

Urban space planning according to the concept of the ideal city

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Abstract

The pursuit of the ideal city has been a cornerstone of urban planning and design thought throughout history. Urban space is considered the primary vessel in which the values of a city and the aspirations of its inhabitants are embodied. Based on this premise, this thesis addresses the planning of urban spaces according to the concept of the ideal city, aiming to formulate a comprehensive knowledge framework that identifies the factors enabling urban spaces to produce ideal cities.

This paper employs a complex scientific methodology, beginning with a descriptive-analytical approach to trace the historical and philosophical development of the ideal city concept from antiquity to the critique of modernity and postmodernity, including an analysis of leading global experiences (Litchworth, Chandigarh, and Brasilia). This theoretical grounding leads to the identification of six key factors governing the efficiency of the ideal urban space: the factor of universality, equitable distribution, the environmental factor, the economic factor, the social factor, and the factor of mobility.

Keywords:(Idealism, ideal city, urban space, sustainable urban space).

تخطيط الفضاء الحضري وفقاً لمفهوم المدينة المثالية

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الملخص

لطالما كان السعي نحو المدينة المثالية حجر الزاوية في فكر التخطيط والتصميم الحضري عبر التاريخ. يُعتبر الفضاء الحضري الوعاء الأساسي الذي تتجسد فيه قيم المدينة وتطلعات سكانها. انطلاقاً من هذه الفرضية، تتناول هذه الأطروحة تخطيط الفضاءات الحضرية وفقاً لمفهوم المدينة المثالية، بهدف صياغة إطار معرفي شامل يُحدد العوامل التي تُمكن الفضاءات الحضرية من إنتاج مدن مثالية.

يتناول هذا البحث تخطيط الفضاءات الحضرية وفقاً لمفهوم المدينة المثالية، بهدف صياغة إطار معرفي شامل يُحدد العوامل التي تُمكن الفضاءات الحضرية من إنتاج مدن مثالية.

يُعدّ الفضاء الحضري الوعاء الأساسي الذي تتجسد فيه قيم المدينة وتطلعات سكانها. تستخدم هذه الورقة البحثية منهجية علمية معقدة، تبدأ بنهج وصفي تحليلي لتتبع التطور التاريخي والفلسفي لمفهوم المدينة المثالية من العصور القديمة إلى نقد الحداثة وما بعد الحداثة، بما في ذلك تحليل تجارب عالمية رائدة (ليتشيورث، تشانديغار، وبرازيليا). ويؤدي هذا الأساس النظري إلى تحديد ستة عوامل رئيسية تحكم كفاءة الفضاء الحضري المثالي: عامل الشمولية، والتوزيع العادل، والعامل البيئي، والعامل الاقتصادي، والعامل الاجتماعي، وعامل التنقل.

الكلمات المفتاحية: (المثالية، المدينة المثالية، الفضاء الحضري، الفضاء الحضري المستدام).

1. Introduction

Urban space plays crucial role in shaping a city's image and determining its level of sustainability. Historically, the concept of the ideal city has been linked to humanity's attempts to create a balanced environment that combines beauty, organization, and functionality. This has led to the development of philosophical, social, and engineering perspectives that seek to understand the elements that make a city more capable of meeting the needs of its inhabitants and achieving harmony between the built and natural environments.

The literature presented in this research confirms that the essence of the ideal city stems from the centrality of humanity and its needs, and that urban space is the most influential element in realizing this essence. It is the framework within which urban structures interact with human behavior, and through which the city's functions and organization are embodied. The research highlights that the evolution of the concept of urban space has been linked to historical and intellectual transformations extending from the classical era to the modern era. The understanding of the function of space has shifted between defensive, service-oriented, and environmental considerations, and today it is being reconsidered as a crucial element in building more sustainable and ideal cities. The paper begins by identifying a problem which is a weakness in understanding the tenets of idealist thought, specifically the ideal city, as a general problem, and a lack of clarity regarding the role that the factors of the ideal city play in planning urban spaces at their various levels, and this stems from the premise that hypothesizes that the results of ideal city factors can produce urban spaces that enhance the city's sustainability. Therefore, the significance of this paper lies in its attempt to formulate a methodological framework that defines the fundamental components of urban space, enabling the evaluation of its urban, social, and environmental efficiency within contemporary cities. It contributes to providing scientific foundations that help improve the design of urban spaces and enhance sustainability by clarifying the factors that should be considered in planning and developing the modern urban environment. Based on the foregoing, this paper represents a qualitative addition through its exploration of the following objectives:

1. To study the conceptual and philosophical framework of the ideal city.
2. To identify the elements specific to idealism in urban space planning.
3. To formulate specific factors for urban space planning in the ideal city.
4. To review the most important global experiences in ideal cities and to verify the extent to which the identified factors are applicable.

2. Theoretical and conceptual framework:

2.1 The Concept of Idealism

Ideal is a noun derived from the root meaning "example," describing anything perfect in its field and worthy of emulation, or someone who adopts a role model to follow in life. Idealism is a feminine noun derived from the root meaning "example," a derived noun from the root meaning "example" (Omar, Ahmed Mukhtar, 2008, p. 2068). Idealism among philosophers differs from that of the general public. It takes

two directions: the first is ancient, namely Platonic idealism, which originated with Socrates and was further developed by his student Plato (Kishana, Mahmoud, 2018). This school of thought holds that ideas or Forms (intelligible concepts) are superior to sensory existence, meaning that knowledge within it has a celestial character, and ideas are separate from the world of senses and matter (Amin, Othman, 1967). The other direction is modern, namely Kantian idealism, which was paved the way for by the father of modern philosophy, Descartes, and highlighted by Berkeley. This school of thought holds that things are nothing but sensory impressions or ideas, and these things are not independent of potentiality. The intelligent one who understands it (Kishana, Mahmoud, 2018).

2.2. The concept of the ideal city

Although the concepts of Ideal City and Utopian City are used interchangeably by researchers, they differ in content (Slodczyk, J., 2016). Utopia, in its meaning, is a socio-political system that does not exist in the real world but is a product of imagination. The element of imagination is a component of utopia (Gutowski, B., 2006), but it has the potential to become a tangible reality, and the realization of the project may indicate that it is no longer utopian. The essence of the difference lies in the fact that the concept of Ideal City tends to be, more often than not, spatial plans that meet social, economic, and military needs, while the Utopian City was conceived as a visual extension of social theories, where the authors of utopia created models of an ideal social system in an urban space (Slodczyk, J., 2016).

2.2.1. The ideal city in ancient times

Plato believes that the idea of organizing the ideal state is based on the image of the human soul. By examining the virtues of the soul, we find that they consist of three main virtues: reason, courage, and desire. This means that the state is divided into three main parts, just as is the case with the soul (Dobra, A., 2009, p. 85). These three virtues are the basic virtues that Plato compares to the fourth basic virtue, justice, which ultimately appears as a balance between the other three virtues (Kaila, E., 2018). Each of its elements corresponds to an element of the ideal state: reason corresponds to the rulers, courage to the soldiers, and desire to the craftsmen (Dobra, A., 2009). In the just city, its ruler would be the philosopher, assisted by the other two classes. Justice is summarized in the system of three classes, where each class performs its appropriate social role (Williamson, T., 2008). Plato's treatises in The Republic and The Laws are considered the logical foundations of the ideal city, where

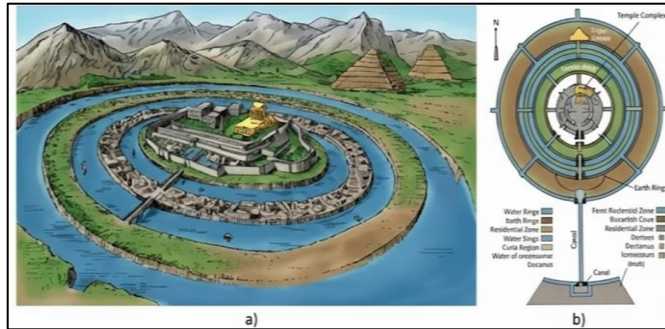


Fig 1. a. Perspective drawing for Plato ideal city, b. General plan for Plato ideal city.

all residents are subject to complete control through surveillance and regulations that restrict the private lives of residents and allow limited ownership (Slodczyk, J., 2016). According to Plato, the planning of the ideal city must be subject to a set of astronomical, social, moral, religious, and class concepts, in addition to mathematical concepts. Plato draws the urban space of Atlantis as a radial ring, all of whose dimensions are equal to the center, which is the theater. as shown in figure 1, Here, the dominance of the circle over the ideal city is manifested as an ideal geometric shape based on the idea of Pythagoras, where the circle is the most ideal shape.

It cannot be denied that Athens is a prototype of Atlantis, particularly in its central area and the system of water rings surrounding the city (Manassova, M. et al., 2024, p. 214).

However, Aristotle disagreed with his friend and teacher Plato regarding the form of urban space. He believed that the ideal city should be rectangular and divided into three sections: sacred, public, and private. The city should be the center of the entire surrounding area, receiving necessities from all directions. Other requirements included easy access to these goods and services through suitable transportation. He also emphasized social cohesion and the regulation of migration (Manassova, M. et al., 2024).

Aristotle believed that Athens was a prototype of Atlantis, particularly in its central area and the system of water rings surrounding the city.

2.2.2. The Ideal City in the Middle Ages

Al-Farabi combined the visions of Plato and Aristotle to formulate a description of his ideal city. He believed that happiness is pure good and the goal of every political organization, in agreement with his teacher Aristotle. Al-Farabi saw that man desires

to live in society, and this desire is inherent in his nature because happiness cannot be achieved except through living in a society and among others (Kopecká, P., 2015, p. 3). Al-Farabi likened this society to the body of a living organism, where the organs complement each other to preserve life in the body. He likened the ruler to the heart, and the organs differ in their proximity to and connection with it. Some are directly connected to it and fulfill its desires, the second level is connected to this first, and so on until "it ends with organs that serve and do not rule at all" (Al-Farabi, Abu Nasr, 1986, p. 123). Then Al-Farabi concluded the administration of his ideal city, where he developed Plato's division of society into classes and presented a more profound model with five levels:

1. Philosophers (i.e., the learned, the scholars, and the academics): At the top of the city's hierarchy, they guide the city toward prosperity.
2. Orators and preachers: Religious leaders, orators, poets, musicians, and bureaucrats.
3. Experts in practical sciences: Craftsmen whose trades enable them to develop the city.
4. Warriors and city guards: Those entrusted with warfare and maintaining order in the city.
5. Merchants, farmers, and shepherds: The lower strata of the city, engaged in their profitable activities. (Kopecká, P., 2015, p. 4)

Al-Farabi used the circle as a geometric shape for his ideal city, which is a metaphor for Plato's ideas about the form of the ideal city of Atlantis, where he repeated its urban space and architectural characteristics (Manassova, M. et al., 2024, p. 219). However, Al-Farabi's understanding of the state goes beyond the understanding of the Greek state due to the influence of Islam's holistic view of the whole world. The ideal state is all the inhabitants of the earth, and the ideal cities are the nations that are located within it, and then the villages that are located on the peripheries, all of whom cooperate to achieve happiness. Nations whose inhabitants cooperate to achieve happiness is an ideal world, and it is not necessary for all of them to be ideal, as perfection and happiness can be achieved in the main cities and be absent in some of their settlements (Öztürk, C. & Çetin, E.K., 2024, p. 89).

2.2.3. The ideal city in the Renaissance era

The first ideal city of the Renaissance was Sforzinda, founded by the Florentine architect Filaretti in 1475 (Perović, S. & Popović, S., 2013, p. 539), which was one of the most famous in that period.

The ideal cities of the Renaissance had a star-shaped layout engraved in a circle. From the city center, where the governor's palace was located, 16 roads extended to intersect the circle, where 16 markets were placed at the intersections. These were not only markets but also places of worship. The city also contained a cathedral, a duke's palace, schools, and public spaces. Sforzinda was supposed to be an invincible city because of its star-shaped design, as the city had a primarily military function. However, the development of war machines and the spread of gunpowder and projectiles proved otherwise (Slodczyk, J., 2016, p. 149). The star-shaped city was a metaphor for Alberti's idea, as he preferred the polygon for security reasons (Merve, E., 2019).

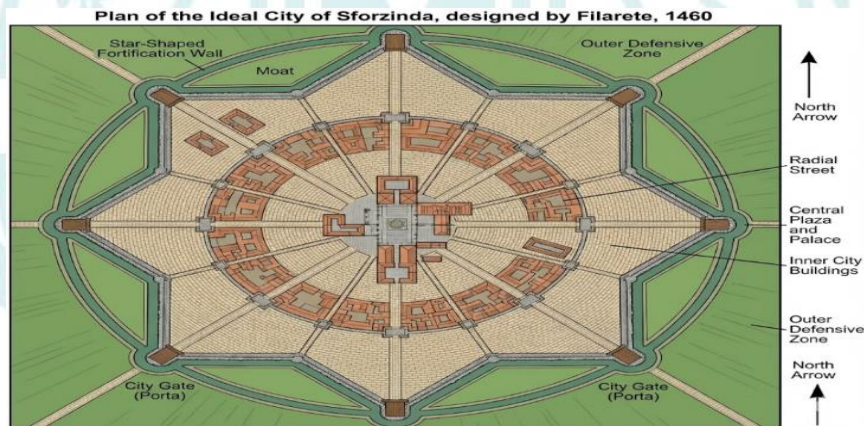
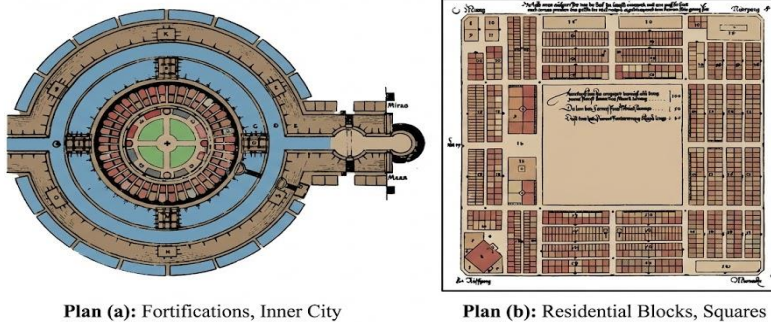


Fig. 2. Sforzinda city plan by architect Villaret. Source: (Nanda, 2019, p. 9)

Among the prominent ideas of ideal cities is "Royal city" designed by Albrecht Dürer. The famous painter's ideas were reflected in the city of Freudenstadt in 1596 by the architect Heinrich Schickhardt, where the city was designed with the large square at the center, with public facilities located at the corner of it, and each side of the square ending in a main street leading to one of the city gates. The houses were arranged in such a way that the entire city layout resembled a board for playing pachisi (Slodczyk, J., 2016, p. 150).



Plan (a): Fortifications, Inner City

Plan (b): Residential Blocks, Squares

Figure (3): Plan of the Royal City as envisioned by Albrecht Dürer.
Source: (Dürer, A., 1527)

The Italian philosopher Tommaso Campanella presented a compelling vision of the address social problems, positing that all inhabitants had a duty to work, but this work was not for extended periods, thus allowing everyone time and opportunities for social interaction (Slodczyk, J., 2016, p. 150). The city is built on a high hill and divided into seven concentric rings, each named after a planet. It features strong fortifications, double walls, towers, and moats. Gates in each ring face the four cardinal directions. The buildings are interconnected palaces. At the city's center stands a circular temple built on columns and topped with a large dome. The city is governed by a priest and three princes representing strength, wisdom, and love. According to the law, all inhabitants are equal, and all property is communal; there is no private ownership. Education is valued, allowing children to choose their preferred field, with an emphasis on physical training, arts, and sciences. Society is characterized by equality and morality. Goodness, solidarity, and work are available to all residents, as there are no unemployed people, and they have modern technologies in agriculture, construction, and transportation (Campanella, 1885).

As the pace of the Industrial Revolution increased, the need arose to separate uses according to function. Claude Nicolas Ledoux was a pioneer in planning the ideal city and laid out a plan for the city of Chaux in 1775 AD. The city was oval in shape, and the road surrounding the city served as the city boundary and also connected to the streets extending to the city center. The city was dominated by the functional approach to planning, where trades varied from blacksmithing and barrel making to

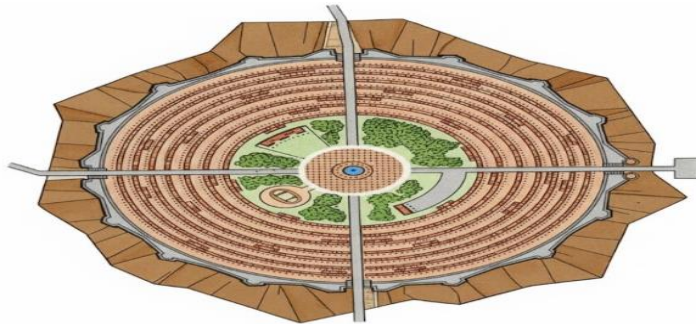


Figure (4): Plan of the ideal City of the Sun as envisioned by Tommaso Campanella. Source: <https://visual-worlds.org>

salt factories, as well as carpentry workshops and carriage makers. Families lived in dwellings in individual rooms and shared kitchens among themselves. It should be noted that Ledoux's design was an omen of bad luck for later designs and of the separation of functions, and his city can be considered the first model of the ideal industrial city (Slodczyk, J, 2016, p. 151).

2.2.4. The concept of the ideal city in the modern era

The ideal city during the twentieth century was one of the periods that witnessed the most development of enlightened ideas about social justice and expressed the power and beauty of technology. This was a comment by Robert Fishman in his book, where he wrote about three of the greatest visions in modern planning, namely Howard's concept of "garden cities of tomorrow," Frank Lloyd Wright's idea of "Broadaker City," and Le Corbusier's presentation in "Ville Radius." They saw that building new cities was a solution to the urban crisis and the social crises of previous cities (Hammad, A., 2015).

A. Ebenezer Howard (1850-1928): (Garden Cities of Tomorrow)

In 1898, Sir Ebenezer Howard published his book "Tomorrow: The Peaceful Path to True Reform," which included his ideal vision of the garden city (Hammad, A., 2015). Howard presented the idea of the garden city as a blend of the advantages of the countryside and the city while avoiding their disadvantages. He posited the existence of three large magnets representing the countryside, the city, and the countryside and the city together (Moerman, 2020).

The city and its surrounding lands cover an area of 6,000 acres, with the city itself occupying one-sixth of the total area, or 1,000 acres. The city is home to 32,000 people and is surrounded by a green belt of agricultural land that limits further growth.

The city's shape is circular, with a multi-ringed layout. At its center is a five-acre park, surrounded by public buildings and essential city services. Six main roads bisect the city, dividing it into six equal districts. The design also includes a 420-foot-wide street called "Grand Avenue," which houses six locations for schools, playgrounds, and churches (the choice of church could be changed according to the residents' beliefs). This grand avenue is also a green space extending for approximately three miles. Workshops, factories, warehouses, and other industrial and craft uses are located along the outer ring, all situated on a railway line that connects to the main rail network to facilitate the transport of goods. This arrangement reduces traffic congestion within the city (Howard E., 1902). All of this is organized by shared land ownership, it ensures benefits for all residents, as they contribute money and effort to develop healthy, economical, and hygienic city (Nabila, 2021).

B. Le Corbusier (1887-1965) (The Contemporary City)

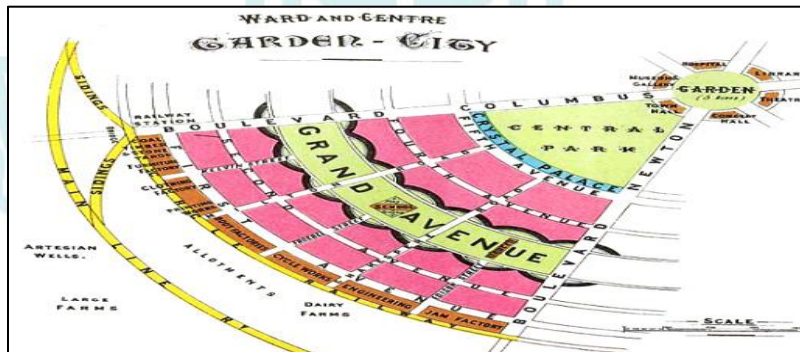


Figure (5): A detailed plan of the garden city

Le Corbusier's career as a prominent architect began from virtually nothing in urban planning, yet his success stemmed from his profound understanding of the problems and challenges facing contemporary cities (Dzwierzynska & Prokopska, 2017, p. 3). His attempt at "The Contemporary City" was the first attempt to construct an ideal city since Howard's Garden City, a project that was never realized but was later modified into "The Radiant City" (Hammad A., 2015).

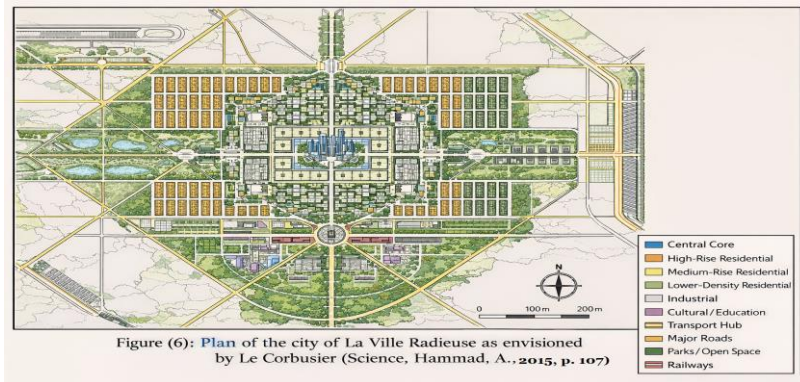


Figure (6): Plan of the city of La Ville Radieuse as envisioned by Le Corbusier.

Source: (Hammad. A.. 2015. p. 17)

According to Le Corbusier, his design for La Ville Radieuse represents an ideal model of personal freedom. He believed that cities in the early twentieth century were chaotic and inefficient, so he set several goals for his radiant city:

1. Providing effective communication channels
2. Providing ample green spaces
3. Achieving optimal access to sunlight
4. Reducing traffic congestion within urban areas

To accommodate the population increase in urban areas, Le Corbusier found that the best way to achieve these goals was through high-rise construction. In the city center is the central station, which is a meeting point for all means of transport in the city, from the subway and trains to buses and taxis. The central part consists of twenty-four skyscrapers with dimensions of approximately 190 meters x 190 meters and a height of more than 200 meters to house (500,000 - 800,000) people. These buildings will be a civic center and the headquarters of all leading companies. Surrounding these buildings are residential neighborhoods designated for skyscraper workers, where the buildings represent 15% of the entire site. According to Le Corbusier, people will be able to enjoy spacious gardens and open green spaces, good access to sunlight, and a reduction of the urban noise problem to a minimum (Montavon et al., 2006). In conclusion, Le Corbusier sought perfection and idealism in city planning, trying to solve all the city's problems in his ideal design and his future vision of crowded urban life. These are the most important experiments of ideal cities in the twentieth century (Ahmed Hammad, 2015, p. 18).

C. Frank Lloyd Wright (1867-1959): (Broadacre City)

Frank Lloyd Wright developed Broadacre City through three consecutive books, creating a detailed model (3.7 x 3.7 meters) representing a hypothetical community unit of four-square miles (Hammad, A., 2015, p. 18). Broadacre City is Wright's concept of suburban cities, and its philosophy lies in decentralized planning where all activities, services, and amenities are placed together, allowing factories to coexist with agricultural and residential areas, and vice versa (Kumar, A. & Dev, P., 2020, p. 541).

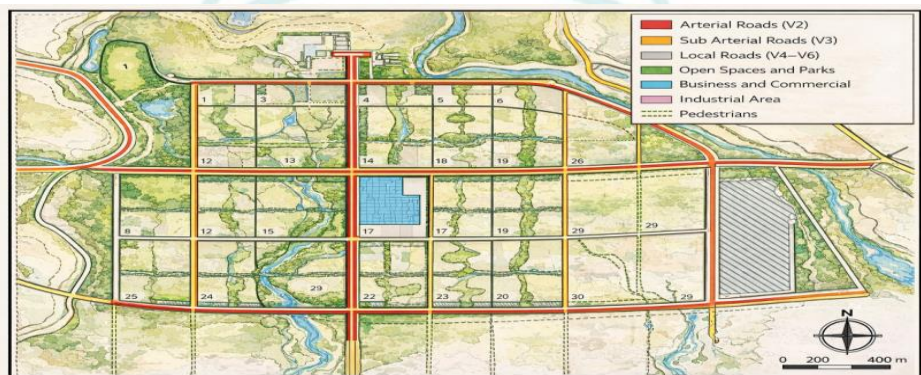


Fig. 11. The hierarchical road system (V7) in Chandigarh Source: (Bose M, 2017, p22)

Wright laid the conceptual foundations for urban planning, stipulating that each family should have a plot of land measuring 4,000 square meters from the federal land reserve. Depending on the area and its conditions, this could accommodate approximately 1,400 families, resulting in low density. Priority was given to railroads and automobiles, for which highways and multiple lanes were designated. Houses were to be built using various materials, including fire-resistant synthetics, while also not neglecting traditional natural materials (Hammad, A., 2015, p. 20).

Wright sought to establish new standards for creating modern cities that would adapt to technological, economic, and social changes (Hammad, A., 2015, p. 20). His vision for the future of urban centers rejected centralization and the concept of a city whose primary function was the rapid movement of cars (Kumar, A. & Dev, P., 2020, p. 541).

This paper offers a comprehensive and in-depth examination of the concept of the ideal city, tracing its evolution as a central idea in human civilization from antiquity to

the present day. It begins by establishing the conceptual framework through an analysis of the linguistic and terminological dimensions of idealism. Historically, the study starts with ancient and medieval times, where the ideal city was essentially a physical embodiment of a social, political, and philosophical system. Through the works of philosophers such as Plato in "The Republic" and Al-Farabi in "The Opinions of the Inhabitants of the Virtuous City," we see how the city was designed to reflect a just hierarchical structure, where the urban form and distribution of functions mirrored the desired social structure, with a primary focus on achieving justice, stability, and security.

The discussion then moves to the Renaissance, which witnessed a qualitative shift from a philosophical focus to an obsession with ideal geometric forms (such as the circle and the star). This trend was not merely aesthetic but was driven by pressing defensive and military requirements imposed by the development of the arts of war. Proposed models such as Sforzinda and the City of the Sun are considered prominent examples of this integration of geometric order and security function.

With the dawn of the modern era, and as a reaction to the chaos and decline of the industrial city, comprehensive planning visions emerged. First came the Garden City movement, led by Ebenezer Howard, which sought to create a healthy environment by combining the advantages of the city and the countryside. Then came the more radical modernist visions with architects such as Le Corbusier and Frank Lloyd Wright, who advocated for a strict functional separation between residential, work, and leisure areas, and embraced high-rise buildings and the dominance of the automobile as tools for achieving maximum efficiency and order.

Table (1): Factors specific to urban space in the ideal city according to the theoretical framework

No.	Factor	Definition
١	Publicness	Publicity is the basic characteristic that gives public space its public character, meaning that spaces differ in their degrees of publicity, and there is no "absolute" public space, but rather spaces that are more public than others.
٢	Equitable distribution	This refers to the right of access to public spaces and the actual extent of access to these spaces in a fair and equal manner for all segments of society.
٣	Environmental factor	This refers to the environmental dimension of spaces and the resulting positive impact on the surrounding environment.
٤	Economic	This refers to the commercial activity in the space, such as markets and

	factor	commercial hubs, which are considered vibrant spaces.
٥	Social factor	An important dimension of urban space is that it represents all human activities and daily operations within the urban space.
٦	Mobility factor	Streets and roads are public spaces with a kinetic function that must be organized and directed towards serving humanity.

3.The pioneering experiences of the Ideal City

3.1. The city of Letchworth, United Kingdom: Letchworth, located in the northern county of Hertfordshire in the United Kingdom, is considered the world's first garden city. Its construction began in 1903 by a private company called First Garden City Limited. The city is now owned by the Letchworth Garden City Heritage Foundation, a self-funded charitable organization that reinvests for the long-term benefit of the city's communities. The city has faced numerous challenges throughout its history, yet it has remained steadfast, embodying the principles of a true garden city and its preservation (Lewis, 2015, p. 153). The city will be studied according to the factors identified in Chapter 1, as follows:

1. Publicness

The urban spaces in the city of Letchworth are owned by the "LGCHF" trust, according to the ownership data of the County of Hertfordshire (North Herts Council, 2022).

There are also semi-public spaces located in some large residential blocks, which are common areas for household chores and recreation, such as gardens designated for cooking, playgrounds for children, and sports fields. Semi-private spaces are represented by the front gardens of residential units, where maximum enjoyment is ensured for everyone .

A homeowner, by integrating these spaces, creates a continuous urban landscape of green spaces, as shown in Figure (7) (Blanco Pastor et al., 2023, p. 8).

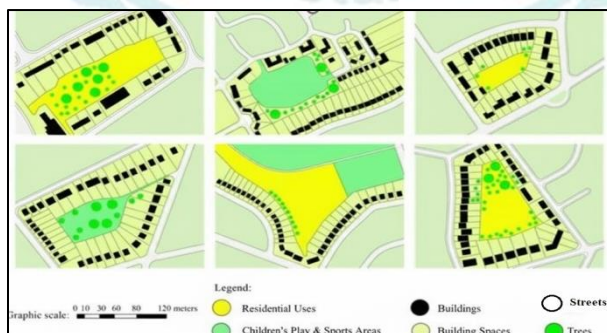


Figure (7): Residential complexes containing semi-

2. Equitable distribution: The population of Letchworth is approximately 33,990 according to the 2021 census (ONS, 2023). The city has a wide range of open and green spaces. There is a sense of spaciousness in the city center with wide sidewalks and long, tree-lined streets. Throughout the city there are 17 open areas that vary according to function as shown in Figure (8), where the open areas vary according to function as shown in Table 2:

3. Environmental factors

The Garden City has always been known for its greenery in its surroundings, even in the city center. Only one tree was cut down during the city's planning, reflecting the city's commitment to preserving its environmental heritage. Landscape design and green spaces formed a unifying element, as building design standards varied from one area to another. Border hedges, which were formerly agricultural land boundaries, trees, shrubs, and tree borders gave the city a public garden-like character befitting its name (Miller, 1983, p. 180).

4. The Economic factor

The business district is located in the city center and to the south of the train station are two main streets, "Eastcheap" and "Leys Avenue," consisting of shops on the ground floor and residential use above (Elazzazy & ECKARDT, 2019, p. 40), where buildings line both sides of the roads continuously, with an open space on the south

side called "Leys Square," which is an important public space within the city. The commercial uses on these two streets vary from restaurants to shops (Council, 2007, pp. 41 & 51).

5. The Social factor

Letchworth is characterized by its vibrant social scene; it can be safely said that no other city in the country of its size has such a social life, with activities and events ranging from commercial activity on Lees Street in the shopping Centre to recreational activity in open spaces (Norton Common, Broadway Gardens, and Howard Gardens). (Elazzazy & ECKARDT, 2019, p. 50)

6. Mobility factor

The wide roads and relatively little traffic in Letchworth provide an ideal environment for cyclists, and the pedestrian connections to the surrounding residential areas are of high quality and mostly frequent (Council, 2007, p. 62). Most of the roads in the city are closed, which is the same feeling generated in dead-end roads, which enhances traffic safety, as there are no standing intersections but rather unusually safe

intersections where the driver can see and be aware of all traffic long before meeting. Although maintaining the existing long lanes may create the opposite effect, garden city architects have tried different ways of integrating road intersections into nice and balanced groups of buildings to form small spaces along the roads (Blanco Pastor et al., 2023, p. 8).

The Leachworth experience in the United Kingdom, which began in 1903, is the first practical application of the garden city concepts advocated by Ebenezer Howard. It presented a unique urban model that aimed to combine the advantages of urban life with the rural environment. This experience was distinguished by its adoption of a planning system based on the green belt to limit random expansion, while dedicating the principle of public ownership of spaces managed by a heritage institution to ensure the sustainability of community benefit. The analysis showed the city's superiority in achieving a delicate balance between the human and environmental scale, through a hierarchy of spaces starting from the large central parks to the semi-public green spaces within residential neighborhoods, which enhanced social interaction and accessibility, and made it the closest model to achieving the concept of balanced idealism compared to later modernist experiences.

Table (3): Summary of the Letchworth experience

Factor	Definition	indicators
Publicness	Urban spaces can be described as having a clear hierarchy of publicity. This hierarchy is controlled by the function and use of the space, and there are other secondary factors that contribute to this hierarchy of publicity, such as control and domination of the space.	• Ownership • Control and domination • Urbanization
Equitable distribution	The size of the space varies in the city according to population density, and this means that the per capita share within the city also varies. We notice that the administrative area has tall buildings and wide spaces, and the commercial area has dense and closely packed buildings.	• Spatial proximity • Individual share
Environmental factor	A garden city is a series of interconnected gardens that promote biodiversity within the city, resulting in a variety of plant, animal, and bird species due to the connection of green spaces with their surrounding environment.	• Enhancing green spaces • Biodiversity

Economic factor	The commercial street in Letchworth boasts a sufficient variety of goods and services. This diversity attracts a large number of shoppers, resulting in excellent street vibrancy. Furthermore, the mix of uses ensures that the street remains active throughout the day.	• Land use mix • Retail diversity • Commercial density
Social factor	In the Letchworth experience, we see unique opportunities to foster social interaction, for example, through gardens nestled among homes. These spaces, with their sensory aspects, generate a general sense of satisfaction and comfort in the city, expressed through connection to place and a feeling of belonging. This is achieved through broad participation in decision-making processes and the preservation of the city's rural character, clearly demonstrated through residents' interaction with laws that protect the city's identity. The city also reflects individual and collective identity through the cultural heritage woven into its feature.	• Social interaction • Sense of place
Mobility factor	The city's roads are characterized by a diversity of transportation options, including public transport, bicycles, and walking. The nature of the roads is characterized by closed-end traffic routes to ensure safety and security, and also by the absence of continuous roads. In general, there is a separation between the movement of cars, pedestrians, and bicycles through physical barriers such as trees or sidewalks.	• Multiple modes of transport • Infrastructure supporting public transport

3.2. Chandigarh, India:

In 1948, Jawaharlal Nehru decided to build a new capital for Punjab on the land near the Hindu temple of Chandi, which became Chandigarh, meaning "Fort of Chandi." The Government of India allocated an area previously occupied by more than 50 villages for the construction of a new capital. On April 2, 1953, Nehru laid the foundation stone for the new capital of Punjab. The task was entrusted to the architects Albert Meyer and his partner Matthew Nowicki, but the plan was not implemented due to Matthew's death in a plane crash in 1950. Le Corbusier succeeded him in working on the establishment of the city (Aloyants & Kotin, 2019, p. 241).

1. Publicness

Chandigarh is characterized by its green spaces and expansive areas, boasting numerous public urban spaces of varying functions. The degree of publicity in these spaces varies depending on their nature and location. Chandigarh's public parks are city-wide green spaces, often featuring artificial water features, attracting residents

and holding national significance. There are also flowing green spaces that connect the city's various parts, forming green belts. Semi-public and semi-private parks are neighborhood parks that attract residents and host community events. Private spaces are the gardens of individual residential units. (Sharma, 2021, p. 73).

Equitable distribution

The open spaces in Chandigarh are part of a carefully planned hierarchical system from the city level down to the residential neighborhood. At the city level, there are huge spaces, The Leisure Valley, which stretches for 8 kilometers from northeast to southwest and is centrally located in the city, extending along an eroded valley and the seasonal N-Choe River stream. Also, Sakana Lake and Rajendra Park are extensive gardens located at the city's periphery to the northeast (Administration, 2015, pp. 230–235) .

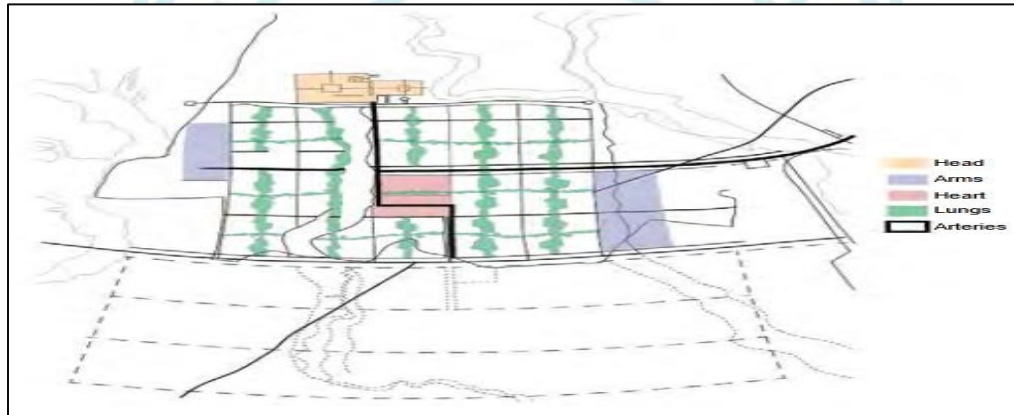


Fig 10. Le Corbusier's plan and the distribution of spaces in a hierarchical manner. Source: (Patel, 2018, pp. 12–13)

2. Environmental factors

Le Corbusier believed that by providing easy access to basic pleasures such as sunlight, greenery, and open spaces within the city, he could positively influence the physiological and psychological aspects of human well-being. In his book "The Radiant City," he speaks of future cities with their vast green spaces as cities that would enable the human spirit to draw strength from its active interaction with the forces and beauty of nature. This is reflected in Chandigarh to this day, where one is amazed by the abundance of gardens, parks, and open spaces throughout the city, and the trees lining the roads, their type and shape determined by the direction of the road and its function in the hierarchy of the road network. Amidst the vast green spaces,

abundant city parks, and neighborhood gardens, Le Corbusier wished for a vibrant public space where residents would have countless opportunities for close interaction with others, as well as ample space for contemplation and solitude. He imagined people living active and healthy lives in open green spaces, protecting themselves from the pressures of the modern city (Ramesh, 2016, p. 3) In the case of Chandigarh, maintaining public health at the individual and community level lies in providing comprehensive green spaces, reducing pollution, and maintaining the cleanliness of the city (Bhattacharya & Sen, 2022, p. 61).

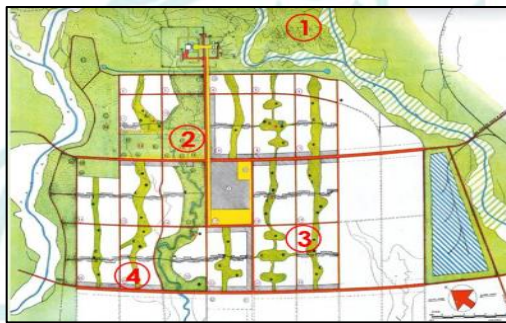


Figure (9):
Hierarchical
arrangement of
public spaces
(١)Public spaces
that attract city
residents
(٢)Flowing spaces
that connect the

3. Economic factor

Commercial activity is integrated with the rest of the activities in the residential sector, providing self-sufficiency for the sector's residents. It is on one side of the road to avoid distractions and frequent crossings, and it also faces north to avoid the sun's rays. At the city level, the V6 highway is a commercial extension from east to west, surrounded by residential sectors on both sides. In this way, continuity of daily life needs and resources is achieved, and it connects the entire city from east to west (Jigyasu, 2014, p. 106).

4. The social factor

Le Corbusier sought to connect spatial design, building facades, and the relationships between components to create a sense of joy. This interconnectedness influences perception and ensures renewal. For example, the Open Hand monument symbolizes the restoration of confidence in western India and is psychologically impactful. Well-designed urban spaces foster a sense of happiness through a balanced urban environment that harmonizes built, semi-built, and unbuilt spaces with nature, human needs, and the vertical and horizontal expansion of city buildings. Crucially, this involves aesthetics balanced with added technological dimensions, such as concrete pouring to create landscapes, integrated urban design and planning, modular

coordination, the principle of measurement, the division of buildings into grids, the rhythm of large complexes, and reference principles for repetition, scenes, and views. Alongside these efforts to instill a sense of joy in urban spaces, Chandigarh, as a city, offers a sense of urban well-being and appropriate freedom, coupled with the potential for renewal. (Bhattacharya & Sen, 2022, p. 58).

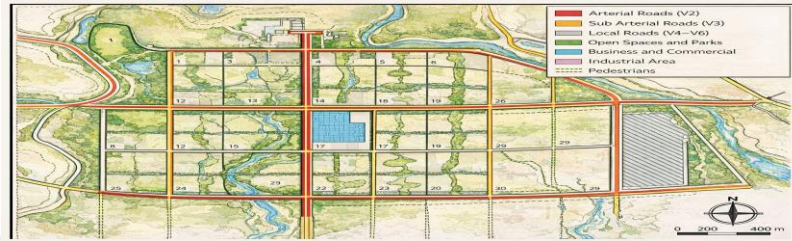


Figure (11): The hierarchical road system (V7) in Chandigarh /Source: (Bose M, 2017, p22)

5. Mobility factor

Chandigarh's street system is based on the "V7s" system with seven hierarchical features, planned in a grid pattern that ensures easy access to all parts of the city. It also encourages car traffic over other sustainable means of transportation. The roads are organized hierarchically, with 1V representing main roads connecting the city. In the outer areas, V2 main streets within the city, V3 roads that define the boundaries of residential sectors, V4 shopping streets within the sectors, V5 residential neighborhood streets, V6 access roads to homes, and V7 pedestrian and bicycle paths (Kim & Park, 2016, p. 59).

Chandigarh's experience represents a prominent embodiment of the principles of modernity and the radiant city in the pursuit of perfection. Its planning relied on the system of residential sectors as standard units surrounded by a strict hierarchical road network (7Vs system) aimed at separating the movement of vehicles and pedestrians. Despite the city's success in providing a distinctive visual environment interspersed with vast green spaces and natural axes such as the Recreation Valley, the analysis showed that the exaggeration of functional classification and the separation of distances led to the dominance of the private car and the fragmentation of the urban fabric, which constituted an obstacle to the social vitality and spontaneous economic integration that characterizes traditional cities, thus becoming a model of engineering idealism that may sometimes lack an intimate human scale.

Table (4): Summary of the Chandigarh experience

Factor	Definition	Indicators
Publicness	There is a hierarchical arrangement of public spaces from public to private, and they have different functions. Public spaces are central spaces connected in a straight line and perform an important recreational and environmental function. There are also flowing spaces that act as green belts bordering residential areas, and spaces distributed within the residential sector that contain various activities such as sports, play and entertainment. There is also a part dedicated to residents, which is the private space of the residential unit.	• Vitality • Control and mastery
Equitable Distribution	The city's spaces are distributed fairly through a connected network of open and green areas, extending centrally along residential sectors to ensure easy access. Despite variations in population densities due to negative social stratification, the city generally enjoys a sufficient amount of green space, with an average per capita share of 17.4 square meters.	• Spatial proximity • Individual share
Environmental factors	The extended green belts provide connectivity to green areas, which enhances biodiversity through the diversity of plants and animals. The city in general has a green character from its wide spaces, planted roads and green belts.	• Enhancing green spaces • Biodiversity
Economic factors	The city has a bustling commercial scene, concentrated in Sector 17 and V6. These areas are characterized by consideration of comfort aspects through the orientation of buildings to achieve maximum shade. They are diverse markets and include several levels of trade in goods and services. These shops are subject to strict controls to avoid visual clutter.	• Land use mix • Retail diversity • Commercial density
Social factors	There are numerous opportunities for social interaction in the city, from beautiful central parks that attract visitors to nature reserves with community events and activities. The availability of technological elements and their integration with the urban space enhances this interaction, and monuments and statues reinforce and showcase the city's identity and the level of coexistence among its diverse identities and ethnicities.	• Social interaction • Sense of place
Mobility factor	The city is characterized by its wide roads, as the city prioritizes the movement of cars of both public and private vehicles, and then the movement of bicycles or walking. Also, the road network is characterized by safety through service roads, and the separation of residential areas from the fast traffic roads by means of planted median islands.	• Multiple modes of transport

3.3. The city of Brasilia, Brazil:

In 1956, when Juscelino Kubitschek was elected President of Brazil, he announced the creation of a new capital for Brazil. The idea of building another capital was reinforced by a set of different factors, such as the desire to start a new history separate from the colonial legacy and the attempt to monopolize power away from the huge population centers. When a capital is created far from the most densely populated areas, it is less likely to be exposed to popular demonstrations. Also, there is the desire to develop uninhabited interior areas. Among the ideal cities that were created from scratch, the model of Chandigarh City, designed by Le Corbusier, is the closest to the city of Brasilia (Rodrigues da Silva, 2015, p. 267).

The architect Lucio Costa's proposal won out of twenty-five proposals. The proposals submitted to the competition showed strong links to the CIAM Foundation and especially to the principles of modern rationalism of Le Corbusier. Lucio Costa's plan was based on a main axis that intersects with another curved axis, in a shape resembling a bird with outstretched wings, or as Lucio stated, a shape that symbolizes the cross. The main axis is defined by a large central space made of grass and orange earth and surrounded by roads for car traffic. The end of this huge axis is completed by a central square, which is the governmental and civic center. The city was planned to accommodate 500,000 people (Rodrigues da Silva, 2015, pp. 279 & 281).

1. Publicness

Territorial boundaries are the foundation for the relationship between the user and the space. They depend on criteria such as the degree of accessibility and control over the spaces. Accessibility is the primary factor that allows us to perceive this transition from public to private space. In the case of Brasilia, the building embodies private space within residential areas. The private space, the apartment, has restricted access, while the entrances are semi-private, with fewer restrictions than the apartment but more than the street. In Brasilia's buildings, the entrance is a space connected to the exterior, and the buildings are elevated by columns called "pilotis," which are semi-private spaces. Moving to the residential areas, the user notices a certain degree of encroachment by the residents. This space, although public, is considered an extension



Fig. 12. A- Semi-private spaces "pilotis" B -Semi-public spaces, building courtyards
 (Solórzano & Almeida, 2019, p. 13) & (Caldeira, 2007, p. 352)

of the buildings' sphere of influence; it is a semi-public space, while public streets and squares enjoy free access and are under the control of an entity that furnishes, organizes, monitors and is responsible for them (Solórzano & Almeida, 2019, p. 16).

2. Equitable distribution

In the central area, a formation of a different size than the rest of the sectors resulted, with the spread of vertical buildings and vital centers, unlike the areas designated for housing, which are characterized by average building heights and appropriate spacing between facades (Caldeira, 2007, pp. 342 & 357). The spaces are distributed on four different levels: the massive level, which represents spaces with symbolic significance for expressing a strong launch of authority, and it is along the massive axis and civic work is active in it and it is often a center for demonstrations, protests and marches. As for the social level, it refers to the central level of the city at the intersection of the two axes, and it is a space dedicated to interaction and supporting the daily activities and needs of the city's residents. The level below it is the residential axis, which is designed in a way to protect the privacy of the residents and create an atmosphere of intimacy and comfort. The last level is the rural (pastoral) level, which is related to environmental aspects, as it is spread throughout the city through its green areas and its lake and connects the three levels (Pereira, 2014, pp. 7–9).

3. Environmental factor

Brasilia is an open city integrated with linear parks, and these spaces represent its most authentic characteristic. Also in Brasilia, both the air and water are clear and refreshing, providing an ideal environment for planting trees and creating parks, nature reserves, and forests. Trees surround the residential blocks in green belts,

where only the city center or the Plaza de la Pétente are visible; the rest of the city is densely covered with trees. Green spaces maintain a pattern of privacy where residential buildings are not visible (Bispo, 2020, pp. 39–40 & 48).

4. The Economic factor



Figure (13): A- The macro scale B- The social scale C- The rural (pastoral) scale
D- The residential Scale (Solórzano & Almeida, 2019, p. 9)

The commercial sector is located next to the central platform, where it combines various shops, offices, and banking activities. It is interspersed with small squares that are community spaces located internally within the sector. Lucio Costa explains the concern for the issue of accessibility, whether for vehicles or pedestrians, as the land is left free to accommodate the intensive flow of people frequenting the sector. It has more suitable characteristics for living, especially with regard to its bioclimatic conditions. It is a large space with flowerbeds and gardens and is suitable for environmental protection. Since it is located on the edge of the road system into the sector, it forms more spatially protected environments in terms of size and composition (Caldeira, 2007, pp. 363–365).

5. The Social factor

The cultural and entertainment sector stands out as a meeting and gathering point, located opposite the commercial sector and in an area that serves as a point of contact between the four main sectors of the urban area. It allows for broad communication between the two sectors and forms the true urban center (the heart of the city). Costa defines it as a space dedicated to concentration, circulation, and also contemplation. It functions as environments for social interaction and accommodation for those who move through the center. These are the spaces whose purpose should be to encourage encounters and integration with the surrounding buildings (Caldeira, 2007, pp. 358–362).

6. Mobility and mobility factor

In the ideal city of Brasilia, urban fragmentation resulting from its extensive public spaces and transportation networks negatively impacts transportation. For urban residents, the degree of spacing and dispersion of highways within urban areas restricts accessibility between urban centers (Pontes, 2010, p. 209). The city has a massive axis, a symbolic space encompassing the most important government buildings and significant squares. This axis features a six-lane road in each direction, very wide central spaces partially covered by trees, and substantial setbacks of approximately 310 meters between the facades of ministerial buildings. There is also a 12.4 km long residential axis consisting of six lanes with a central reserve road, two 40-meter-wide tree-lined roads on either side, two smaller four-lane side axes, and two densely wooded strips at least 20 meters wide bordering the rows of large residential blocks to the east and west of this road complex. The distance between facades is at least 210 meters. At the intersection of these two axes is the road platform, which includes a metro station and a bus station. The city's main public transport hub, consisting of 4 levels for car traffic below and pedestrian traffic above, also provides a distinctive view of the Ministries Square and Congress Towers (DE HOLANDA & MEDEIROS, 2012, pp. 6–22).

The city of Brasilia represents the ultimate embodiment of modern rationalism and the CIAM's vision for ideal cities. It is characterized by a rigid functional classification and a gradual progression of spaces from monumental structures, symbolically representing authority, to residential areas filled with green spaces and linear gardens. While it succeeded in creating a stunning visual landscape and an integrated ecosystem, analysis revealed another side to this architectural ideal. The dispersal of building blocks and the extensive road networks designed for cars led to urban fragmentation, hindering pedestrian mobility and reducing opportunities for spontaneous social interaction and a sense of community. Thus, it remains a model of a city that prioritizes formal order and political symbolism over functional flexibility and human scale.

Table (5): Summary of the Brasilia Experience

Factors	Definition	Indicators
Publicness	From the perspective of the city of Brasilia, public space is defined by access and control, and on this basis, a hierarchical order is formed from public to private spaces.	• Ownership • Control and domination • Urbanization

		• Physical formation
Equitable distribution	The city of Brasilia is characterized by its widely spaced buildings and expansive open spaces, which are arranged on four levels: the grand, the social, the rural, and the residential. Generally, there is a fair distribution of spaces, and they are easily accessible via transport networks or main streets.	• Spatial proximity • Individual share
Environmental factor	The city greatly enhances green spaces through interstitial spaces in residential areas or via wide, expansive axes, which take the form of lush gardens. These gardens provide connectivity with the forests surrounding the city, and are therefore a fertile environment for biodiversity.	• Enhancing green spaces • Biodiversity
Economic factor	Commercial activities are concentrated in a central location in the heart of the city, characterized by a variety of goods and services, a mix of uses, and high accessibility thanks to the nearby main transport station.	• Land use mix • Subdivision diversity
Social factor	Social interaction and community engagement are clearly evident in the city center through the four main sectors of the center, and at the level of the residential sector, the interstitial spaces also serve as meeting and effective participation areas.	• Social interaction
Mobility factor	The city boasts an excellent, hierarchically structured transportation network that provides high connectivity between the center and the periphery.	• Multiple modes of transport • Infrastructure supporting public transport

Conclusion

This research sought to explore the concept of the ideal city and its manifestations in urban planning. Through an extensive research journey, from theoretical foundations to applied analysis, it revealed that idealism in planning convention is not a rigid template or a fixed geometric formula, but rather a dynamic concept that reshapes itself according to the variables of the times. While idealism was based on philosophical and ethical visions in ancient times, and on defensive and engineering concerns during the Renaissance, it transformed in the modern era into a strictly functional one, settling today on the concepts of sustainability and humanizing cities. It became clear that urban space is the true vessel in which these values are translated, and that a city's success is not measured by the size of its buildings as much as by the

quality of its public life and the capacity of its spaces to accommodate human interaction.

A comparative study of global experiences yielded key lessons regarding the duality of planning and life. The Letchworth experience demonstrated a creative balance between rural and urban environments, while the modernist models in Chandigarh and Brasilia revealed the other side of architectural idealism, where excessive functional categorization, car dominance, and a wide visual scale led to urban fragmentation that weakened social intimacy.

In light of this, the paper concluded by formulating a comprehensive framework that identifies six governing factors for the efficiency of urban space (publicity, equitable distribution, environment, economy, society, and mobility), emphasizing that the path to the ideal contemporary city requires moving beyond a purely material planning approach and adopting a place-making approach

Table (6) Summary of Factor Analysis in Urban Space According to Ideal Cities

Factor	Brasilia city	Chandigarh city	Letchworth City
Publicness	Public space is defined by access levels; the "Pilotis" columns stand out to create semi-private spaces connected to the outdoor space beneath the buildings.	Public spaces range from multi-functional urban public areas to semi-public and private parks within neighborhoods.	The spaces range from private (front gardens) to semi-public and public (inner courtyards). They are owned by the "LGCHF" Foundation.
Equitable distribution	The area is distributed according to four levels (large, social, residential, rural). Vertical buildings are concentrated in the center, while residential buildings are of medium height.	A carefully structured hierarchical system of open spaces, from the city level down to the neighborhood. The 8-km-long "Recreation Valley" stands out as a central element of the distribution.	A wide distribution of open spaces (17 zones) with diverse functions (playgrounds, recreation, cemeteries). Wide sidewalks create a feeling of spaciousness.
Environmental factor	The concept of a "park city"; an open city integrated with a linear park. Trees surround the residential blocks to protect privacy and the climate.	Based on Le Corbusier's philosophy (sun, space, greenery). Green belts connect the city's edges. Per capita share of green space is 17.4 m ² .	"A truly "garden city"; not a single tree was cut down during the planning process. Green spaces surround the city and permeate its center.

Economic factor	A central commercial area adjacent to the "Central Platform". The land was cleared to accommodate the heavy flow of shoppers, cars and pedestrians.	Ensuring self-sufficiency for each sector. Business activity extends along the V6 from east to west to guarantee resource continuity.	A commercial area in the center and south of the station. Mixed functions (shops on the ground floor and accommodation above) with a "Leys Square" plaza.
Social factor	Interaction in the cultural and entertainment sector stands out as meeting points, and in the interstitial spaces within the "super quadra" (residential neighborhoods).	Designs aimed at spreading "joy"; squares and projects (such as the Open Hand Monument) to promote trust, human interaction and coexistence.	A very active social character; great interaction in central parks and open spaces (such as Norton Common).
Mobility factor	It has an excellent transport network and a hierarchical road system, but it has suffered from "urban fragmentation" due to the widening distances and the dominance of the private car.	The strict "7Vs" system classifies traffic and separates car lanes from pedestrians, ensuring access for all parties.	Wide roads and low traffic. An ideal environment for cyclists and pedestrians. Use of cul-de-sacs to enhance safety.

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