces of cities into urban spaces again. To achieve this, they must not only be performed in a different way, but their architectural qualities must once again be at the centre of construction, which has since been lost to the engineering disciplines.

174 Cullen 1961, pp. 12, 45–49 **175** Op. cit., pp. 11, 17–21 **176** Op. cit., p. 118 **177** "performaCITY", congress and events, Basel 2014

15 No Ideas but in Things— *On Materiality*

Compose. (No ideas but in things) Invent!
William Carlos Williams, "A Sort of a Song", 1944

Not long ago, under the term "Telepolis", the illusion was propagated that matter, things, and physical space of the city would soon be largely replaced by a virtual urban reality.[178] And for some time, urbanism has concentrated on data and processes. Yet we are now witnessing a resuscitation of interest in the world of things and the sensual in many cultural fields precisely as a reaction to the abstraction of the virtual. This is also being addressed theoretically, for example, through the revival of phenomenology or actor-network theory (ANT). Architecture is unrivalled here. The fact that architecture can be experienced with all the senses is not least due to its materiality. Architecture as a "conceived space",[179] as a concept, or as a sketched design, already reveals the architectural on an intelligible level; as form and structure it can be depicted abstractly as a scale model or by means of plans; with its spaces it shapes the city politically and socially in many ways. Performatively, however, it manifests itself directly in situations and scenes, where, in the words of Bruno Latour, the physical material object operates as an actant. And in its materiality, architecture touches the senses directly and in a variety of ways. That is the focus of this chapter.

Materiality not only refers to the fact that architecture is produced with the aid of building elements and materials—from asphalt to plants, from wood to concrete—but also to the fact that the uniqueness of the material gives rise to manifold characteristic impressions. These are based on the direct physical perception of the material, although the cultural impact of their appearance is not to be disregarded. Materials on the scale of the city include vegetation, water, earth, air, such that the materiality of the city touches all the areas that are dealt with in urban ecology today. In this way, materiality comes into play at two different levels: firstly, the material of which architecture itself consists in its substance; secondly, the materiality of the environment, which indirectly influences architecture through its effects.

Material and things

The *Königsplatz* in Munich, slightly lowered by Leo von Klenze so that on its lengthwise sides the bases of the museums appear higher, was levelled in the Third Reich and

178 Rötzer 1995 **179** Boudon 1991

covered with large granite slabs to create a parade ground. Subsequently deployed as a parking lot, this arrangement endured for a few decades longer. It was not until 1988 that the original character of the site—formed by the lawns in the shallow hollow on which one can lounge in summer—was restored. In addition to the immediate sensory perception, the corresponding change in material was not only functionally justified, but also acts here as a sign, text, and invitation.

Colourful tiled paving is the key feature of the waterfront promenade in Alicante. This example demonstrates the spatial power a striking floor can have. Those who enter on and walk around on it have the impression of being in a special space. The rippling pattern of the mosaic tiles in three colours lends a lively buoyancy to strolling up and down between the fountain to the east and the monument to the west. The canopies of the palm trees suggest a roof and at the same time filter the light, contributing to the shimmering atmosphere of this promenade, as does the immediate proximity to the sea.

The spatial effect of materials is an element of architectural design. In Düsseldorf, special paving slabs with a wave pattern were designed for the riverside promenade on the Rhine. In Portugal, the *Calçada Portuguesa*, the rich pattern of black and white mosaic stones, on which walking feels like something extraordinary, can still be found on the pedestrian walkways of many cities. Water-bound surfaces or smooth asphalt, cobblestones or slabs of different patterns and colours, lawns or meadows, the material of surfaces and overlays influences one's movement, permits or prohibits settling, mostly casually, without crossing the threshold of our consciousness. The material attracts special attention when it impedes, as with rough, bumpy cobblestones, or when it is particularly beautiful, as in the case of the famous Burle Marx mosaic on the *Copacabana* beach promenade.

Materials appeal to the senses to different degrees, attract us, want to be touched, bring us into close contact with architecture or hold us at a distance. Several sensory perceptions usually work together and are often supplemented by associations. The enclosed masses of skyscrapers, the reflection of indirect light from the facades into the chasms of streets, and the resonance of their internal acoustics contribute to the stony radiance of Manhattan in the same sense.

In the perception of materiality, all senses may be addressed, partly through synaesthesia, but the haptic takes precedence. Seeing lends visual stimuli to the haptic perceptive faculty, so to speak. Surfaces can not only be touched, they can also be scanned with the eye as an extension of the tactile sense: we see how something feels, sometimes even how it smells or tastes. Contact of the feet with the ground offers a specific

tactile experience and, along with its vibrations, roughness or smoothness, firmness or flexibility, influences one's progress. The artist katrinem, for example, traces noises and sonic experiences during her city walks, in the interrelation of walking, sound, and space.[180] In this way, she makes conscious an impression of urban spaces that is usually below the threshold of attention. Including these levels of perception, which escape representation in traditional blueprints, is a challenge for architectural design.

Pre-modern cities were built from the material that was regionally available. Bright red sandstone in Mainz, dark red, gloomy sandstone in the Black Forest, warm, reddish, shimmering sandstone in Salamanca, grey-green sandstone in Zurich, blue stone in Belgium, brick in the Po Plain or in Toulouse, slate roofs on the Moselle, Falun-red-painted wood in Sweden. Regional materials were formerly used for economic, logistical, and climatic reasons and shaped cities. Since these constraints no longer apply—Vietnamese granite is cheaper in southern Germany than granite from nearby Franconia—targeted use of materials means conscious cultural placement. The architectural design chooses to use certain materials. This is how the Hamburg brick, which seems so characteristic of northern Germany, was deliberately introduced by Fritz Schumacher.

The white painted urban neighbourhoods of modernism, or Bruno Taut's colourful estates in Berlin, make the cohesion of a residential estate obvious, a picture of community, albeit at the expense of individual expression. The uniformity of the material creates spatial unity. The contemporary colour scheme for Zurich, on the other hand, is based on colour affinities, allows for diversity, and yet seeks to promote a characteristic mood drawing on expert consultation.[181] The balancing act between paternalism and laissez-faire seems to have succeeded in this particular case.

Vegetation plays a special role as a material in urban spaces. Since it is bound to climatic zones, the blue-flowering jacaranda trees of the subtropics are not to be found in European cities. Gardens and front gardens, boulevards lined with trees, avenues and parks, all the elements of cultural landscapes woven into the city vary according to cultural traditions, climatic zones, and even local microclimates within cities. Urban vegetation, at all scales, is a material of the greatest importance for atmospheres, impressions, and the feeling of well-being. It also includes all the materials available to landscape architecture in particular. The *Englischer Garten* in Munich, *Central Park* in New York, *Hyde Park* in London, most of these parks are more than just a feast for the eyes of those strolling by. One lies on the meadow, swims in the stream, and feels both materially on the skin.

180 www.katrinem.de **181** Rehsteiner/Sibillano/Wettstein 2010

As to water: the sea, rivers, and canals not only give a city structure, it is water as a material that brings its special properties to the city. If it is lacking, as with the city extensions of Cairo on the plateau of the desert, this lack becomes frighteningly obvious. If a city uses its water prudently and directly, as Barcelona or Rio de Janeiro do their seashore, Zurich the Limmat, Munich the Isar, Basel the Rhine, then the immediate sensual power of water is an exalted treasure.

Materiality of the environment

The materiality of the environment has a direct influence on our physical well-being and on our health. At the end of the nineteenth century, for example, in the face of urban squalor, the need to create healthy living conditions was one of the fundamental motives behind the development of the new discipline of urban planning. The early building inspection laws, as well as later building and planning laws, had the urgent task of ensuring healthy living and working conditions. Even today, the principal objective of environmental law, which is interwoven with planning law in a variety of ways, is still pollution control. Thus, the practice of spatial administrative land use, which is based on distance and separation, has been firmly established since modern times. In consequence, alternative, divergent spatial designs on the basis of an architectural repertoire are excluded from the outset. The unfortunate separation of urban planning and urban design is particularly evident here.

Architecture and ecology, urban design, and environmental protection are only gradually coming together again in this field under the buzzwords of sustainability, resilience, or climate design. They identify a wide range of topics with spatial consequences that directly affect the materiality of our environment. Many of the desired effects can only be pursued in the long term and through monitoring. Others, however, have an immediate effect on the improved quality of the environment that can be experienced physically and sensually.

In the windy north, a window is opened to the outside so that the wind can push it into the frame; in the south, porticoes give shade to pavements. Thus, regional conditions once led to characteristic solutions and typologies, to the appropriate use of building elements and materials. Since modernist architecture believed that it could solve the same challenges through additive building technology, which is still being attempted the world over, climate-adaptive architecture now also offers an alternative at city scale. ‘Comfort’, originally a culturally connotated term in the sense of security and well-being, is reduced in building technology to a measurable feel-good criterion, with purely physical parameters such as temperature, humidity, air movement, and heat radiation. If, however, the optimisation of these parameters in architecture is understood as a task to be solved integratively, not as a retrospective technical upgrade of

the building, then it will already flow into the design. Thus the term 'comfort' is extended back to its original meaning, the impression of the materials becomes part of a comfortable atmosphere. Comfort could also be expected from the urban climate: exposure to the sun, shade for the hot seasons, cooling through vegetation and evaporation, avoidance of the urban heat effect through night-time cooling and ventilation. In addition to physiological well-being, almost all design features are important for comfort in a spatial situation, in particular the factors of narrowness, width and proportions, orientation, material and colour effect, and lighting mood.

To return to the subject of water: the treatment of rainwater in the city has changed since the 1990s as a result of increasing flood catastrophes. Retention at the site of precipitation has become standard. Puddles are now no longer a planning error, but are specifically designed, and sufficient retention areas are the motivation for characteristic open spaces, such as the *Landschaftstreppe* (Janson + Wolfrum) in Ostfildern near Stuttgart. Rainwater is deliberately used as a material and not banished as a damage factor to the concealment of a canal. Originally, the retention of short-term rainwater was just an instrument of control to eliminate negative effects on downstream users, a functionalism of the material cycle. But architecture has brought water back into the city as an attractive material. This is in line with Bruno Latour's general observation: "The typically modernist divide between materiality on the one hand and design on the other is slowly being dissolved away. The more objects are turned into things—that is, the more matters of facts are turned into matters of concern—the more they are rendered into objects of design through and through."[182]

182 Latour 2008

16 City as Text—
On Signs and Expressions

The environment is full of signs, they speak to us on all sides. They often drown out the immediate experience of architectural situations, to which they simultaneously belong as integral parts. Orientation in the city is largely governed by non-architectural signs, markings, traffic signs, or informational signs. Is there a shortfall in the communicative expressiveness of the city's architecture here? To what extent should it be self-explanatory?

Ducks and decorated sheds

Since the publication of *Learning from Las Vegas*, banal signs have also been regarded as a feature of cities. According to the authors of this influential book, architecture is supposed to convey meanings, not subtle expression, but a clear service to communication.[183] If need be, writing and text in the literal sense of the word must be used. Architectures of pop, entertainment, and trash play with this, and have since been accepted as components of cities and cultural landscapes. No matter what one's position on the matter, since the linguistic turn of postmodernism, it has been the case that architecture is also a sign, is fundamentally significant, and that architecture and the city may also always be read as text.

How do signs work?

According to semiotic theory, form and perceptible quality as the 'signifier' refer to something else, to an object or a meaning, the 'signified'. The correlation between the two is usually regulated by a cultural code, the learning of which is part of socialisation.

All objects, elements, and forms with which cities and their spaces or buildings confront us can in principle be understood as signs. For example, signs serve as clues: a certain form signifies an entrance, perhaps the form of a gate, or it signifies the river in the form of a bridge. The distant effect of a building's silhouette as a landmark provides orientation in the city, church towers still indicate the centre, while buildings or urban spaces refer to the history of the respective city in which they have been an active participant: there was once an uprising there, a popular festival has been held here for 200 years, and the Berlin Wall was there. Whole city plans and spatial sequences can serve as historical narratives—as long as they are not accidentally or deliberately wiped out.

183 Venturi/Scott Brown 1972

Sometimes a built structure as self-image refers to certain characteristics of its own, for example to its structural arrangement, its use, or its social status. Functionally planned urban spaces do this emphatically: parking lots, highways, football fields make use of unambiguous linguistic elements. Such references can, of course, be misleading.

Not infrequently, however, architectural signs convey meanings that lie outside the realm of architecture, relying on the mediation of conventions or a certain knowledge. Knowledge of a religious context or social background may then be necessary. Where this kind of sign prevails in architecture, it may happen that its material, space-forming, and situation-defining character recedes into the background, for example in favour of an iconographic layer of meaning or the representation of political power; sometimes it is concealed by narrative content or drowned out by an appeal, such as the invitation to consume in a retail street, where advertising, marketing, and the function of goods displace the spatial characteristics of architecture.

On the one hand, the signifier and the signified can be situated closely together in the architecture of the city. The church tower points to a church from afar. This connection can, however, fade, break, or even be flouted, as the example of a holiday resort on the Costa Brava shows, simulating a nearby village, except that the 'church' contains the lobby of a hotel. In other cases, however, the symbolic conveyance of meaning is based on a more or less far-fetched pictorial quality. Palm trees or bird figures serve as city outlines, so that they can be read from the air or in maps. The graphic renderings of Masdar City resemble a computer circuit board.

Often what a sign refers to is itself the starting point for further references, which can continue in an endless chain. The mediation of a certain meaning (denotation) is overlaid with partly diffuse side effects and additional meanings (connotations). For example, Jørn Utzon's opera house in Sydney figuratively denotes sailing ships or open shells, overlaid with connotations of floating lightness and demonstrative openness. The emblematic structural elements of Charles W. Moore's *Piazza d'Italia* in New Orleans refer denotatively to well-known historical building elements and regions of Italy; a boot-shaped figure in the floor covering denotes the contours of the Italian peninsula. For the overall effect of this sign-laden ensemble, however, ironic and theatrical connotations are crucial, which, in the sense of a parodistic *Italianità*, were probably meant to connote the numerous Italian immigrants in the city. While postmodernism discovered a desire to play with signs, this example shows how quickly an excessive use of narratives can lead to oversaturation. Architecture then all too easily gambles away its potential to remain open to any communicative use.

The situational dependence of sign processes relativises the unambiguous classification of signs and meaning. Therefore, those urban design concepts that specifically seek to make use of certain iconographies from architectural history are problematic, since they can only be read with the requisite prior knowledge. This may work for individual buildings, whose interpretation the art historian or architectural theorist can at least enjoy. The architecture of the city, however, which in its historicity and urbanity is always multi-coded and ambiguous, is rarely suitable for the transmission of specifically programmed messages.

The city as palimpsest

Historical strata are omnipresent in European cities. Even the various major growth spurts of industrialisation and modernity are not inscribed on a blank slate. The cultural landscape that once enveloped these cities is still legible in traces. Since postmodernism, since Rossi and Venturi, understanding the city as a palimpsest has been state-of-the-art in urbanism. Particularly since the challenges currently lie in the transformation of existing building stock, and the spatial reference to older historical strata is not only appreciated by experts: a park on the site of a former steelworks in Duisburg-Nord, the conversion of harbours into residential areas, theatres in Wilhelminian building yards, or the creative industry in Peter Behrens' tobacco factory in Linz. Further examples could be listed ad infinitum. But often not much remains of the former structure, sometimes only a small representative sign, such as the Thomas-Converter, a reminder of the huge Phoenix steelworks in Dortmund. The investors in the new settlement on *Phoenix See* did not want to burden themselves financially with one of the last production facilities. Signs of memory decouple themselves from the architecture of the city.

Roland Barthes points out that it is not only the well-read historian who can experience the historicity of the city. "(...) the city is a writing; he who moves about the city, e.g., the user of the city (what we all are), is a kind of reader who, following his obligations and his movements, appropriates fragments of the utterance in order to actualize them in secret. When we move about a city, we are all in the situation of the reader of the 100,000 billion poems of Queneau, where one can find a different poem by changing a single line; unawares, we are somewhat like this avant-garde reader when are in a city."[184]

Readability versus immediate expression

On the one hand, legibility is an indispensable prerequisite for the comprehensibility of architecture, and its rational transparency is the basis for intellectual pleasure in

184 Barthes 1967/1986, p. 95

deciphering an architectural composition. On the other hand, the ideal of satisfaction through a form that is completely conclusive in relation to its content, as demanded in eighteenth-century rationalism (*architecture parlante*) or twentieth-century functionalism, has proved illusory.

Umberto Eco criticises Lúcio Costa's plan for Brasília: "*The moment the architect seeks the architectural code outside architecture, he must also design its significant forms in such a way that they satisfy other codes of reading.* For the historical situation on which he relies to determine the code is more transient than the significant forms with which he fills it. (...) The act of architectural communication certainly contributes to change the circumstances, *but it does not represent the only form of practice*."[185] This is a critique of the modernist hubris that seeks to generate a symbolic form from a given function without taking into account its temporal constraints. The complexity of the urban inevitably falls by the wayside. Brasília's architectural programme turned out to be inadequate, in that the part of the city with the emblematic form of the bird absorbs only ten per cent of the city's population, while satellite cities and favelas must compensate for the deficits. But even if the sign no longer corresponds to the originally intended meaning, despite Eco's criticism, the relation between sign and meaning has proven to be elastic. After fifty years, Costa's *plano piloto* has assumed the role of a super sign for the city centre, comparable to a European old town. No building form, no form of the city, allows an unmistakably unambiguous reading. Even if it allows for certain undisputed interpretations, each form has an extended spectrum of meanings that extends beyond this, and in the course of time it acquires new meanings and thus acquires new functions. The very diversity of meanings that do not have to be clearly read is central to the architectural experience.

In fact, a reading mediated by signs only encompasses a part of architectural communication. Architecture communicates itself principally through the immediacy of its expression, which in turn has a direct effect on us as an impression. To do this, architecture does not have to become a signifying system, whose code must be known in order to be able to read it, rather form and arrangement can directly express many of its meanings. Although it is said that the formation of a spatial articulation, for example, makes a change of direction 'readable', so that the form of a gate signifies the entry into a city quarter, or a gradient signifies the proximity of a river, in fact one is guided in a direction without the need for a codified function as a sign. The modes of expression such as appeal, challenge, or gesture[186] demonstrate behaviour, action, or possibilities of movement in an immediate and vivid way. Key architectural situations, as anchor points for orientation in the city, and structures that make the city memorable, lend it immediate clarity and legibility.

This train of thought began with the question of whether it was a failure of the city's architecture if anything and everything required referencing with printed signs. Admittedly, it would be going too far to demand that the architectural form itself should assume all types of urban spatial communication. But the architectural repertoire in this field is rarely exhausted.

185 Eco 1968, p. 249 **186** Janson/Tigges 2014, see corresponding keywords

17 A Well-Considered Spatial Framework— *On Structure*

The idea that we can grasp or work on the architecture of a city as a whole is nowadays scarcely conceivable. But the goal of achieving an identifiable architectural structure, at least in limited areas of the city, is inherent in the aspiration to treat the city as architecture. Kevin Lynch's influential investigation of the pictorial impact of an architecture of the city amounts to the demand for clarity and legibility, for the recognisability of its parts and their interconnections.[187] If the interplay of the parts with the whole can be traced at different levels of scale according to a transparent structure, then a consistent image of the city can develop. Such transparency creates a sense of security and, in certain cases, offers intellectual pleasure. While rational transparency generally plays a role in the history of architecture as a criterion of architectural quality, in some cases it is a special feature, for example, in ideal urban planning such as the strictly geometric scheme of the city of Karlsruhe, which was praised by Heinrich von Kleist: "It is as clear and luminous as a rule, and when one enters it is as if an ordered mind speaks to us."[188]

Another kind of intelligibility and memorability of urban spatial structure is not based on a geometric order, but is achieved through a sensitive orientation to the local conditions. The city becomes readable and intelligible, for example, when the buildings form a unit with the natural topography or when their shape can be identified as crystallisation at a historical core.

Both types of urban structures appear side by side in history. Colonial cities or absolutist city foundations, Berlin's Hobrecht Plan or Cerdà's urban expansion of Barcelona in the nineteenth century, followed geometric schemata for instance, while other cities or districts developed from settlements on hilltops, in valleys, along rivers or bays, from agglomerations around castles, monasteries, or road junctions, successively making use of local conditions. However, geometric ground plans do not always go back to a design, nor irregular structures to an evolved settlement.[189] Sometimes designed cities are misinterpreted as evolved, like Munich's urban expansion designed by the architect Theodor Fischer at the end of the 19th century with its irregular curved street pattern. Or informal districts such as some in Mexico City or in Cairo seem to be the result of state planning due to their strict geometry. But in fact they are based either on illegally organized subdivisions or on ancient agricultural land patterns.

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187 Lynch 1960 **188** Kleist 1801, p. 283 **189** Braunfels 1966

An overall architectural structure is capable of offering what Kevin Lynch understands by the "imageability", or "*visibility* in a heightened sense, where objects are not only able to be seen, but are presented sharply and intensely to the senses. (...) Such a city would be one that could be apprehended over time as a pattern of high continuity with many distinctive parts clearly interconnected." Lynch emphasises that this does not necessarily mean "something fixed, limited, precise, unified, or regularly ordered, although it may sometimes have these qualities". Rather, it is simply "to consider the need for identity and structure in our perceptual world".[190] Above all, it is a matter of "orientation in the living space".[191]

Through orientation, humans anchor their own spatial disposition in the spatial structure of their surroundings. Because we depend on being able to find our way in space, orientation is on the one hand a prerequisite for a feeling of security and comfort. On the other hand, it offers us the basis for spatial discoveries and new experiences. To this end, it must be possible for us to form an idea of a comprehensive spatial structure. This is usually done by producing a cognitive map (mental map) in two different ways. Either one imagines the space as a more or less complete structure. Or, since a ground plan or site plan are not immediately perceptible, one imagines the context of the spaces alternatively as a linear sequence of sections of movement or procedural steps between individual points. In such cases, only certain structural properties of the space are utilised and imprinted on memory. Architectural design can facilitate orientation in the space of the city, for example, through memorable sequences of spaces, overviews and vistas, axes of movement or vision.

The structure and form of a neighbourhood or an entire city can be recognised by the way in which it is accessed through the transport routes in the form of a distinctive road network and a visual hierarchy of paths. Particular spatial relationships can be created by laying out axial systems: in the simplest form through an orthogonal street intersection, such as *cardo* and *decumanus* in the Roman *castrum*, for example, or the intersecting market streets in the *Zähringen* cities, or as a wide-ranging arrangement of spaces and paths, such as in baroque Rome in the axial system of Sixtus V, which functionally organises the networking of former pilgrim routes and today's tourist streams while at the same time staging them theatrically. The large-scale axial order structuring a city becomes legible at individual points when places such as the *Odeonsplatz* in Munich reveal intersections of the north–south axis with the east–west axis. If they are regionally networked, such axes extend into the suburbs or the surrounding countryside, as in this case through their extension beyond the *Siegestor* and the *Propyläen*.

But the structure of a city is not only tangible in the form of axial frameworks or a network of paths. The Sistine Axial System is not only a network of routes, but also invests the cross-city spatial interrelationship of places of assembly, formerly pilgrim churches, with considerable significance. Thus, the large-scale spatial relational structure of some distinctive architectural elements forms the basis for a recognisable overall shape of the city. Distinct neighbourhoods or other spatial sections of the city, as readable forms, can also be components of large-scale configurations. The clarity of their contours and the visibility of their edges play an important role here.

The structure of a city or settlement has a decisive influence on urban life. Nevertheless, we do not perceive the structure of an entire area as such directly on site, in city spaces, streets, and squares. It usually only becomes visible on the map, where structural parallels to neighbourhoods in other cities or to neighbouring areas also become discernible. Plan and map abstract reality by isolating individual structural features and represent a matrix of interpretation. We can interpret them as the key to the character of an urban area and as the way in which historical and social structures emerge through circulation systems, building types, and in the changes from one neighbourhood to another. Once recognised, the structure can then also be identified in reality on site. The Finger Plan of Greater Copenhagen, typical of post-war spatial development plans, has indeed had a long-term effect through its pictorial quality—a hand with five fingers—despite the fact that it was not formally adopted.

Urban design as landscape architecture

The city derives its unmistakable character from its location in the landscape and its effects on the character of urban spaces. If urban development is apprehended as a form of landscape architecture, then the shape of the city profits from the landscape features and the uniqueness of place. While schematic grid cities appear interchangeable and the diffuse sprawl must struggle against its facelessness, the location on a hill, on the river, in the bay, or in the basin can make the appearance of entire towns and cities in their own way unmistakable. Paul Zucker, who examines the city in its appearance as a whole in his study *Entwicklung des Stadtbildes*,[192] speaks in this context of the "sculpture of the city body" and points out that in Rome, for example, even the levelling by building layers over centuries has not eliminated the character of a city of seven hills. An elevated position with a wide view, such as that offered by a hilltop, becomes a distinctive experience in a locality that crowns the hilltop, as for example in Toledo or Perugia. The "embedding in a basin" in turn is described as characteristic of cities such as Innsbruck or Stuttgart: "Almost every street runs towards a mountain wall as a visual closure. (...) Thus the landscape reaches into the city from all sides, as

190 Lynch 1960, pp. 9–10 **191** Op. cit., p. 9 **192** Zucker 1929

it were."[193] The concave enclosure of a bay, in its structural embrace in the manner of an amphitheatre, is experienced above all in port cities such as Genoa, as is the grandstand character of a hillside landscape thanks to its terraces, as in Valparaíso.

The character of the cityscape will be further enhanced by such features if the architecture of the city thematises the landscape potential in the cityscape, exploits it scenically, and utilises it in detail for the architectural spatial treatment of its individual neighbourhoods. Terraces and platforms, for example, then profit from the elevation of the topography; the ascent provides an opportunity to install generous staircases, peaks become lookout points, and striking features of the landscape become accessible via bridges and pulpits. A location on the waterfront benefits the city when it turns its face to it, it finds creative expression through a public waterfront promenade, and through appropriate types of residential buildings, one benefits from living on the waterfront. The decisive goal of Barcelona's successful urban renewal was to bring the city to the sea. The water of the Inner Alster in Hamburg is enclosed almost like a square by the facades of the houses; in the new harbour cities of Hamburg, Copenhagen, or Amsterdam, the old harbour basins are the structuring spaces.

Designing cities through landscape

In landscape urbanism, a design approach has been introduced into urbanism that goes beyond the clever inclusion of landscape potential and starts with landscape as a structural concept. James Corner, one of its protagonists, notes a failure of classical urban design in the face of the challenges, particularly in the USA in the 1990s, where there is a huge gap between commercial land seizure in the form of subdivisions on the one hand, and new urbanism on the other. Methodical approaches, however, that treat the landscape as a conceptual starting point in the sense of non-hierarchical structures, aim to overcome the obsolete contrast between centre and periphery. "Landscape urbanism views the emergent metropolis as a thick, living mat of accumulated patches and layered systems, with no singular authority or control. Such a dynamic, open-ended matrix can never be operated upon with any certainty as to outcome and effect. It escapes design and, even more so, planning. The contemporary metropolis is out of control—and this is not a weakness but its strength."[194] Postmodern metaphors such as net, matrix, patchwork, collage, conglomerate, felt, plateau, archipelago, rhizome, and hybrid are linked to an idea of landscape as a non-hierarchical structure that is constantly changing. Above all, the landscape effects of the large modern networks of technical infrastructure possess a structural potential that is still a major theme and opens up ways of dealing with their deficits. The fact that with this turning away from modernist hierarchical planning, design was also jettisoned, is probably more due to the pamphleteering style of the text from which the above quote is taken. Ten years later, James Corner is one of the architects of the High Line

in New York, a classic neighbourhood development by means of the revaluation of urban open spaces, which works with a strong design setting. He now runs a global design studio.

But since urban ecology became the focus of urbanism more than forty years ago, and urban regions about thirty years ago, landscape has indeed taken on a different significance. Since then, designing cities through landscape has been an approach in urbanism for working on overall urban structures on a larger scale: regional landscape parks structure large-scale regions—for example the decentralised Stuttgart region—with landscape spaces in complex layers on several levels. Whereas previously landscape areas were negatively defined as protected areas—as a result of everything that is forbidden there—it is now a question of developing dispersed or small-structured urban regions from the overarching landscape areas and networks regarded as valuable. The *Emscherpark* in the Ruhr area, the *Regionale* in North Rhine-Westphalia, the *Pferdelandpark* in the border triangle north-west of Aachen, the *IBA See* in Brandenburg: in Germany alone there are many such approaches.

Public spaces as structural spine

City architecture can mean two things: for one thing, the architectural characteristics of the city as a whole, the urban structure and public spaces, which is to say, the city as architecture. Secondly, the architecture of the buildings in the city. The two levels often do not coincide; in practice, different parties are usually responsible for them. At the level of the overall structure, an urban design concept is often developed through competitions in the case of new planning; local authorities translate the concept into building law and produce the infrastructure. At the level of the individual buildings that fill neighbourhoods, on the other hand, private builders or investors construct buildings within the framework of planning and building law according to their own ideas, which do not necessarily correspond to the intentions of the urban design concept. Against the background of such a discrepancy, how can the quality of a city's architecture be optimised?

In an OMA project, design control over the implementation of the urban design concept was to be achieved by, on the one hand, providing stability to the urban structure through a scaffold of open spaces, while, on the other hand, filling the spaces in between with the restrained control of urban development: for Melun Sénart, a *ville nouvelle* near Paris, open space bands were to form the structural framework on the scale of the existing landscape. The 1987 plans stated: "It would require (...) innocence to believe, at this end of the twentieth century, that the urban—the built—can be planned

193 Op. cit., p. 59 **194** Corner 2003, p. 59

and mastered. Too many architects' 'visions' have bitten the dust to propose new additions to this chimerical battalion. Today, consensus builds around avoidance; our most profound adhesion is to the non-event. The built is now fundamentally suspect. The unbuilt is *green, ecological, popular.* If the built—*le plein*—is now out of control—subject to permanent political, financial, cultural turmoil—the same is not (yet) true of the unbuilt; nothingness may be the last subject of plausible certainties."[195] This approach was exemplary in the 1980s and widely publicised through a graphic illustration of the plans and models. Renowned, but never implemented, it is probably the best-known example of the structural concept of designing cities through landscape.

Even though the aerial view of Sénart's actual development does not show any traces of it to this day, the complementary treatment of the two urban components proposed there corresponds in principle to a meaningful approach: on the one hand the structure of the public spaces, on the other the development of the building sites. If the division of an urban area into streets and squares, open spaces and public facilities, is sufficiently distinct as a design framework, whether due to landscape features or their structural form, private building activity in neighbourhoods can develop relatively freely, tamed by a few guidelines, even in the form of mediocre building architecture, without the overall character of the urban structure having to suffer as a result. Thus, in many cases, the classic design of urban expansions of growing cities has worked well as long as there was still a small network of investors and medium-level homeowners who brought diversity to the process. In view of the current trend for investors to develop entire building areas from a single source, it is worth making the effort to keep the plots small and create threshold spaces to promote a diverse mix.

Public spaces are in a complementary relationship to private construction sites. They offer the better prerequisites for becoming the crucial stabiliser of the architectural structure of a city. They are capable of being equipped with creative distinctness. By supporting the scenic aspect of urban situations, they become preferred locations for urban performative processes. What constitutes the urban activity of a city is mainly crystallised here. The *Landschaftstreppe* in Ostfildern near Stuttgart or the quays of the *HafenCity* Hamburg's waterside areas, for example, are such locations, but at the same time they are indispensable structural elements in making these places unmistakable. The relationship between the weak control of the building sites and the strong structural framework of public spaces could be understood as the relationship between scope and distinctness that has already been described as a characteristic of architectural competence (Chapter 6), a relationship of far-reaching significance for the city as architecture.

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195 Koolhaas/Mau 1995, p. 974

Urban Design

18 A Method for the Concrete Case— *On Design*

In the modernist age of the 1960s, in what Horst Rittel called the scientific age, it was not only Buckminster Fuller who thought of planning as an alternative to politics in putting the world to rights. One only had to approach it systematically and scientifically enough. It was the same motives that separated urban planning from urban design at that time, and spatial planning from design in architecture. However, that cultural and political decisions could be rationalised in this way soon revealed itself as an error. Proponents of such attempts, such as Christopher Alexander, who also sought to systematise the architectural design according to strict scientific criteria, soon retreated in disappointment. Better architecture or better cities evidently could not emerge in this way.

Design thinking

We understand our contemporary times as 'Reflexive Modernity', marked by action in uncertainty, openness, and underdetermination of processes. All these factors focus on design as a specific method for solving problems. Design (to design) is understood as a third, independent form of knowledge located between the rational sciences (scientific empiricism and hermeneutics in the humanities with their quantitative and qualitative methods) on the one hand, and art (the various artistic methods of gaining knowledge) on the other. Rather than isolating problems, taking them apart, and treating them as controllable sub-problems, designing has the capacity to synthesise contradictory and incomplete information, goals, and values. Design affords solutions to tasks and problems that are excluded from inductive or deductive rationality and that have been labelled by Horst Rittel as "wicked problems".[196] Rittel "pulled the rug from under the planners' belief in rationality by astutely demonstrating that their attempt to be rational must itself run into dilemmas of rationality".[197] Through the iterative approach of designing, on the other hand, complexly structured problems, for which the right solution is not available or conceivable, can be overcome.

The term "design thinking" encompasses these competences. Design as the "practice of not-knowing"[198] is widely appreciated in reflexive modernism as a methodological procedure that deals with "real-world situations and the possible means of changing them",[199] and therefore is beginning to establish itself beyond the classical design disciplines in a broad field of applications.

196 Rittel/Webber 1973 **197** Reuter/Jonas 2013, p. 15 **198** Dirk Baecker, quoted after Jonas 2014 **199** Jonas 2014, p. 75

Following the architectural theorist Achim Hahn, architecture can be understood as a "discipline of practical reason". It is not alone in this; law, medicine, pedagogy, economics could also be classified in this way. All these disciplines have to do with specific cases and elude a general theory, because: "The solution to the concrete case is fundamentally *unavailable* to a general theory."[200] Basic problems of situated real-world action thus constitute the core areas of practice. Their solution depends on the concrete conditions of the particular situation. In architectural design, urban design and architectural urbanism have a method at their disposal that puts the concrete case at the centre, and at the same time have a rich repertoire for mastering spatial complexity.

While the auxiliary disciplines of architecture work with quantitative or qualitative analysis, with inductive or deductive theory formation, design in architecture is understood as a method of 'invention', among other things, by abductive theory formation. To achieve this, a conceptual, theoretical penetration of the task is first necessary and, building on this, the development of a concept. Achim Hahn discusses "conception" in accordance with Vitruvius's concept of *ratiocinatio*: "The design as conception draws attention to the anticipation that any design is capable of."[201] Hahn describes "design therefore as an anticipation of the future (...). The design as conception anticipates something intellectually and visually and can only do so by relating the future or the new with the known and familiar."[202] Design then methodically undergoes a process of evolution–variation–selection–restabilisation. Real-world phenomena are linked with systematic knowledge, the social with the technical. Design combines social, technical, and aesthetic practice, is always both historically and contemporarily oriented, thus transdisciplinary. It addresses such diverse things and conditions as spatiality, atmosphere, comfort, sustainability, everyday life, quality of life, and social conditions. Methodologically, a design is creative and synthesising, linking implicit and explicit knowledge. The design brings a thing into form, gives it shape and expression. Since complexity is mastered in design in order to achieve a well-considered structure of parts and the whole, one often speaks of 'architecture' in the figurative sense. After all, the usefulness of the results depends on them being adequately documented, visualised, and illustrated in order to communicate them in this way and make them available for further processing.

The object of architectural and urban synthesis is usually a social situation that is difficult to grasp, with a multitude of unpredictable factors and unforeseen human interventions. It cannot be dismantled or simulated; its architectural treatment can only be explored in concrete execution. This entails a close relationship between research and practice. In contrast to the hubris of saving the world, which is still imputed to architects in the spirit of modernism, the method is to bring a hypothesis into play.[203] There

is no perfect solution, at most a better one—never the right one. Above all, however, alternatives can be created in the process of designing, and their discussion is essential, especially in urban design.

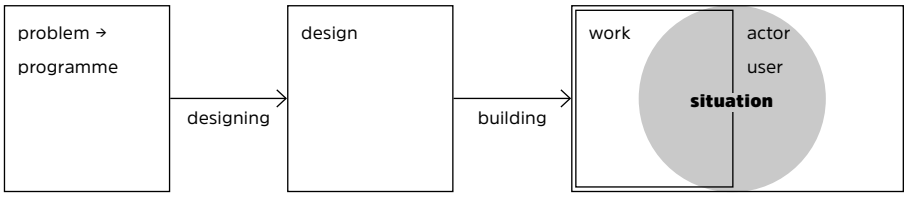
There is an urgent need to make greater use of the skills and potential of design again in urban planning, instead of reducing the role of design to the short phase of urban design competitions or pilot projects. As if one had already 'the design', although it will be crushed in the ensuing processes. Designing does not end with the draft on a sheet of paper, but, as architects know, runs through the entire planning and construction process. Design begins with the definition of the problem at the outset and continues right up to its subsequent use in the adaptation of the architecture by its users.

Designing the city

Looking at the entire process, one notices various practices that differ primarily in the role played in the design process by the fundamental feature of urban architecture described in this book from different angles: the interplay between the construction and the activity of the inhabitants, which determines its nature, and which, in its performative character, turns the architecture of the city into a constellation of spatial situations.

If one examines how the architecture of the city is to be treated in this complex sense through design, it becomes apparent that the particular interest in the character of the situation and the performative potential of the architecture, dependent on different design practices, can concentrate on different phases of the overall design process. On the one hand, the focus may be on the realisation of the 'good' urban design, which is then left to appropriation by a creative urban society. In other cases, the aim is to develop performative potential already during the design process. In the highly simplified graphic representation of the design process below, the circle in each case marks the area in question.

200 Hahn 2008, p. 204 **201** Op. cit., p. 180 **202** Op. cit., p. 187 **203** Op. cit., p. 204



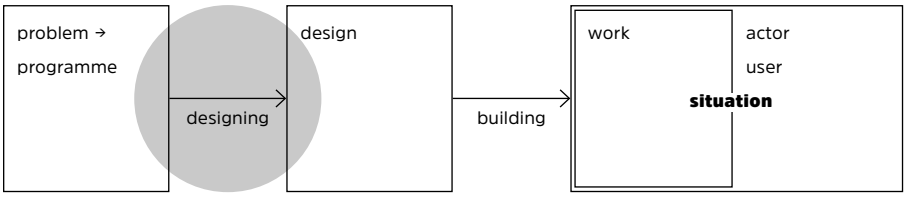
In the first instance, the design is oriented towards the work to be executed as its result. Yet although architecture as a "heavy medium of communication"[204] is constrained by physical, anthropological, and social bonds, the ongoing reciprocity with the comprehensive situation also opens up scope for use, appropriation, performance options, and variable interpretations for the work in question. Each architectural element of the city is inscribed with its performative character. The result-oriented design, which aims to achieve the finished product, is also capable of mobilising the performative potential through which it intervenes in the structure of the city and creates urban spaces. Architecturally distinct spaces have the capacity to become urban situations that are either perceived casually in everyday life or as memorable urban spaces attracting special attention. The creative repertoire of architecture provides the instruments for this. There are many examples of contemporary designs that create stimulating settings for urban events. These designs create urban spaces of possibility and explicitly direct their intention towards the performative situation of the outcome. Three examples whose urban qualities also include scenic features are provided to illustrate this:

1. The *High Line* in New York creates a space for movement, a linear park that offers completely new access to the Chelsea district, which has been in a state of transformation for some time (architects James Corner, Diller Scofidio + Renfro — Fig. p. 128).

2. The *Stadshal* (city hall) in Ghent was conceived during a lengthy design process as an open "living space"[205] for the urban society. In this sense, the design idea was persistently pursued through all setbacks and at the same time made increasingly distinct. Actually only a canopied square, the service facilities are so skilfully arranged as to lend themselves to multiple uses (architects Robbrecht en Daem, Marie-José Van Hee — Fig. p. 40).

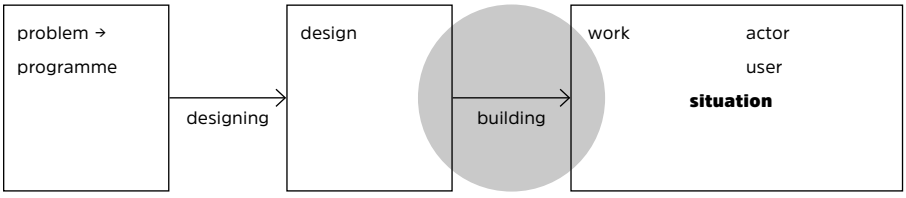
3. The *Dreirosenbrücke* in Basel contains a wide motorway link in its construction volume, but on the covering section runs a much narrower city street. This has created space for a very wide walkway overlooking the Rhine and the city. The pedestrian space in the middle of the river has become a place to linger (architects Steib + Steib — Fig. p. 22).

Designing 2



A design less focused on the work is interested in the performative power of the design process itself. The future residents are integrated into the design process or even to some extent into the construction process, for example by means of participation in building owner communities. The aim is not only to build cost-effectively, but also to optimise the design for later use and appropriation. Among the many projects that are emerging everywhere today, one with clear urban potential is selected here: the cooperative *Kalkbreite*[206] in Zurich was founded after a public workshop in the neighbourhood with the aim of developing a very complicated plot of land, which has been occupied by a tram depot. In a participatory process, the group members developed a complex project together with the architects (Müller Sigrist 2014), who became involved through a competition. Commercial and public uses now surround the tram terminal, on whose roof lies an open space, inexpensive apartments, new forms of accommodation and flexible living spaces, supplemented by spaces for encounters and exchanges. One of the many reviews of this project describes it as "urbanity in a box".[207] The boundary between the careful development of programme by the client or project developer and the design of the spatial solution becomes blurred. These two stages of the design process mesh.

Designing 3

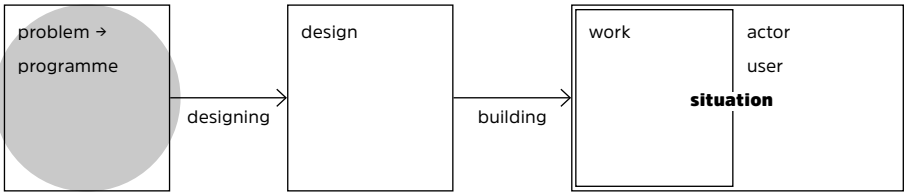


A design practice that shifts the focus from the work to the event finds diverse inspiration through art. Over the last two decades, a culture of urban forms of action has developed that "makes the city" with architectural performances.[208] The overlap with

204 Joachim Fischer, quoted from Baecker 2015, p. 66 **205** Robbrecht et al. 2013, p. 19 **206** www.kalkbreite.net **207** Song 2015 **208** Wolfrum/Brandis 2015

artistic practices of performance art is self-evident. The architectural work in the narrower sense is often ephemeral, as in many projects by Raumlabor Berlin, for example "Shabbyshabby Apartments" commissioned by the Münchner Kammerspiele, or "The Cineroleum" of Assemble Studio from London, the "University of Neighbourhoods" in Hamburg, or the "Große Potemkinsche Straße" in Wittenburg. The concept is strong, the detailing of the design is often very far-reaching, building and use merge, but the work itself is sometimes almost invisible or explicitly temporary; the architecture as a work only acquires presence as a component of the urban situation. The blurring that arises in the process of production and construction is part of the concept. Total control is not sought, but professional competence is not abandoned.

Designing 4



Another shift in the focus of design practice is that design practice itself, in an even earlier phase, generates urban reality through its performative power. Performativity extends to the complex decision-making processes in which a large number of actors are actively involved. Architects do not predominate, but instead support the procedures and processes with their design competence. These procedures clearly develop beyond conventional participation through citizen participation or the participation of the 'affected', which developed in the 1970s and which has fossilised in certain formalisms.

Urban design

Cities are undergoing a new process of transformation. Structural change, migration, and new diversities must be confronted. Here it is important not to limit oneself to mere conflict moderation, but to promote active involvement in 'making the city'. Many new design and planning procedures therefore go through an experimental stage and are successively developed further as workshops, citizen appraisals, interim uses, or multi-level competitions with intervening public debates. Small projects are particularly open to experimentation; in their totality, they are already changing the design culture in cities. Not-for-profit grassroots projects are often the only successful ones in muddled conflicts pertaining to urban planning routines. Hand-made urbanism,[209] micro-interventions, and micro-planning focus on local initiatives and action groups. Increasingly, their creative strategies are being incorporated into formal spatial design

processes. Particularly in large-scale and long-term projects, complex transformations, and the redesign of larger urban territories, the problem arises of who the actors in a complex urban society may be. All relations are in flux: from expertise to self-determination, from professional administration to active citizenship, from representative politics to direct engagement, from communication to collaboration.[210] No linear development can be identified here. In this respect, the debate about the liberalisation of design processes is embedded in the discussion of ethics, politics, and expertise in both everyday society and scientific theory. The task of design is increasingly shifting from the finished plan to the process of designing, to design thinking.

It is precisely in the face of this uncertainty, underdetermination, and multiplicity, as well as the necessity for "collective experimentation" (Latour), that design offers an appropriate methodological approach. We see the emerging worldwide interest in the methods of designing, in design thinking, and that "(...) the spread of the word 'design' doesn't come at a time when there is less to do; it comes at a time when there is more to do".[211] In urbanism, an ever greater diversity is evident with regard to how cities develop spatially, what can be described as an urban way of life at all, and what forces they generate and modify. Against this problematic background, one of the strongest arguments offered by 'architectural urbanism' is its methodological toolkit of design: urban design.

209 Rosa/Weiland 2013 **210** Terkessidis 2015 **211** Latour 2008, p. 7

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1 Giuseppe-Tartini-Platz, Piran (architect Boris Podrecca)
2 Iberapuera Park, São Paulo (architect Oscar Niemeyer, landscape architect Roberto Burle Marx)
3 Dreirosenbrücke, Basel (architects Steib + Steib)
4 Between Place de la Comédie and Esplanade, Montpellier
5 Place de la Daurade, Toulouse
6 City Hall, Ghent (architects Robbrecht en Daem, Marie-José Van Hee)
7 Piazza San Marco, Venice
8 Piazza Unità d'Italia, Trieste
9 Hammarby Sjöstad, Stockholm
10 Via Rizzoli, Bologna
11 Federal Center, Chicago (architect Ludwig Mies van der Rohe)
12 Benidorm
13 Sperlonga
14 Beijing
15 Parque do Flamengo, Rio de Janeiro (landscape architect Roberto Burle Marx)
16 Torres de Satélite, Mexico City (artist Mathias Goeritz, architect Luis Barragán)
17 Scharnhauser Park, Ostfildern (architects Janson + Wolfrum)
18 High Line, New York (landscape architect James Corner, architects Diller Scofidio + Renfro)

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