

The Collective Power of the Single Building

How Small-Scale Can Influence Large-Scale in Urban Planning in the Future

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“Perhaps the best definition for the inhabitants of an early city is that they are a permanently captive farm population.”

– Lewis Mumford, *The City in History* (1961)¹

People have been meeting up in public spaces since time immemorial—praying, talking, bargaining, eating, arguing, and making music together. Living in communities and wanting to exchange views and experiences physically and on the spot are characteristic traits that are primordially human and will never be replaced by virtual platforms. Touch, sounds, smells and glances produce stimuli that cannot be transmitted across electronic networks, which can neither replace nor conjure up our physical and mental presence. A single glance may often say more than a thousand printed words. The greater the density of our surroundings and the scarcer the public space available, the more we tend to appreciate how important it is to genuinely experience the reality of spaces right up close. These are the conditions in which contacts are made from person to person and in which stimuli and impulses are transmitted.

When we look back at the way in which the railways developed during the age of industrialization, it appears that this new form of transport gave rise to a network of links between the commercial centres and had an accelerating effect on the cities and their growth. Railway stations—large-scale public receptacles built to house the railway infrastructure—often formed the interface between existing urban structures and new urban areas that developed during industrialization in the 19th Century.

Planning new structures allowed for the creation of a very wide and diverse range of different usages. In accordance with traditional models, buildings that served the driving forces behind the economy such as education, manufacturing, and trade were again intermingled with buildings for residential and religious purposes. The ground floors, providing a kind of connecting medium, became established as vital levels of urban life. The next level of public space was established by streets, squares, markets, parks, and gardens. By definition, these are all publicly accessible places that even today still function in accordance with agreed social rules, promoting social, cultural, and economic exchange among people.

In the early 20th Century, Ebenezer Howard advocated the Garden City as a model in reaction to the growing separation of town and country. Howard cited the town as symbol of society, of mutual help and friendly cooperation, of broad relationships, and of science and art which contrasted the country as symbol of God’s love and

care of men.² In its structural pattern, the Garden City is arranged circularly around a core city, with residential areas alternating with green spaces, intended as an open criticism of the terrible living conditions then predominant in English cities and as a response to disproportionately high rental costs.

In contrast to established 19th-Century conceptions of the city, life in the Garden City focused on residential usage. Many years later, the Congrès Internationaux d’Architecture Moderne (CIAM) developed a fundamentally new principle for urban planning. In the Athens Charter that he presented at the Fourth CIAM Congress in 1933, Le Corbusier produced a radical manifesto advocating a revolutionary way of thinking about and planning cities. In essence, the Congress concluded with the idea of a functional form of urban planning that regards itself as mediating in an interplay between individual functional areas within the continuum of the city. This modernist view of urban planning passed into European culture during the postwar period and influenced planning work in many cities. The disentangling and separation of functional areas still provide the framework for many assumptions and tools used in urban planning today.

Fortunately, modern cities have proven to be more adaptable than what was originally put down on paper, and in the end they are also to some extent resistant to passing trends in planning. Not only the built masses of the city itself, but also its inhabitants dispose of a degree of robustness that should not be underestimated. It is people who shape buildings, and they do not all follow the latest fashions. It is all about appropriation: city-dwellers are showing that they are able to appropriate areas and spaces to themselves and pour the widest possible variety of functions into them. The result is a natural, refreshing diversity.

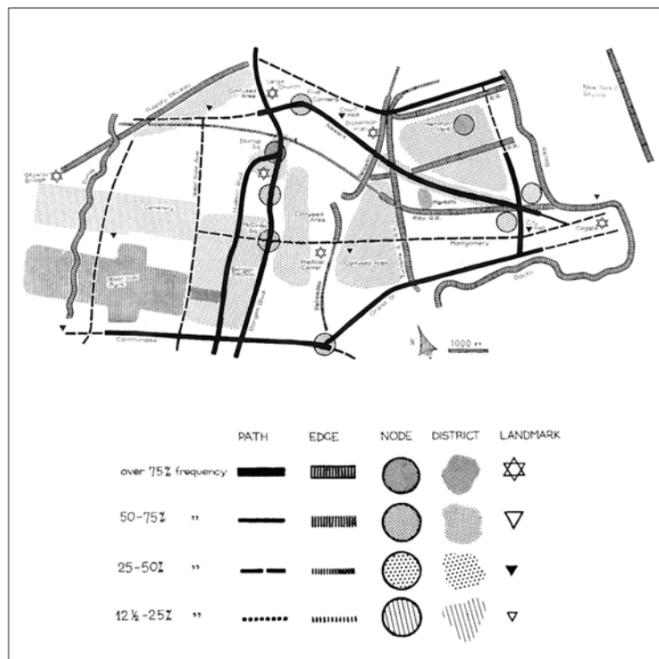
“Not only is the city an object which is perceived (and perhaps enjoyed) by millions of people of widely diverse class and character, but it is the product of many builders who are constantly modifying the structure for reasons of their own ... No wonder, then, that the art of shaping cities for sensuous enjoyment is an art quite separate from architecture or music or literature.”

– Kevin Lynch, *The Image of the City* (1960)³

This statement by Kevin Lynch initially suggests hope, but the appearance is deceptive. Today, as there are more people living in cities than in the countryside and the imbalance is likely to become even more extreme in the future, established political and social planning processes are often unable to keep up with

Herzog & de Meuron, *Caixa Forum, Madrid, Spain, 2008, view from the southeast.*





the dynamic force of the urban centers' rampant growth. In the face of an urgent need to create space, and also due to shortages of finance, central aspects of urban development such as the production and implementation of master plans are often left to private or institutional investors. The established competence and independent authority of those responsible for planning in the cities are often ignored and ultimately undermined. Public responsibilities of the democratically elected representatives who are involved in urban development shift into private hands.

The rapid influx of new city-dwellers fundamentally challenges efforts to achieve a quality of life suited to the circumstances. Both the built and natural environments are coming under pressure. Never before have so many areas of public usage been privatized in cities throughout the world—in areas such as education, health care, living for the elderly, trade, culture, infrastructure facilities, etc. Public market halls are a good example, as they have given way to department stores and malls in which the customer is subordinated to the applicable house rules—often making the spontaneous occurrence of unexpected events impossible and refusing entry to unwelcome guests. Particularly in the booming big cities—in Asia, for example—privatized areas are increasingly pushing out publicly usable and freely available spaces. For reasons of financial shortages and increased efficiency, cities are passing the responsibility for creating and managing public space to private investors. The latter are enticed with higher usage bonuses for their development projects, and they compensate for the obligations agreed with the authorities by raising the rental income and sales returns. In the short term, this is usually good business for both sides, but in the long term it is a pact with uncertainty. Seen over the long term, private investors are never as robust as municipal communities and they tend to adapt their structures to economic facts very quickly, so that they are the first to put an end to unprofitable expenses and services.

Even as the substance of the city is robust and city-dwellers are ultimately capable of resisting the superficial attractions of the market, the preconditions for this need to be established and fortified—meaning in particular allowing the public authorities to welcome novelty and ensuring that investors are willing to take part in experiments. This is the only way in which innovative forms of new residential and living spaces can be developed. How can we describe and assess the quality of experiments and their sustainability in this field? In the city rankings published by *The Economist* or *Monocle*—both internationally respected and widely available print media—various different criteria are used

to measure quality of life. Factors such as distance to hospitals and recreational facilities, unemployment rates, availability and routing of public transport, trends in rental prices, and even dog-friendliness, are taken into account as factors influencing urban well-being. Usually derived from questionnaires, such data tend to produce an abstract and overly technical picture of contemporary lifestyles. People's characteristics and idiosyncrasies are difficult to assess. If Google constantly measures the movement speed of mobile phones in order to identify the locations of traffic jams, we know nothing about what the drivers are thinking, why they are in their cars in the first place, or where they are heading. Why do people become ill, how do communities arise, what is it that creates job satisfaction, how are educational services actually used, and what effects do all these factors have on the job market? These and other characteristics that are difficult to measure have a very substantial influence on the quality of life in cities.

Despite its tremendous popularity, the SoHo neighborhood in Manhattan would not meet all of the criteria listed in the Livability Index of the AARP Foundation, a private foundation in the United States for the improvement of living standards. The index itemizes, for example, housing costs and availability, neighborhood, safety and access to jobs, access to public facilities, transportation, road safety and accessibility, environment, quality of air and water, health, number of smokers, distance to hospital services and their quality, engagement, Internet access, voting rate, number of social institutions and opportunities, equality of opportunity, average age, and high-school graduation rates.

SoHo, as an example, shows a low rate of housing affordability, with a select and privileged class able to afford to live in this neighborhood. This drastic social limitation calls into question all of the other factors taken into account in the calculation.

Despite this, SoHo is an extremely popular area in New York City, particularly among tourists. SoHo creates what many people experience as a pleasant atmosphere. In comparison with downtown Manhattan, it has a small-scale, clearly arranged appearance comprising urban green, it promotes interpersonal relationships, and provides many communal and publicly usable spaces. It is spatially comprehensible for people and its clear arrangement conveys a sense of physical protection. It is a district you can get your hands on. There is a sense of neighborliness that gives the deep-rooted community in the district a sense of being at home. SoHo attracts people—but living there does not

offer the same open equality of opportunity that was present in the age of the great immigration. In this sense, Richard Sennett, in his book *The Conscience of the Eye*,⁴ is correct to describe New York City as being dead: the Big Apple has long since closed the open arms that it held out to every class of society. It was the colorful mixture of immigrants that made it great. Ellis Island, the central arrival point and distributing hub for the immense stream of immigrants, no longer has a purpose. The culture of difference—the elemental force behind urban coexistence—now survives only in limited form.

One essential aspect that will bring us closer to the issue of quality of life and livability are the ways in which individual groups of buildings, or even individual buildings, are able to exert a positive influence on neighborhoods and improve the quality of life of their residents.

This situation has prompted us to investigate the nature of 'Collective Form.' Collective Form represents groups of buildings and quasi-buildings—the segment of our cities. Collective form is, however, not a collection of unrelated, separate buildings, but of buildings that have reasons to be together.

"Cities, towns, and villages throughout the world do not lack in rich collections of collective form. Most of them have, however, simply evolved: they have not been designed. This gives some reason why today so many professionals, both architects and planners, often fail to make meaningful collective forms—meaningful to give the forms forceful *raison d'être* in our society."

—Fumihiko Maki, *Investigations in Collective Form* (1964)⁵

Important small-scale components of the city, either individual buildings or groups of buildings, have a greater influence on their surroundings than is commonly thought. This is the hypothesis that is being investigated in the Dense and Green research at the Singapore-ETH Centre Future Cities Laboratory, where new building typologies are being studied in relation to their social, cultural, climatic, and eco-stabilizing capabilities. The city state is one of the most popular places in Asia to live and work in, and it is aiming to become a megacity based on essential Asian values such as harmony, respect, and hard work. This was how the city was described in the *National Geographic* magazine, November 2017 issue. Singapore has notable examples of building types that stand out from the mass of the city's other structures and devote themselves to coexistence, to a sense of community, comfort, and biodiversity without losing sight of economic considerations.



Greene Street, SoHo Cast Iron Historic District, New York, New York, USA, 2019, view from the northeast.

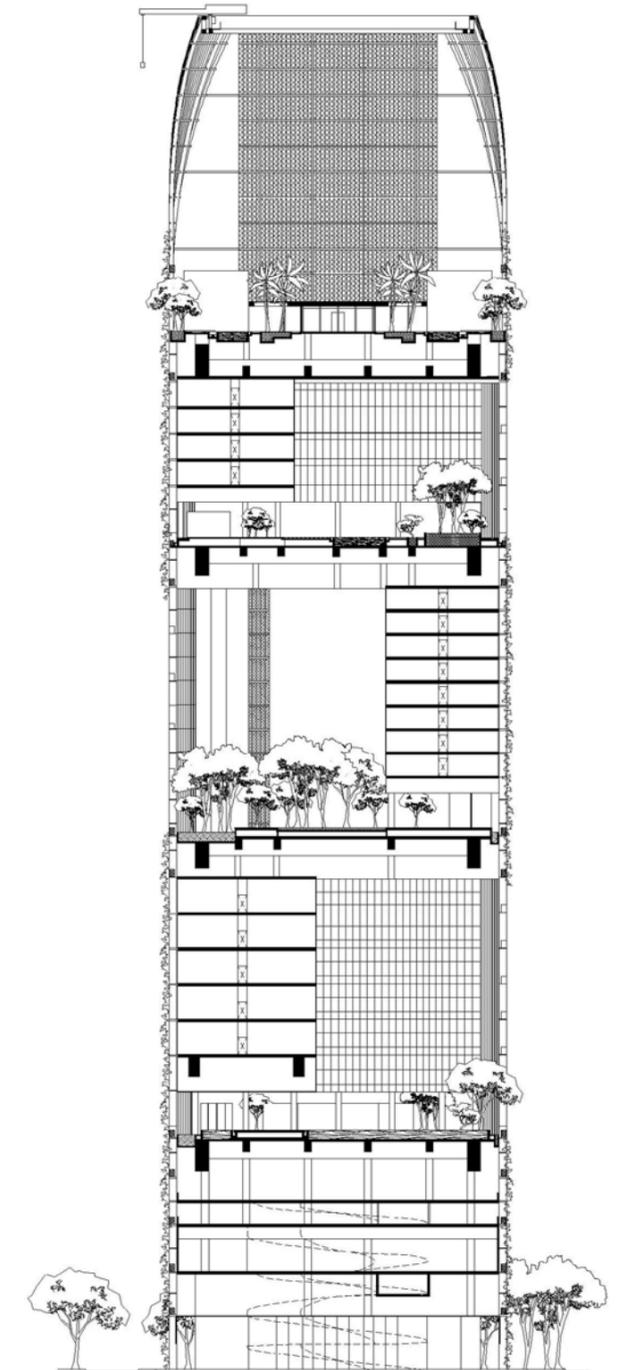
WOHA, Oasia Hotel Downtown, Singapore, 2016, section.

For example, there are buildings that have vertically arranged green plantings and feature community spaces for recreation within an extremely densified urban environment. The incorporation of green areas within and around high-rise buildings occurs in buildings with a wide range of usages. Sky terraces and sky bridges, a step beyond the traditional roof gardens, as well as vertical green elements are used here for cooling and providing shade. Other combinations of this type of green approaches to architecture are found in cities around the world, including Milan, Sydney, and Miami. Departing from established types of buildings, they propose a serious vision and novel models for the vertical expansion of the city.

The cross-sections of these buildings make the idea clearer: the urban ecosystem, with its public and private green spaces, has been shifted to the vertical plane and reinvented for this new dimension. The ways in which public, communal, green-planted spaces can be integrated by this approach is likely to be a challenge in the development of future architectural typologies. A single green-planted building that is accessible to a district's inhabitants has the potential of creating better social links within a limited space and footprint while at the same time representing a successful economic model.

The growth of Asia's cities is advancing tirelessly, and statisticians have predicted growth of a further 20% over the next 10 years. An extremely worrying prediction! Will that mean the end for good quality of life in the cities, or will public activities that were previously so popular then only take place on the vertical plane? Seen from the point of view of evolutionary history, humans are beings that live close to the earth. But human beings are also adaptable, and the approaching explosive growth of the world's population, together with the rural exodus and subsequent development of large cities, have shifted many human activities from the horizontal to the vertical plane. Living and working at dizzy heights have already become part of everyday life, above all in Asia.

At the 1959 CIAM congress held in Otterlo, Ernesto Rogers triggered a debate on basic principles when he presented the Torre Velasca, which he had designed together with his colleagues Gianluigi Banfi, Lodovico Barbiano di Belgiojoso and Enrico Peressutti (BBPR). The tower-like, multifunctional building in Milan reflects working and residential usages that are differentiated in terms of cross-section and elevation. But Rogers did not succeed in explaining to his colleagues the way in which the building's expression represents a construct formed of interlocking conditions and an image of its constituting

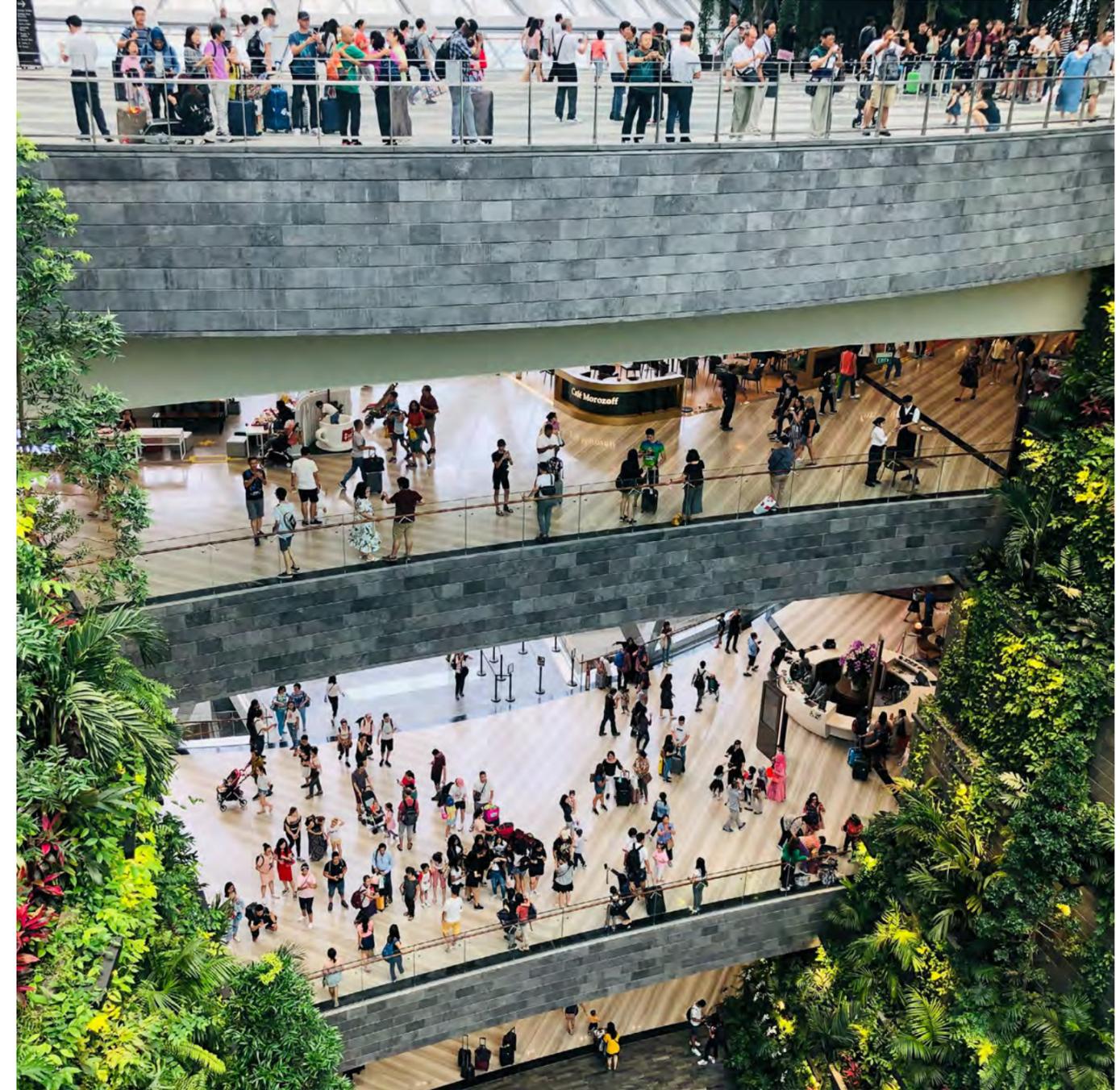




influences; and so he failed to persuade them of the need for urban planning at this small scale. Through its combination of functions and also in its structural quality (based on the principle of structural honesty), the Torre Velasca represents a logical way of densifying the city. And yet it was Peter Smithson's severe criticism of its formalism and historicizing attitude that won out at the Congress. This discussion occurred at a time when the focus was perhaps more on large-scale overall contexts, and this might explain the conference's dismay over the presentation of an individual object. Peter Smithson then presented his London Roads Study and contradicted Rogers. The Smithsons, Louis Kahn, and Aldo van Eyck — the intellectual heavyweights at the Congress — vehemently defended the view that one should concentrate on the greater reality of the large scale. This attitude, and their vote in favour of a statement opposing object-like qualities and rejecting any processing of traditions, were from then on demonstrated in new practices of architectural design — and wrongly so, since Rogers's tower already anticipated the concerns of densified and combined living and working, and with its slender substructure provided scope for valuable public space from which the surrounding district could benefit.

There are many who believe that the construction of our cities is essentially complete. Europe and North America have almost given up looking at things on a genuinely large scale. At the other end of the spectrum, entire cities have been springing up in Asia within an extremely short time. But in the process of their development, the small-scale concerns of the individual and in the scale of districts are often overlooked. Mainly financed by private investors, these projects provide residential and working spaces in order to satisfy the demand by merely following the market. Gated communities, for example, are popular, but the way in which they are closed off to the outside world means they do not in the end make any genuine contribution to public life.

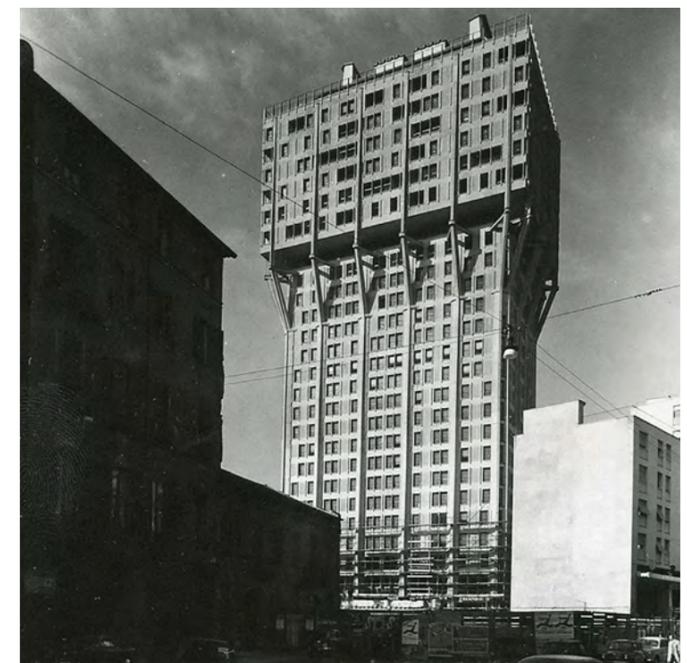
The ways in which an individual building can influence its immediate surroundings are still underestimated even today. How much public and communal space do buildings contain? Do they offer space for recreation within the district? Do they promote the development of the flora and fauna, do they radiate less heat into their surroundings so that they reduce the "heat island effect," do they regulate their water balance inside a separate and independent system? These and other factors that influence the environment can lead to improved living conditions in the cities. If we look at the large scale once again, it becomes evident that cities can and must make shared and public green spaces available, implement them and ultimately also manage them.





But all this on its own is still not enough to satisfy the larger aspiration to allow greater urban density in the future. As the example of the Torre Velasca and its mixture of functions shows, it will become necessary to integrate all of these concerns into individual buildings: implement them architecturally in order to supplement districts with high-quality usable space. More creativity, courage, and social commitment are needed in the development of new architectural typologies. This will enable property developers to reposition themselves, no matter whether they are private companies or institutional or public bodies, and allow them to take responsibility for the community and contribute to improving the quality of life. Just as Ernesto Rogers was able to deduce the whole from individual elements, we will in the future increasingly experience the way in which buildings on a small scale can influence our living conditions.

The examples presented in this book have the potential to become persuasive models for the ways in which cities can be made more enjoyable to live in and more environmentally compatible, with smaller interventions. High density does not necessarily mean any loss of green areas or community-used spaces; the apparent opposites can in fact complement one another. Ebenezer Howard conceived of the Garden City and implemented several examples of it; and Singapore today is gradually trying to develop itself into a "City in a Garden." Here the idea of rethinking cities is in accordance with political goals and is being established as a guideline through the strong influence of the city planning authorities and implemented "from the top down." Conversely, "from the bottom up" development, from small scale to large scale or from a single building to the level of the district, requires commitment on the part of each individual. The demand to create networked and active forms of urban existence emerges from large numbers of small, compartmentalized structures. In his book *Building and Dwelling: Ethics for the City*, Richard Sennett distinguishes between "two different things—one a physical place, the other a mentality compiled from perceptions, behaviours and beliefs. The French language first came to sort out this distinction by using two different words: *ville* and *cit *."⁶ The *ville* is laid out and planned on a large scale, it is built of stone and mass. The *cit * embodies the Latin *civitas*, in contrast to *urbis*. Instead of buildings made of stone, it is interpersonal concerns, touch, sounds, smells, glances, etc., that come to the surface and constitute what makes life in the city worth living in the first place. This recognition has less to do with the size of one's own dwelling than with the quality of the spaces that we are able to use in common as city dwellers.



One important question remains: is there any hope to gain control over urban planning in the future and make the cities worth living in again? What will the cities of the future look like? Resource-efficient, emission-free, green, and at the same time spatially densified—that is the provisional answer at the moment. In the search for *civitas* within the *urbs*, several of the projects presented in this volume are already making a contribution to public life while at the same time incorporating community spirit. They stand as individual architectural works that have been conceived and implemented through tremendous commitment and were not developed solely on the basis of profit calculations.

1. Lewis Mumford, *The City in History: Its Origins, Its Transformations, and Its Prospects* (New York: Harcourt, Brace & World, 1961), 47.
2. Ebenezer Howard, *Garden Cities of To-Morrow* (London: Swan Sonnenschein, 1902), 17–18.
3. Kevin Lynch, *The Image of the City* (Cambridge, MA: MIT Press, 1960), 2.
4. Richard Sennett, *The Conscience of the Eye: The Design and Social Life of Cities* (New York: Knopf, 1990); German translation: *Civitas: die Grossstadt und die Kultur des Unterschieds*, trans. Reinhard Kaiser (Frankfurt am Main: Fischer, 1991).
5. Fumihiko Maki, *Investigations in Collective Form* (St. Louis, Missouri: Washington University School of Architecture, 1964), 5.
6. Richard Sennett, *Building and Dwelling: Ethics for the City* (New York: Farrar, Straus and Giroux, 2018), 1.



