

# LOOKING UP: IMAGINING A VERTICAL ARCHITECTURE

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## ABSTRACT

Densification is a much-used concept in urban planning in Finland today. Big cities are dealing with a growing population, and a reasonable solution to housing needs seems to be infill construction. Along with the demand for density comes a discussion about vertical building and the role of tall buildings in the city skyline and the townscape. Today's discussion is updating a similar discussion from the early decades of the twentieth century, when the future seemed vertical in many urban planners' visions, on both sides of the Atlantic. In this article, two such visions from the 1920s are revisited: Swiss-French architect Le Corbusier's famous plan for the centre of Paris and Finnish-American architect Eliel Saarinen's plan for the lakefront of Chicago. These plans reflected a contemporary belief in technological advancement and showed a master planner attitude with a focus on the whole urban environment. Both planners were also looking upward, although seeing the possibilities of a vertically constructed city somewhat differently. In spite of their forward-reaching visionary qualities, both plans remained on paper, depicting a possible future that is now looked at as an alternate past. These visions and discussions of the previous century could still offer a comprehensive view for the contemporary discussion on urban density and one of its results: the vertical city. Many of the questions that should be answered when increasing densities in today's cities already had their beginnings in the visions that the twentieth-century architects offered for the future.

## KEYWORDS

high-rise, skyscraper, tall building, townscape, Eliel Saarinen, Le Corbusier

## INTRODUCTION: HIGH-RISE DISCUSSION THEN AND NOW

### **Current High-Rise Discussion in Finland**

Building high has always been a conspicuous means of showing power. Height guarantees visibility and therefore contains strong image-making possibilities. A city silhouette of shiny skyscrapers implies financial activity, optimism, and courage. It also indicates an urban density, which has been one answer to today's sustainable urban growth in Finnish cities. In their search for solutions to infill construction, planners have looked upward, aiming to find prominent places for tall buildings.<sup>1</sup> Resulting plans have provoked discussion about the visual effect of such buildings, as well as studies on their proper placement in the urban landscape. Many Finnish cities have faced the question of where to build high. Helsinki got its report 'Korkea rakentaminen Helsingissä' (Building High in Helsinki) in 2011,<sup>2</sup> and a year later a similar study was published in Tampere: 'Korkean rakentamisen selvitys Tampereen keskusta-alueella' (A Study on Building High in the Tampere Centre Area).<sup>3</sup> Several other Finnish cities (Kuopio, Espoo, Oulu, Turku and Hämeenlinna) have got their corresponding studies as well.<sup>4</sup> In two of the largest cities in Finland, Helsinki and Tampere, tall buildings have, in recent years, most visibly been responsible for changing the urban skyline. Therefore, in this article, the high construction studies of these cities are used as main examples of the discussion on Finnish high-rise construction. The aim is to bring a more thorough understanding of the history of tall building types to the current discussion, which has so far lacked in-depth contemplation about the new role of high-rises in the townscape. The studies may have shown how the skyline or street view would be affected by already designed high-rises, but the discussion has only skimmed the question about the aims of placing tall buildings in specific places, and what this means for the townscape in the scale of the city as a whole.

The skyscraper is no longer a new building type, but until the twenty-first century, its applications have been few and far between in Finland. One of the motivating factors for constructing tall buildings now seems to be the creation of a dynamic image for a growing, forward-looking city. This was clearly visible on the cover of the Tampere report, which showed proposed tall buildings highlighted in shining amber, as if beacons for future growth. This motif has existed as long as the term skyscraper: private enterprises' need to promote company image and cities' need for landmark buildings, both for orientation and image reasons.<sup>5</sup> Another factor mentioned in the Helsinki and Tampere studies was sustainable development. The current

planning trend calls for a denser urban structure and more efficient land use around rail traffic stops. This is made economically possible by raising the construction volume. Even if building high is not in itself considered sustainable, the placement of tall buildings may be used to promote densification and use of public transportation, thus making it one of the strategies to help diminish the carbon footprint of cities.<sup>6</sup>

When studies about high-rise construction began to be commissioned for Finnish cities in the first decade of the twenty-first century, several tall building projects had already been given the required permissions. They were predicted to be examples, setting the path for subsequent construction. The studies sought to develop general guidelines to help in the strategic planning of the city. Accessibility, topography, and historical urban values were taken into account when suggestions were made about suitable areas for high-rise construction. The Tampere study from 2012 is representative of such studies. It especially mentioned the importance of context-specificity, and the need to look for more than general situational guidelines to determine suitability. While the traditional way of using high-rises as ends of monumental axes was no longer deemed appropriate in today's context, the role of tall buildings as focal points to aid urban legibility was duly noted. The study also

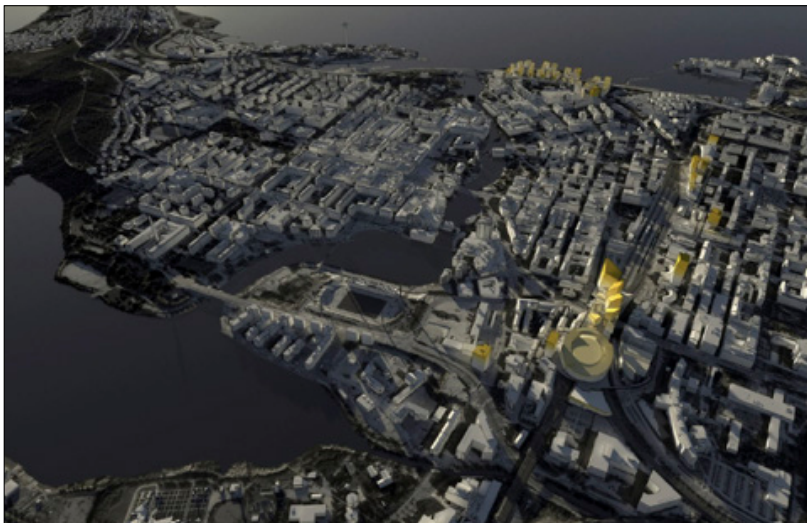


Figure 1. Tampere city centre with planned high-rise construction. Source: Moisala and Ylä-Anttila, cover of 'Korkean rakentamisen selvitys Tampereen keskusta-alueella'.

asked a question about the role of tall buildings in the city: are they clearly visible landmarks or parts of high-rise clusters, with heights accommodated to fit the existing landscape?<sup>7</sup> This question is also relevant for this article, as it links back to the tall office building discussion of the 1920s.

### **A Brief Look at History: The Tall Office Building Discussion in the 1920s**

The urban role of tall buildings has been discussed before. The late 1800s had seen a rapid development of tall buildings, first with masonry construction and then steel. However, architecture had not kept up with the construction innovations. American architect Louis Sullivan asked what the tall building should look like in his famous article 'The Tall Office Building Artistically Considered',<sup>8</sup> and the stage was thus set for a discussion that continued into the early part of the twentieth century. By the 1920s, forests of skyscrapers had grown in major American cities, but the question of skyscraper design was still unresolved, in spite of Sullivan's call for functionally articulated designs that would celebrate the building type's verticality.<sup>9</sup> Problems were not consigned to form and facade articulation alone. The building's role in the city also demanded solutions. Tall buildings were often clustered in close proximity, making it easy to compare the heights of adjoining buildings. This, however, created difficulties with density and light. One of Sullivan's articles on the topic had been illustrated with a street scene, where closely built tall buildings were constructed in a setback style with gradually diminishing blocks.<sup>10</sup> Setbacks were thought necessary in this situation, but in such clusters the skyscrapers' possibilities as focal points of civic design were naturally lost.

The tall building was not seen as a solely American building type. In Europe, the discussion had been especially active in Germany, starting in the second decade of the twentieth century. Generally, Europeans were worried about the uncontrolled vertical clusters of American cities.<sup>11</sup> Skyscrapers' suitability, construction guidance, and effect on traffic were questioned.<sup>12</sup> The suitability issue had much to do with the building type's effect on the urban environment. Skyscrapers were mainly seen as buildings that could accentuate specific points in the city, as cathedrals had done previously.<sup>13</sup> However, the landmark versus cluster issue was dichotomous. The oppressive density and traffic congestion of the American city were seen as problems, but at the same time the upward movement of a vertical city intrigued architects.<sup>14</sup> The clustered skyscraper city was also called shining and magical.<sup>15</sup>

### **Approaches to the Tall Building: Common Themes and Contradictions**

The two seemingly contradictory approaches to constructing tall buildings in cities—as landmarks or in clusters—continue to appear in today’s discussions. They were also visible in the studies done for Tampere and Helsinki. Both studies noted the skyscraper discourse of the 1920s, giving historical perspective. Current skyscraper designs were thus linked to a continuing story. Many of the earlier arguments used in promoting skyscrapers were reused; the tall building was treated as a landmark, or a beacon of dynamic image. Problems created by the clustering of tall buildings were also noticed, as they were in the 1920s, although now the discussion focused on where the tall buildings should be built, as opposed to whether they should be built at all. Indeed, the main aim of the high construction studies drafted for Finnish cities around the first decade of the twenty-first century was to show suitable zones or even specific places for tall buildings. So far, the groups of tall buildings seem follow a more disciplined placement logic than the more or less uncontrolled clusters so strongly criticized in the early twentieth century.<sup>16</sup>

Historical references notwithstanding, the recent skyscraper studies do not present a comprehensive view of the early twentieth-century depictions of the tall building and its possibilities in the city. Back then, master planners could show their overall attitudes about the new building type as a single—or multipliable—part in an urban composition. Even if the aims of today’s studies are different from the 1920s urban visions, in-depth knowledge about the earlier visions could offer a necessary background for the contemporary discussion on urban density and one of its results, the vertical city.

This article goes back to describe contributions to the 1920s skyscraper discussion by two architects, Swiss-French architect Le Corbusier and Finnish-American architect Eliel Saarinen. Le Corbusier’s well-known plan for the centre of Paris and Eliel Saarinen’s plan for the lakefront of Chicago reflect the skyscraper discussion of the early twentieth century. Although most of the early examples of the building type had been constructed in the United States, famously in Chicago and New York, skyscraper discussion had flowed on both sides of the Atlantic. Therefore, the interest was naturally global when the *Chicago Tribune* newspaper announced its 1922 competition for the most beautiful tall office building in the world. For Saarinen, being awarded second prize in the competition resulted in a move to the United States to begin a new career as a teacher of architecture and planning. At the same time, Le Corbusier was developing his skyscraper type in Europe. His

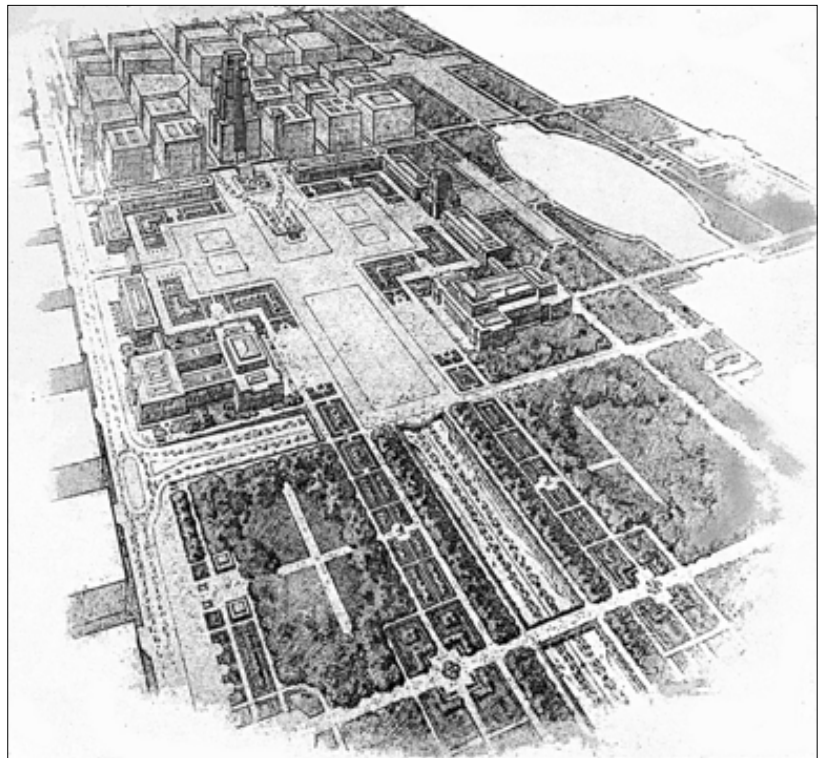
first visit to the United States became a reality more than a decade later. His travel impressions were condensed in a book, where the vertical cities of the New World received both criticism and admiration. In the next sections, this article concentrates on how the two architects used the tall building type in planning an urban environment: the skyscraper's role in the city.

## SKYSCRAPER VISIONS OF THE EARLY TWENTIETH CENTURY

### **The Chicago Lake Front Story**

#### **The Chicago Tribune Tower Competition**

Although Eliel Saarinen had not actually designed a skyscraper prior to the Chicago Tribune Tower Competition of 1922, he had already expressed his opinion on the tall building question ten years earlier. In the 1912 competition for the new capital of Australia (Saarinen received second prize),



*Figure 2. Eliel Saarinen's Chicago Lake Front Plan, perspective drawing. Source: Arkkitehti 2 (1924), p. 22.*

he wrote about restricting building heights to prevent the kind of vertical growth seen in American cities. According to Saarinen, overall planning issues should be the main incentive, if tall buildings were grouped together.<sup>17</sup> Like many of his Finnish colleagues, he preferred the European version: tall buildings as accents in the townscape.<sup>18</sup> For Eliel Saarinen, the skyscraper was an urban design element.

In the Chicago Tribune Tower competition, fitting the context had not been one of the evaluation criteria. The competition brief had simply called for a beautiful office building.<sup>19</sup> However, the resulting attention for Eliel Saarinen's second prize entry—a vertical setback design—lead to an urban vision where context was a main issue: the Chicago Lake Front Plan of 1923. There, Saarinen proposed a solution for a growing city's traffic problems, while advertising his skills as an urban planner, not just the designer of skyscrapers.<sup>20</sup> He especially emphasized the plan as an opener of possibilities.<sup>21</sup>

### **The Chicago Lake Front Plan**

With a newcomer's objective eyes, Saarinen anticipated organic decentralization by radically suggesting that American cities could have many centres.<sup>22</sup> Starting with traffic, he designed parking solutions and elevated pedestrian paths. Rapid transit traffic was circulated away from the centre, to prevent congestion. A huge self-service parking hall near the centre would receive cars and allow people to do business and shopping on foot.

Saarinen trusted in people's willingness to walk,<sup>23</sup> as have many car-free zone planners after him. Saarinen wrote of the architectural whole and a monumentality necessary in a big city, with descriptions of scenes from the street level and from a bird's-eye view. Even if local ordinances did not then allow it, he placed cultural buildings in parks, the recreational areas for the car-prone city dwellers.<sup>24</sup> The plan was admired for successfully combining two important themes of American city planning: civic beautification and the needs of increasing traffic, although underground parking was thought unrealistic due to the water level of the nearby lake.<sup>25</sup>

In Saarinen's plan, the skyscraper was a strategically placed landmark. His prototype from the Chicago Tribune Tower Competition was reused here as a hotel, marking the spot of an underground railway station. The form of the building was separated into four parts, all visible in the facade to further enhance the building's verticality. In perspective drawings, the

skyscraper was studied both as an ending of a monumental axis and as part of a group of buildings that enclosed a public space. From far away this skyscraper was visible as a landmark, and from the street one could follow its vertical lines all the way to the top, as skyscraper design should allow, according to Saarinen.<sup>26</sup>

Saarinen's understanding of the urban environment as a whole influenced his attitude towards high-rise buildings. The skyscraper was an individual urban design element, and parts had a subordinate status to the whole. In his book *The City: Its Growth, Its Decay, Its Future*, Saarinen later criticized the skyscraper for being self-centred and indifferent to its surroundings.<sup>27</sup> Fittingly, Manfredo Tafuri has called Saarinen's skyscrapers 'spectators of the urban scene'.<sup>28</sup> In Saarinen's plans, skyscrapers acted as compositional highlights. One could admire the composition from their heights, or one could see them as defining landmarks in the composition. They were looked at or looked from. Clustering these buildings would have ripped them of this compositional power. Eliel Saarinen did not appreciate skyscraper clusters, neither for urban design reasons nor for planning reasons. Like Frank Lloyd Wright, Saarinen promoted controlled and decentralized growth for expanding cities.<sup>29</sup> In the race between the elevator and the automobile, both architects would have likely put their money on the latter.<sup>30</sup>

Saarinen did not treat the skyscraper as a building subject to economic laws. In fact, he was critical of the kind of urban landscape these laws had created in American cities. He called the streets of New York too restless,<sup>31</sup> but he could also give positive comments about the urban atmosphere. In such comments, he appears to be aware of the building type's constraints as an embodiment of commerciality.<sup>32</sup> This commerciality was intertwined with the skyscraper's status as an American building type, a symbol of capitalism and industrial efficiency. Already in the late 1800s, visiting architects had thought Chicago's early skyscrapers awe-inspiring, despite possible problems they could create.<sup>33</sup> Likewise, Eliel Saarinen could enthusiastically describe lofty views of Manhattan, while criticizing the everyday environment of clustered skyscrapers.<sup>34</sup>

Tradition met modern times in Saarinen's Chicago Lake Front. The design was to solve a modern urban traffic problem, while using a traditional composition of symmetrically placed elements. The skyscraper served as a landmark in this monumental civic design. The urban vision shown in



the next section—Le Corbusier’s Plan Voisin—shows yet another way to use the skyscraper building type. This skyscraper was neither an individual landmark, nor part of a heterogeneous cluster.

### **The Plan Voisin Story**

#### **The Contemporary City**

Le Corbusier’s famous Plan Voisin—plan for the centre of Paris in 1925—was preceded by his study of a Contemporary City (*Une Ville Contemporaine*, 1922) for three million people.<sup>35</sup> There the city was placed on an ideal level site and divided into sections according to function. The centre was for business and residential buildings, while the industrial areas and working-class housing were outside the centre, all connected by a speedy transportation network. The ideal city was based on a symmetrical grid of streets. Two highways intersected at the centre point of the city, forming the backbone of a hierarchically structured transportation system. For Le Corbusier, speed was of the essence in a modern city: ‘a city made for speed is made for success.’<sup>36</sup> Robert Fishman has noted the lack of symbolic value in the centre of this ideal city. Le Corbusier’s city centre had no need for civic monuments or individual landmarks. Instead, the centre was a hub of transportation, which Fishman has called an appropriate symbol of a city in motion.<sup>37</sup>

According to Le Corbusier, the full possibilities of the new building type were not applied when skyscrapers were used in a traditional way as design focal points. Neither was he satisfied with the skyscraper clusters of American cities. Although he did not visit the United States until the 1930s, he was well aware of the urban development overseas and vehemently sought to differentiate his skyscrapers from the American versions even before he had actually experienced them.<sup>38</sup> Strong criticism was voiced again after his American visit in the book *When the Cathedrals Were White* (1937). The skyscrapers of New York he declared too small and their setbacks a compulsory result of misguided urban planning. He wanted to see tall buildings further apart, not grouped close together. The planning of a metropolis could not be separated from its traffic systems, and this had been, according to Le Corbusier, neglected in New York. Even the spirit of the skyscrapers was all wrong: their height was determined only by number.<sup>39</sup>

Le Corbusier had, like so many Europeans, a mixed attitude towards the skyscrapers in the New World.<sup>40</sup> He was also fascinated by the courage and the creative atmosphere of the American city, comparing it to a forest just

as Saarinen and others had done.<sup>41</sup> His admiration towards the American vertical city is evident when he describes them as cities of hope or calls New York a city of incredible towers or ‘a limitless cluster of jewels.’<sup>42</sup> Nevertheless, the admiration he felt was overshadowed by the results of analytical comparison grounded in his own version of modern urban planning principles. In Le Corbusier’s opinion, the American skyscraper clusters could not compete with his rationally placed Cartesian skyscrapers.<sup>43</sup>

### **Plan Voisin**

Le Corbusier formulated his ideas on modern city planning in his book *Urbanisme* (1924). Nowhere is his geometrical urban order better illustrated than in his plans and perspective sketches of Plan Voisin, the boldly utopian-dystopian vision for the centre of Paris.<sup>44</sup> His aim was a new urban vision of upward growth—the traditional city had to go.<sup>45</sup> With skyscrapers, a necessary workplace density was achieved for a city’s core. Although the fantastic perspective drawings may lead one to think otherwise, Le Corbusier saw his proposal as contemporary and possible, not wanting to stress the future orientation.<sup>46</sup> In Le Corbusier’s version of the modern city, tall buildings were placed in the centre according to a functional logic, equidistant from each other, ensuring light and fresh air for the inhabitants. Le Corbusier’s skyscraper vision was a field, where each individual tall building had its predesignated place, conforming to an orthogonally ordered grid. If Saarinen’s skyscraper vision had not really treated the building type’s economic premises, neither did Le Corbusier’s. Looking at his famous perspective sketches of Plan Voisin, one is struck by the futuristic quality of this brave new world, where technology has managed to solve most problems and man has recreated himself to fit the strict geometrical order.

Need for density was the underlying reason for vertical growth. With a dense urban core, less distance had to be travelled, and thus the connections could be faster. The demands of modern working life also required green areas for recreation. Since these areas had to be near the workplace, in Le Corbusier’s vision the city had nowhere to grow but up.<sup>47</sup> The modern city needed tall buildings in the very centre, where businesses would inevitably gravitate. Therefore, according to Le Corbusier, the city had to make room for them and their workers’ transportation.<sup>48</sup>

Le Corbusier’s modern city grew vertically, not horizontally, as in Eliel Saarinen’s version.<sup>49</sup> For Le Corbusier, the main focus was on the centre.

Industrial areas and the garden cities designed for workers, both outside the city centre,<sup>50</sup> were not described with equal enthusiasm. Later, in his *When the Cathedrals Were White*, he described the Cartesian skyscrapers of the new urban core. Le Corbusier insisted that modern technology had made even sixty-storey skyscrapers realizable. This type of building would allow light into all the rooms and its cruciform shape guaranteed stability against wind. A skyscraper like this was not only a function of the offices it housed, but also 'of the area of free ground at its base'. The problem of congested streets was solved by a hierarchically constructed traffic system, the highways winding their way through the skyscraper field.<sup>51</sup>

Le Corbusier's version of tall buildings was seen as another European application of the skyscraper building type. In Finland, this version was promoted by architect P. E. Blomstedt, who called it a 'free high construction system' and noted that it had nothing to do with either the closely built skyscraper clusters rising in America or the skyscrapers placed according to aesthetic principles, like old-fashioned 'exclamation marks'.<sup>52</sup> Blomstedt emphasized the building type's possibilities as something other than a focal point in an aesthetically designed urban townscape.

Although today's discussion has so far concentrated on the landmark or cluster issue, the skyscraper field made its appearance in the planning of Tampere as late as 1988, in the unbuilt proposal for Tampella by architect Timo Penttilä.<sup>53</sup> The skyscraper field in its Plan Voisin guise is perhaps speaking today's language even less than the traditional landmark, but one may still see echoes of it in the current high-rise designs. There, similarly, the distances between buildings are measured, wind situation assessed, and light angles studied.<sup>54</sup>

### **Comparison: The Skyscraper and the City**

Saarinen and Le Corbusier were modern architects, influenced by the prevailing ideas of order and control in design. The controlled growth of Saarinen's organic decentralization was later shown in regional scale in the city maps he included in his book *The City*.<sup>55</sup> According to Saarinen, cities should grow in concentrated satellites around the main core. Control was extended to the planning of this core, where each individual part was complementing the whole. Organic cohesion was as important in the urban design details as it was in the regional urban planning scale. The skyscraper's role was to act as a focal point.

Le Corbusier's ordered urban landscape sought to open up the traditional dense urban structure with an entirely new order: a field of skyscrapers. In Le Corbusier's grid, no individual member stood out. Neither were the skyscrapers huddled together to allow the spectator to compare heights or make assessments about the power and prestige of their owners. Instead, they stood apart, with greenery all around, to create the soft edges necessary to make a transition to the human scale. Their spacious placement allowed fast-flowing traffic circulation. The skyscraper was a means for an efficient urban centre.

Eliel Saarinen had wanted to open up the dense urban centre by decentralized growth outward, but Le Corbusier solved the density problem by allowing growth upward. Both architects were looking at the whole city, concentrating on solving the needs of circulation and subsequent urban growth. Saarinen proposed individual landmarks, Le Corbusier multipliable elements. However, in both cases the architects saw the view of the whole as an essential part of the urban planning process.<sup>56</sup> The whole would dictate the role of

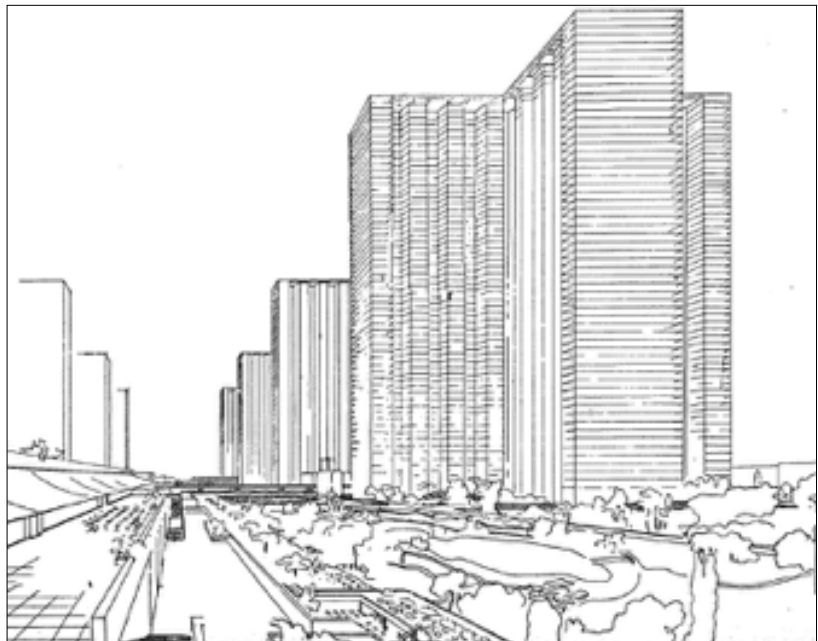


Figure 3. Le Corbusier's city of tomorrow. Source: Le Corbusier (1924), *Urbanisme*, p. 232.

its subordinate parts. Even the landmark was but one element in the plan. The two architects both used monumental symmetry in their urban plans,<sup>57</sup> which showed a complete finished city in the master planner tradition. A master planner would depict a complete vision of the urban landscape, since envisioning piecemeal growth of vertical units, each aiming to upstage its neighbour, would contradict the idea of an urban whole with subordinate parts. Such a cluster formation process could not be easily controlled. In these cases, the vision of the whole would be overshadowed by the subordinate parts taking over. Understandably, the architects would criticize the seemingly haphazard clustering of skyscrapers in American cities,<sup>58</sup> for they did not represent order. Instead, they were constructed following their own rules of power and economy, which setback and light angle requirements sought to keep in check.

What could these two skyscraper city designs from the 1920s bring to today's Finnish discussion about the role of tall buildings? Just that: the focus on their role in the urban landscape. In the two examples, the architects studied the tall buildings' effects on the city. The issue was not just where these buildings should be placed, but why, and also what the decisions would mean to the whole urban landscape. Both architects also sought to include the pedestrian view in the discussion, by looking along the facade or by emphasizing the ground-level connection.

## DIFFERENT VIEWS OF THE SKYSCRAPER

### **Controlling the Whole: Looking At and Looking From**

Neither one of the 1920s visions presented here was ever implemented. Saarinen's plan was successful, nevertheless, in promoting his skills as an urban planner. He settled in the United States, continuing to design architecture and draw city plans, while teaching urban design at the Cranbrook Academy of Art near Detroit. The visual imagery of Le Corbusier's Plan Voisin became known worldwide as an example of modernist planning. Its design principles inspired planners for decades. Both plans revealed a belief in technological advancements, in construction as well transportation. The future-oriented optimism was typical of the first decades of the twentieth century, even if the optimism was short-lived; already in the early 1920s, the problems of vertical automobile-oriented cities were noted by the likes of Lewis Mumford.<sup>59</sup>

The discussion about skyscrapers has always included a considerable amount of future-orientation.<sup>60</sup> Whether or not skyscrapers are signs of their builder's wise use of wealth and ability to see ahead, they are special places where people may grasp the urban reality from above. At the same time, these buildings are points of orientation in the urban fabric, important locations in the townscape maps we all have inside our heads when moving in the urban environment. The designing architect has to imagine the building in both guises: from above and in control, and from the street level, looking up. Both of these functions stress the solitary role of the building type as a landmark.

For Eliel Saarinen, the skyscraper was, indeed, a landmark. His drawings of Chicago's Lake Front emphasize this—he was both looking at the skyscraper and from it. The former was a designing architect's or a pedestrian's view, taking in the details of the vertical building from the street level to the top. The latter was an urban planner's view. The idea of controlling the urban scene is shown in Saarinen's description of the view from the top floor of his hotel-skyscraper:

And I see a stranger arrive in Chicago. From Central Station he makes his easy way by elevator to the hotel above. From its garden terraces, a beautiful panorama greets his eye. To the West and North he sees the growing metropolis and above it farther to the North the green park girdle along the length of the shore. Below him Grant Plaza expands southward in majestic repose, surrounded by flowerbeds and public buildings in harmonic monumentality; farther away verdant Grant Park and in the distant South, Chicago Tower's monumental pinnacle flashing high above the city's smoke and dust. To the Eastward, Lake Michigan spreads its wide expanse in green and violet, fading toward the horizon.<sup>61</sup>

In contrast, Le Corbusier's skyscraper, the multipliable building block, was used to create a geometrically ordered city centre. In his vision, the vertical city is often shown from afar, with an element of all-seeing control present, although drawings from the pedestrian viewpoint also exist, and the ground area is mentioned in his texts. His description of a view from the heights of a skyscraper (in this case in Manhattan) rivals that of Saarinen:

The whole city was lighted up. If you have not seen it, you cannot know or imagine what it is like. You must have had it sweep over you. . . . The sky is decked out. It is the Milky Way come down to earth; you are in it.

Each window, each person is a light in the sky. . . . The stars are part of it also—the real stars—but sparkling quietly in the distance. Splendor, scintillation, promise, proof, act of faith etc. Feeling comes into play; the action of the heart is released; crescendo, allegro, fortissimo. We are charged with feeling, we are intoxicated, legs strengthened, chest expanded, eager for action, we are filled with great confidence.<sup>62</sup>

Elated descriptions like the ones quoted above condense the image-creating possibilities of the skyscraper building type in captivating prose. Nowadays, the views from the top floor are used to market the flats. In virtual reality, prospective buyers are seeing how the horizon will stretch in front of their yet-unbuilt apartment's window.<sup>63</sup> Most people take delight in such views. Michel de Certeau has called this the 'pleasure of "seeing the whole"', using the no longer existing view from the top of New York's World Trade Center Tower as an example.<sup>64</sup> Certeau has contrasted this controlling view from above with the everyday lives of people hurrying along the city streets.<sup>65</sup> If the view from above allows the beholder to see the urban environment in its totality, then the city dwellers on the street level, in comparison, are hardly even conscious of the whole they live in. From the street, tall buildings are only seen as landmarks.

The view from above and from below are equally necessary for an urban planner. The street view gives the designer an idea of the enclosed space and its rhythm, while the view from above lets a planner see the whole planning task area. Naturally, Saarinen and Le Corbusier used both views.

### **Tall Building Types in the Current Discussion**

The tall building types of the early twentieth-century discussion (the landmark, the field, and the cluster) are still present in the Finnish high construction studies. However, none of the earlier attitudes towards the skyscraper are taken as an obvious guideline for current designs. The landmark type has been deemed old-fashioned,<sup>66</sup> the high-rises of the modernist field type too dreary and monofunctional,<sup>67</sup> and the skyscraper clusters too haphazard.<sup>68</sup> Nevertheless, all three attitudes are shown either directly or indirectly in the texts and illustrations of the skyscraper studies of Helsinki (2011) and Tampere (2012). The studies show suitable areas for building high<sup>69</sup> but do not claim to promote the building type as an element of civic design or a building block to be multiplied. Instead, its possibilities are studied through examples, where qualities of both may be seen. The focus is on the townscape and the effect the skyscrapers might have on the street views, and in the Helsinki case, especially on the

skyline view from the seaside.<sup>70</sup> Many high-rise buildings proposed for the Finnish cities are grouped together, but they are not simply following the rules of power and economy. The preliminary guidelines of the studies, at least, aim at controlling the construction of such clusters.

The idea of control is present in the very reason for the studies: to determine suitable areas for the construction of tall buildings. In the Tampere study, the city centre is shown in a bird's-eye view, with the recently built or newly proposed tall buildings singled out, as accents in the townscape. The individual buildings are shown most often with design renderings, where a building appears as an object. The context is only hinted at. However, some pictures show actual street scenes. In these scenes, the tall building's landmark role becomes clear (for example, Tähtitorni in Rautaharkko, 2007, in the Tampere study). A few of the cases contain several tall buildings close together.<sup>71</sup> One could call these controlled clusters; the buildings are following a similar form language and visualized from an angle that emphasizes their kinship.

The Finnish skyscraper discussion today also has international undertones—as it did in the early 1900s when interest in the new building type was growing. In the Tampere context, the global aspect is visible, for example, in the choice of the consultant for a project that includes an arena and tall buildings for offices and housing. The initial proposal by Daniel Libeskind from 2011 is similar to his skyscraper designs, to mention just two, in Singapore (2011) and Warsaw (2017). In the Tampere proposal, tall buildings with slanted rooflines are grouped together. The idea of a skyscraper field comes to mind: again, the proximity of the skyscrapers must be carefully measured on the architect's drafting table. Enough light and sunshine must be ensured to the workers of these office spaces, in this case not rising from a green park, but from a deck built over an existing railway yard.

The high construction studies for Finnish cities are serving a useful purpose in their respective cities: acting as a general guide for the placement of tall buildings. As such, they are part of the current skyscraper discussion. So far, this discussion has not vocalized real critique or serious contemplation about the role of the skyscraper as an element in the urban whole—precisely the issue that the two example architects from the early 1900s focused on. The compositional order they proposed may not be the aim of cities today, but taking into account the whole urban environment is still necessary when contemplating the effects of high-rises.



### **The Future: Unused Possibilities**

When the role of the tall building is discussed as if it were a new building type with emerging architectural (and urban) possibilities, the idea of the hybrid building inevitably crops up. The idea of calling the skyscraper ‘an influential Modernist heterotopia of deviance’,<sup>72</sup> based on Michel Foucault’s original concept,<sup>73</sup> has been used by David Grahame Shane, who linked it with the writings of Joseph Fenton and Rem Koolhaas.<sup>74</sup> This characterization contains complexities that deal with more than just form. However, at the form level the concept refers to the building type’s capacity to be articulated vertically along its facades, which could suggest a mixed-use combination of functions.<sup>75</sup> Although this approach has not often been used in skyscraper construction, hybrid buildings have appeared occasionally throughout the history of this building type.<sup>76</sup> They can be seen in the high construction studies for Helsinki, and also Espoo.<sup>77</sup> There the placement of different functions is shown either layered or side by side. The latter version could lead to the kind of vertical articulation Shane was suggesting as a possible development in skyscraper design. In an urban context, articulation of the facades along the vertical axis could give, in the future, tall buildings a more decisive role as landmarks that aid an urban inhabitant in orientation.

It is worth noting that both Le Corbusier and Saarinen divided the shape of their skyscraper examples into sections. Saarinen quartered his Chicago landmark into clearly visible parts, and Le Corbusier used a cruciform shape for his high-rises. Both examples could have been flexible enough to accommodate multiple uses along the vertical axes. This type of articulation was not apparent in the next generation of modernist skyscrapers, which tended towards the rectangular slab form.

Although the two architect-planners presented in this article used the skyscraper as a subordinate element in their urban compositions, the tall building was not only looked at from afar, but also up close. Saarinen’s wish especially was to see the skyscraper from the street, where verticality was visible along the facade. In many skyscraper visions of today, such an impression right next to the building from a pedestrian viewpoint is rarely shown. Instead, the landmark possibilities of the building type are studied with the help of renderings that visualize the skyline or show a single building at the end of an urban corridor. The studies concentrate on the skyscraper’s effect from a distance. The missing pedestrian visions may be explained by the fact that design details are not known when the tall buildings are still in

the planning stage, but their absence is unfortunate. The results can be seen in the existence of towers that lack connection to their immediate environment at the street level—in the words of Kevin Lynch (*Image of the City*): the towers are ‘bottomless.’<sup>78</sup> To prevent this, attention is needed in designing the street-level pedestrian environment. A solution suggested in one of the Finnish high construction studies is placemaking.<sup>79</sup> At the very least, it could focus attention on the street-level scale where the everyday lives of citizens are playing out.

## CONCLUSION

Planners rarely design whole cities today. The role of the planner has changed since the early twentieth century to that of a team player in a complex process of citizen participation, discussion, and negotiation. The tasks in any planning process are multidisciplinary. The kind of traffic planning exercised by Saarinen and Le Corbusier—which gave them an incentive for their plans and a reason for the large-scale view—is now part of a multidisciplinary planning task.

Nevertheless, even today it is necessary to look at the city in the large scale as well, so as to be able to consider the role of tall buildings in an urban landscape. In an increasingly complex urban reality, infill projects are often just individual buildings. Even if the context is carefully studied in these cases, understanding the larger whole is necessary to fully determine the impact of tall buildings. The kind of studies commissioned for Finnish cities, with Helsinki and Tampere as examples, have attempted to present a large-scale view of the whole city. Already planned and designed high-rise projects were placed in context and viewed from above as well as from the street level. New spots for possible future skyscrapers were then suggested.

In these studies, current building projects were linked to the already long history of designing and constructing high-rises. They were presented as a natural result of a process started in the late 1800s. History was used to support their relevance by making the continuation of the story seem inevitable. At the same time, references to future-orientation and urban progress seemed to distance the new applications of the tall building type from its origins. A thorough understanding of these origins, however, could add to the necessary critical dimension of the current discussion. As before, the idea of a vertical city is intriguing, but it also needs to be questioned. In most of the Finnish high-rise studies, the relevance of constructing tall buildings is not doubted outright.<sup>80</sup>

In the current or planned high-rise projects, one sees a combination of the different views of the skyscraper: the cluster, the landmark, and even the urban building block. However, as shown in the studies for Helsinki and Tampere, the clusters proposed for Finnish cities in the twenty-first century are not simply governed by the rules of economic growth. A need for control is apparent and an attempt to design the urban landscape is visible. The tall buildings concentrated on or around major traffic interchanges in the studies—as they were situated in Le Corbusier’s modernist vision and in Saarinen’s more traditional one—could thus be called controlled clusters.

As in Saarinen’s earlier skyscraper vision, the landmark effect in the urban landscape is graphically visualized, now with photomontages or 3D models. Consequently, the landmark possibilities of tall buildings are visible in the current tall building studies, even if the buildings are not treated as focal points in a composition. In the future, applications of the hybrid building type could even bring new visual articulation to the landmark role of tall buildings. In the Finnish context, these examples are, as yet, predominantly unrealized conceptual studies.

The urban building block is a use of the tall building type that has received the most criticism since its modernist applications in suburbs around the world. The premises behind the original idea, nevertheless, are still applied in the shadow studies of today’s high-rises. The controlled clusters of today are taking into account the distances between buildings and noting the need for light inside the apartments.

When the different views of the skyscraper are combined, the skyscraper’s role in the city may be in danger of becoming blurred. If the role is not properly considered, then cities may end up with random clusters or misplaced landmarks. The question asked in the Tampere high-rise study was whether the tall buildings will remain clearly visible landmarks or concentrate into clusters, rising and falling in the landscape.<sup>81</sup> This was an important question. It will eventually be answered as more new high-rises are built and their impact is ready to be assessed. One would hope that the discussion about the tall buildings’ role continues, truly considering the possibilities that this building type brought to cities more than hundred years ago. The two 1920s master planners, with their dichotomic attitudes, were able to see both the potentials and the problems the skyscraper could create. The architects did not just settle on the design of the tall building, but each strove to visualize

an urban landscape where the tall building was fully utilized to its advantage, as they saw it. This kind of a view of the whole, unfortunately, has often been missing from today's high-rise projects. A master planner attitude is no longer relevant in the twenty-first century,<sup>82</sup> but even today's planner needs to understand projects' relationships to context. This article has attempted to show that a thorough understanding of the history of the tall building type and the preceding century's discussions of its role could help to define a more comprehensive attitude to the high-rise question, as well as remind designers and builders of the importance of looking from the ground up.

The Tampere study claimed that a landmark and a new version of the cluster were both possible attitudes towards the tall building. At least the latter alternative—as the controlled cluster—refers to a possibility of using the building type in a way that requires a large-scale regional view, even considering the topography. If such clusters start springing up in the future—still staying within the boundaries suggested in the commissioned studies—their planners, developers, and designers need to discuss the role of the tall building from the viewpoint of the whole city, as well as from the street level. Vertical architecture—with its dynamic image of power and wealth—is still rooted somewhere, and it is at these roots that everyday life at the human scale takes place.

## NOTES

<sup>1</sup> 'Tall building' in the Finnish context generally means high-rise buildings of twelve stories or more, with heights of over 35 meters; see Antti Moisala and Kimmo Ylä-Anttila, 'Korkean rakentamisen selvitys Tampereen keskusta-alueella', Arkkitehtistudio M&Y Moisala & Ylä-Anttila, final report, 30 October 2012, <http://www.tampere.fi/liitteet/k/6C92ilb5A/korkeanrakentamisselvitys.pdf> (all URLs accessed in April 2019), p. 9. In this article, the terms 'high-rise', 'tall building', and 'skyscraper' are used to mean buildings that stand out in their surroundings by their height. These terms are used in a similar fashion in the current high-rise discussion in Finland.

<sup>2</sup> In 2014, this was supplemented by a study for high construction in the suburban areas of Helsinki: 'Korkea rakentaminen Helsingin esikaupunkialueilla'.

<sup>3</sup> In 2015, this was supplemented by a study for high construction in the regional centres of Tampere: 'Korkean rakentamisen selvitys Tampereen aluekeskuksissa'.<sup>4</sup> Studies have also been done in Finland for Kuopio (2009), Espoo (2012), Oulu (2014), Turku (2017) and Hämeenlinna (2018).

<sup>5</sup> Annukka Lindroos, Riitta Jalkanen, Kerttu Kurki-Issakainen, Rikhard Manninen, Pekka Saarinen, Leena Silfverberg, Juhani Tuuttila, Sami Haapanen, Ifa Kytösaho, Juha Veijalainen, Risto Levanto, Hannu Pyykönen, and Pekka Pakkala, 'Korkea rakentaminen Helsingissä', vol. 4: *Helsingin kaupunkisuunnitteluviraston asemakaavaosaston selvityksiä* (Helsinki: Helsingin kaupunkisuunnitteluvirasto, 2011), [http://www.hel.fi/hel2/ksv/julkaisut/aos\\_2011-4.pdf](http://www.hel.fi/hel2/ksv/julkaisut/aos_2011-4.pdf), pp. 4 and 16; Moisala and Ylä-Anttila, 'Korkean rakentamisen selvitys Tampereen keskusta-alueella', pp. 9–10.

<sup>6</sup> Moisala and Ylä-Anttila, 'Korkean rakentamisen selvitys Tampereen keskusta-alueella', p. 5.

<sup>7</sup> *Ibid.*, pp. 34 and 64.

<sup>8</sup> See Louis H. Sullivan, 'The Tall Office Building Artistically Considered', in *Kindergarten Chats and Other Writings* (New York: Dover Publications, 1979), pp. 202–13. Originally published in *Lippincott's Magazine* (March 1896), p. 202.

<sup>9</sup> *Ibid.*, p. 206.

<sup>10</sup> Sullivan's article 'The High Building Question' in *The Graphic* (1891) was quoted in Robert C. Twombly, *Louis Sullivan: His Life and Work* (Chicago: University of Chicago Press, 1986), p. 304.

<sup>11</sup> Christiane Crasemann Collins, *Werner Hegemann and the Search for Universal Urbanism* (New York and London: W.W. Norton & Company, 2005), pp. 89–92 and 160; Katherine Solomonson, *The Chicago Tribune Tower Competition: Skyscraper Design and Cultural Change in the 1920s* (Cambridge: Cambridge University Press, 2001), pp. 236–38.

<sup>12</sup> Crasemann Collins, *Werner Hegemann and the Search for Universal Urbanism*, pp. 89–90; Jean-Louis Cohen, *Scenes of the World to Come: European Architecture and the American Challenge 1893–1960* (Paris: Flammarion, 1995), p. 31. A skyscraper design competition was held in Berlin in 1921. By then, both Auguste Perret and Le Corbusier were envisioning skyscraper cities. On this, see Solomonson, *The Chicago Tribune Tower Competition*, pp. 72–73; Crasemann Collins, *Werner Hegemann and the Search for Universal Urbanism*, p. 160; Cohen, *Scenes of the World to Come*, pp. 107–09 and 117–20; see also Le Corbusier, *The City of Tomorrow* (London: The Architectural Press, 1987), pp. 238, 242, 245–47, and 277–89, originally published in French as *Urbanisme* in 1924. Christiane Crasemann Collins has brought forth the role of Werner Hegemann in spreading the ideas between United States and Europe: for Americans he stressed the role of skyscrapers as landmarks, while for Europeans he recommended learning from American city centres. Crasemann Collins, *Werner Hegemann and the Search for Universal Urbanism*, pp. 89–92 and 160.

<sup>13</sup> The city crown idea was made famous by Bruno Taut in *Die Stadtkrone*; see Bruno Taut, 'The City Crown', translated from the original German *Die Stadtkrone* (Jena: Diederichs Verlag, 1919) by Ulrike Altenmüller and Matthew Mindrup, in *Journal of Architectural Education* (2009), <http://socks-studio.com/2013/09/28/bruno-taut-the-city-crown-1919/>, pp. 121–34. See also Thomas A. P. van Leeuwen, *The Skyward Trend of Thought: The Metaphysics of the American Skyscraper* (1988; repr., Cambridge, MA: MIT Press, 1990), p. 34; Hanno-Walter Kruft, *A History of Architectural Theory from Vitruvius to the Present*, trans. Ronald Taylor, Elsie Callander, and Antony Wood (New York: Princeton Architectural Press, 1994), p. 373, originally published in German as *Geschichte der Architekturtheorie: Von der Antike bis zur Gegenwart* (1985); Iain Boyd Whyte, 'The Spirit of the City', in *The City after Patrick Geddes*, ed. Volker M. Welter and James Lawson (Oxford: Peter Lang, 2000), pp. 15–32, esp. pp. 25–26. For monumental buildings as symbols of power, see Wolfgang Sonne, *Representing the State: Capital City Planning in the Early Twentieth Century* (Munich: Prestel, 2003).

<sup>14</sup> Sigurd Frosterus, 'Ett arbete om New York', *Arkitekten* IV (1910), pp. 58–60; Bertel Jung, 'Munknäs-Haga och Stor-Helsingfors', Part I, *Arkitekten* VI (1915), pp. 73–77, esp. p. 74; Sigurd Frosterus, 'Pilvenpiirtäjä kangastaa', *Arkkitehti* 6 (1922), pp. 86–92, esp. pp. 87 and 90; 'Pilvenpiirtäjä vai ei?', *Arkkitehti* 3 (1928).

<sup>15</sup> See van Leeuwen, *The Skyward Trend of Thought*, p. 11. See also Lewis Mumford, *Sticks and Stones: A Study of American Architecture and Civilization* (1924; repr., New York: Dover Publications, Inc., 1955), pp. 80–81; Benton MacKaye, *The New Exploration: A Philosophy of Regional Planning* (1928; repr., Urbana: University of Illinois Press, 1962), p. 150; Crasemann Collins, *Werner Hegemann and the Search for Universal Urbanism*, pp. 160–61; Jukka Savolainen, 'Modernin maailman rattaissa', in *Art Deco 1918–1939: Modernia eksotiikkaa*, ed. Marianne Aav et al. (Helsinki: Designmuseo, 2005), pp. 59–73, esp. p. 67. Werner Hegemann's writings are an example of dichotomous thinking: he criticized skyscraper clusters, but he saw them as a solution for preventing businesses from spreading to housing areas. Hegemann cited in Crasemann Collins, *Werner Hegemann and the Search for Universal Urbanism*, pp. 89–90.

<sup>16</sup> Lindroos et al., 'Korkea rakentaminen Helsingissä', pp. 22, 46, and 54; Moisala and Ylä-Anttila, 'Korkean rakentamisen selvitys Tampereen keskusta-alueella', pp. 62–66; cf. Frosterus, 'Pilvenpiirtäjä kangastaa', p. 90; 'Pilvenpiirtäjä vai ei?', *Arkkitehti* 3 (1928).

<sup>17</sup> Eliel Saarinen, 'International Competition for Design of Federal Capital: Report accompanying design submitted by Eliel Saarinen, of Helsingfors', 1912, series accession number CP487/6/1, Collections of the National Archives of Australia and the National Library of Australia, <http://naa12.naa.gov.au/scripts/imagine.asp>, p. 12.

<sup>18</sup> This idea was expressed later in Eliel Saarinen's book *The City: Its Growth, Its Decay, Its Future* (1943; repr., New York: Reinhold Publishing Corporation, 1958), pp. 186 and 195.

<sup>19</sup> 'Chicago Tribune Tower Competition: Program of the Competition and Report of Jury of Award', in Stanley Tigerman, *Chicago Tribune Tower Competition & Late Entries* (1923; repr., New York: Rizzoli, 1981), pp. 5 and 8. The Tribune Company published the results in 1923 as 'The International Competition for a New Administration Building for the Chicago Tribune'.

<sup>20</sup> Gustaf Strengell, 'Eliel Saarinen – skyskrappans nydanare', *Nordens Kalender* (1936), pp. 79–96, esp. p. 92.

<sup>21</sup> Eliel Saarinen, 'Project for Lake Front Development of the City of Chicago', *American Architect* 124, no. 2434 (1923), pp. 487–514, esp. pp. 493–504.

<sup>22</sup> *Ibid.*, pp. 487–89.

<sup>23</sup> *Ibid.*, pp. 491–92.

<sup>24</sup> *Ibid.*, pp. 493–504.

<sup>25</sup> Ibid., pp. 488–514, editorial comment, p. 515; Albert Granger, ‘The Saarinen Plan for Grant Park, Chicago, Illinois’, text for lecture held at the June 1924 A.I.A. Iowa meeting, Saarinen-scrapbook SRM 11537, Museum of Finnish Architecture.

<sup>26</sup> ‘Europe wakes up to the need of U.S. skyscraper’, *Chicago Daily Tribune*, 23 January 1923. Saarinen was looking at skyscrapers from a pedestrian’s perspective, and repeating a view used in urban photography in the 1920s: skyscrapers were no longer pictured only from afar, but from below along their facades. In particular, Erich Mendelsohn’s book *Amerika: Bilderbuch eines Architekten* (1926) has been noted for this outlook (Cohen, *Scenes of the World to Come*, p. 90).

<sup>27</sup> Saarinen, *The City*, p. 186.

<sup>28</sup> Manfredo Tafuri, ‘The Disenchanted Mountain: The Skyscraper and the City’, in *The American City: From the Civil War to the New Deal*, ed. Giorgio Ciucci et al. (London: Granada, 1980), pp. 389–528, esp. 389 and 419–20. Original Italian: *La città americana dalla guerra civile al New Deal* (1973). According to Tafuri, the Chicago School architects Sullivan and Adler were not so worried about the loss of public space through skyscraper construction. Nevertheless, Sullivan’s texts include thoughts on the changing townscape, for example, ‘High Building Question’, *The Graphic* (1891), in Twombly, *Louis Sullivan: His Life and Work*, pp. 304–06.

<sup>29</sup> ‘Favors a decentralized city’, *New York Sun*, 21 August 1928.

<sup>30</sup> The following quote is attributed to Frank Lloyd Wright: ‘The outcome of the city will depend on the race between the automobile and the elevator, and anyone who bets on the elevator is crazy.’ See, for example, Mark Hutter, *Experiencing Cities* (New York and London: Routledge, 2016), p. 116.

<sup>31</sup> ‘Favors a decentralized city’, *New York Sun*, 21 August 1928.

<sup>32</sup> ‘Europe wakes up to the need of U.S. skyscraper’, *Chicago Daily Tribune*, 23 January 1923; Orrick Johns, ‘Finnish Architect Prescribes for US’, *The New York Times Magazine*, 17 May 1925, Saarinen-scrapbook 1 (III), Museum of Finnish Architecture.

<sup>33</sup> Solomonson, *The Chicago Tribune Tower Competition*, pp. 70, 93–94, 97–98, 150, 186, and 192; Cohen, *Scenes of the World to Come*, p. 21; ‘Chicago Tribune Tower Competition’, in Tigerman, *Chicago Tribune Tower Competition & Late Entries*, pp. 14–15.

<sup>34</sup> Saarinen, *The City*, pp. 188–95.

<sup>35</sup> Le Corbusier, *The City of Tomorrow*, pp. 163–78.

<sup>36</sup> Ibid., p. 179.

<sup>37</sup> Robert Fishman, *Urban Utopias in the Twentieth Century: Ebenezer Howard, Frank Lloyd Wright and Le Corbusier* (1977; repr., London and Cambridge, MA: The MIT Press, 1994), p. 191.

<sup>38</sup> Le Corbusier, *The City of Tomorrow*, p. 173. Le Corbusier showed contrast by juxtaposing a view of his contemporary city with a picture taken above Manhattan.

<sup>39</sup> Le Corbusier, *When the Cathedrals Were White*, trans. Francis E. Hyslop, Jr. (London: McGraw-Hill Book Company, 1964), pp. xiv–xvi, 36–43, and 51–57. Originally published in French in 1937 as *Quand les cathédrales étaient blanches*.

<sup>40</sup> Ibid., pp. 36–44, 51–59, and 91. European architects’ reactions to American cities were often contradictory. As early as the late 1800s a visitor could call the skyscraper city simultaneously ‘hideous and magnificent’. See van Leeuwen, *The Skyward Trend of Thought*, p. 117; Montgomery Schuyler, ‘The “Sky-scraper” Up to Date’, *Architectural Record* (January–March 1899), pp. 231–57, esp. p. 256. Note also that Le Corbusier’s attitude to American cities is similar to his

initial reaction to Paris; see Fishman, *Urban Utopias in the Twentieth Century*, p. 182; David Pinder, *Visions of the City: Utopianism, Power, and Politics in Twentieth-Century Urbanism* (Edinburgh: Edinburgh University Press, 2005), p. 63.

<sup>41</sup> Saarinen quoted in 'Europe wakes up to the need of U.S. skyscraper', *Chicago Daily Tribune*, 23 January 1923; Le Corbusier, *The City of Tomorrow*, p. 62. For other forest comparison examples, see van Leeuwen, *The Skyward Trend of Thought*, p. 80.

<sup>42</sup> Le Corbusier, *When the Cathedrals Were White*, pp. 42–43 and 58.

<sup>43</sup> *Ibid.*, p. 52.

<sup>44</sup> Le Corbusier, *The City of Tomorrow*, pp. 276–77, 280–83, and 289.

<sup>45</sup> *Ibid.*, 163–78. Robert Fishman (*Urban Utopias in the Twentieth Century*, p. 230) has noted how this ideal modern city was adjusted: from a skyscraper business centre in the Contemporary City to eventually a collection of vertical residential towers in the Radiant City, the latter no longer segregated by class.

<sup>46</sup> Le Corbusier, *The City of Tomorrow*, pp. 163 and 193.

<sup>47</sup> *Ibid.*, pp. 166–67.

<sup>48</sup> *Ibid.*, pp. 116–18 and 171.

<sup>49</sup> Saarinen's organic decentralization is described in his book *The City: Its Growth, Its Decay, Its Future* (1943).

<sup>50</sup> Le Corbusier, *The City of Tomorrow*, pp. 163 and 166.

<sup>51</sup> Le Corbusier, *When the Cathedrals Were White*, pp. 52–53.

<sup>52</sup> Pauli E. Blomstedt, 'Sinebychoffin puolesta', *Arkkitehti* 11 (1928), pp. 170–71. In Finnish his term was 'vapaa korkearakennusjärjestelmä'.

<sup>53</sup> Moisaala and Ylä-Anttila, 'Korkean rakentamisen selvitys Tampereen keskusta-alueella', p. 24.

<sup>54</sup> Lindroos et al., 'Korkea rakentaminen Helsingissä', p. 46.

<sup>55</sup> Saarinen, *The City*, pp. 214–15.

<sup>56</sup> 'Nothing can be undertaken properly without a view of the whole', as Robert Fishman (*Urban Utopias in the Twentieth Century*, p. 206) quotes Le Corbusier. Also, Saarinen claims that solving civic design problems demands an understanding of the whole; see Saarinen, *The City*, pp. 173–74.

<sup>57</sup> The use of a tall building as an urban design element in a geometrically ordered composition—with symmetry—already appeared in Bruno Taut's *Stadtkrone* design from 1919; see Taut, 'The City Crown'.

<sup>58</sup> Le Corbusier, *When the Cathedrals Were White*, p. 53; cf. Saarinen, *The City*, p. 186.

<sup>59</sup> Mumford, *Sticks and Stones*, p. 81.

<sup>60</sup> Silja Laine, *Pilvenpiirtäjäkysymys: Urbaani mielikuvitus ja 1920-luvun Helsingin ääriiviivat* (Turku: Cultural History, University of Turku, 2011), <http://urn.fi/URN:ISBN:978-951-29-4545-0>, p. 40.

<sup>61</sup> Saarinen, 'Project for Lake Front Development of the City of Chicago', pp. 487–514.



- <sup>62</sup> Le Corbusier, *When the Cathedrals Were White*, p. 90.
- <sup>63</sup> Laitaneva, ed., *Kotina pilvenpiirtäjä*, radio program of the Finnish Broadcasting Company, part of the series *Arjen tulevaisuus*, broadcast on 27 February 2017.
- <sup>64</sup> Michel de Certeau, *The Practice of Everyday Life* (1984; repr., Berkeley, Los Angeles, and London: University of California Press, 1988), p. 92.
- <sup>65</sup> Le Corbusier, *When the Cathedrals Were White*, pp. 92–93.
- <sup>66</sup> Moisala and Ylä-Anttila, 'Korkean rakentamisen selvitys Tampereen keskusta-alueella', p. 64.
- <sup>67</sup> Anna Hakula, Antti Moisala, Tiia Ruutikainen, and Kimmo Ylä-Anttila, *Korkean rakentamisen selvitys Tampereen aluekeskuksissa*, 27 January 2015, Arkkitehtistudio M&Y Moisala & Ylä-Anttila, [http://www.tampere.fi/tiedostot/k/Xrx3E8E27/Korkean\\_rakentamisen\\_selvitys\\_Tampereen\\_aluekeskuksissa.pdf](http://www.tampere.fi/tiedostot/k/Xrx3E8E27/Korkean_rakentamisen_selvitys_Tampereen_aluekeskuksissa.pdf), p. 34.
- <sup>68</sup> Lindroos et al., 'Korkea rakentaminen Helsingissä', p. 22.
- <sup>69</sup> *Ibid.*, p. 55; Moisala and Ylä-Anttila, 'Korkean rakentamisen selvitys Tampereen keskusta-alueella', p. 71.
- <sup>70</sup> The role of tall buildings in the Helsinki skyline was discussed already in the 1920s. See Laine, 'Pilvenpiirtäjäkysymys', pp. 250–58, 262, and 271–73.
- <sup>71</sup> For example, Daniel Libeskind's vision for the Tampere Arena from 2011. Moisala and Ylä-Anttila, 'Korkean rakentamisen selvitys Tampereen keskusta-alueella', p. 23.
- <sup>72</sup> David Grahame Shane, *Recombinant Urbanism: Conceptual Modeling in Architecture, Urban Design and City Theory* (Chichester, West Sussex: John Wiley & Sons Ltd., 2005), p. 253.
- <sup>73</sup> Michel Foucault, 'Of Other Spaces' (1967), *Architecture /Mouvement/ Continuité* (October 1984), trans. Jay Miskowicz, <http://web.mit.edu/allanmc/www/foucault1.pdf>, originally published as 'Des Espace Autres' in March 1967; see Shane, *Recombinant Urbanism*, pp. 231 and 244.
- <sup>74</sup> Shane, *Recombinant Urbanism*, pp. 253–57.
- <sup>75</sup> *Ibid.*, pp. 253–54.
- <sup>76</sup> *Ibid.*, pp. 255–56; Henu Kjisik, Sofia de Vocht, Charlotte Nyholm, Hannu Louna, Ilkka Törmä, Harri Hietanen, and Annina Stadius, 'Espoon korkean rakentamisen periaatteet', 2012, Espoon kaupunkisuunnittelukeskus/ yleiskaava & Arkkitehtitoimisto Harris-Kjisik Oy, <http://www.espo.fi/download/noname/%7B207F00B3-2AD7-46AB-A4E9-9BA647007835%7D/36150>, pp. 47–50; Martin Musiatowicz, 'Hybrid Vigour and the Art of Mixing', *This Is a Hybrid: An Analysis of Mixed-Use Buildings*, ed. Aurora Fernández-Per, Javier Mozas, and Javier Arpa (Vitoria-Gasteiz, Spain: a + t architecture publishers, 2014), pp. 12–19, esp. pp. 14–15. In this context, Joseph Fenton's hybrid division (to fabric, graft, and monolith hybrids) is often noted; see Joseph Fenton, *Hybrid Buildings*, vol. 11: *Pamphlet Architecture* (New York and San Francisco: Princeton Architectural Press, 1985).
- <sup>77</sup> Lindroos et al., 'Korkea rakentaminen Helsingissä', pp. 17, 20, and 42; see also Kerttuli Kohonen, Crista Toivola, and Marja Piimies, *Korkea rakentaminen Helsingin esikaupunkialueilla* (Helsinki: Helsingin kaupunkisuunnitteluvirasto, 2014), [http://www.hel.fi/hel2/ksv/julkaisut/yos\\_2014-19.pdf](http://www.hel.fi/hel2/ksv/julkaisut/yos_2014-19.pdf), p. 14; and Kjisik et al., 'Espoon korkean rakentamisen periaatteet', pp. 47–51.
- <sup>78</sup> Kevin Lynch, *The Image of the City* (Cambridge, MA: Technology Press and Harvard University Press, 1960), p. 24.
- <sup>79</sup> Kohonen et al., *Korkea rakentaminen Helsingin esikaupunkialueilla*, p. 12; Placemaking,

<https://www.pps.org>; see also 'Placemaking – What if we built our cities around places?', 2016, project for public places, <https://www.pps.org/wp-content/uploads/2016/10/Oct-2016-place-making-booklet.pdf>.

<sup>80</sup> In the Espoo study, however, one suggested scenario was not to build any more tall buildings. Kjisik et al., 'Espoon korkean rakentamisen periaatteet', p. 73.

<sup>81</sup> Moisala and Ylä-Anttila, 'Korkean rakentamisen selvitys Tampereen keskusta-alueella', p. 36; see also Kjisik et al. 2012, pp. 35–36.

<sup>82</sup> Fishman, *Urban Utopias in the Twentieth Century*, pp. 273–75.