

City of the Future Theories: A Diachronic Comparative Study

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Abstract

This paper strives to interpret the future city or the future of the city by searching published articles. To do this, a review of literature had been made and articles from urban planning and architecture perspectives were studied. We collected information on the time-varying indicators that make up the cities of the future. In this study, it is investigated how the problems arise periodically and the indicators in the formation of the city plans of the future. It concludes with some foresights about next fifty years' city futures of the millennium.

Keywords: Cities, Future, Urbanization, Overcrowding, Disaster and World, Pandemic

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Introduction

"Cities of the future" has been talked about for centuries, not a new issue. In each period, there are works on the preliminary vision of the city's planning, construction, adaptation, and analysis by imagining the cities of the next period (Geen, Elizabeth, Lowe, Jeanne and Walker, Kenneth (eds) 1966; Glasgow City Council, 2011; Hall and Pfeiffer, 2000; Hall, 1988). These studies reveal how cities may integrate into time and period in the future. It is important to question the issue of the preparedness of cities for tomorrow to foresee what might happen in the future. That is why the unavoidable population growth (World Bank, 2013) creates 40 metropolitan cities every year (Verlag, 2008). This data requires planning of the cities of the future from today on both micro and macro scales.

Throughout history, cities have been at the center of social, physical, economic, ecological, technological, and more recently digital developments (Mumford, 1961; Gauzin-Müller, 2002; Wheeler, 2004). In the digital age, we can also talk about the attempts of the digital game designers who tried to find solutions for ideal city life. Firstly, Micropolis and later Sim City forced the users to solve daily problems of cities at the end of the 20th century. It should not be forgotten that Hollywood filmmakers are also one of the visionary groups for this issue. With the help of science fiction films, the audience could be able to predict the future conditions and lifestyles of future cities. Thus, all predictions underline that the detailed analysis of cities provides information on city indicators (urban indicators) of that period. The indicators of the period are guiding in the planning of the cities of the future. Through their work on the cities of the future, researchers produce fundamental concepts of the cities of the future in line with the urban indicators of the period.

The phenomenon of climate change as a result of global problems threatening the future of mankind such as the overconsumption of non-renewable natural resources, pollution of air, water, and soil, the release of fossil fuels into the atmosphere, and rapid urbanization due to growing populations have brought the development of unhealthy residential tissues. During this period, when the world population has reached 7 billion, a significant part of the population is made up of developing countries in Africa and Asia. It is thought that 342 million people will be added to the world population in China alone by 2030, and another 80 million in Indonesia (UN, 2019). After all, cities will deal more with poverty, pollution, and diseases. In cities with an increased population density, climate change will bring greater destruction. Cities, as dynamic and living organisms feeding each other, are affected by changes caused by global problems (Ercoskun, 2012).

The cities of the future are being arranged in accordance with today's urban indicators and, as in the past, each period creates its own cities of the future. The search for the ideal city of the future has always been influenced by some of the requirements of its era and the problems experienced at that time, for example; the search attempt for a Garden City is looking for solutions to the needs of London, which is being suppressed by the rapid population growth in London. The city of the future is a search for the ideal. However, this ideal is limited to the knowledge gained/accessed by humanity on that day. It is important to determine the concepts that will make up the city of the future from today.

Methodology and Approach

The purpose of this research is to determine which concepts the cities of the future were developed in accordance with the urban indicators of that period in search of ideal cities throughout history. It is envisaged that the concepts of the future cities of this period can be figured out through an understanding of the concepts, literature research and analysis of examples, and holistic documentation of the concepts of the city of the future. The method used for holistic documentation is to determine the problems that arise periodically by conducting retrospective literature reviews and to determine the relationship between these problems in forming indicators of the urban plans of the future by reading analyses on the city.

Future Cities

Each period has questioned the city plans of the future for the next period in accordance with its own indicators. In this study, the urban planning models of the future are interrogated by considering the development according to periodic effects (Figure 1).

Pre-Industrial Time

Life in pre-industrial cities was more based on agriculture and the trade of agricultural products, but this trade was mostly within the city limits. These trade activities were carried out with limited lands, cultivation tools, and limited transportation potential. In this life circle, painters and thinkers have tried to visualize the cities of the future. As a result of the reflection of artistic ideas between the years 1450-1650, geometric city diagrams were projected. 'Filarete' described a dream city called Sforzinda in his thesis written in Milan (Morris, 1994). This is an attempt to explore a future city. It is a city diagram consisting of 8 pointed stars placed in a circle with radial road axes. 'Scamozzi' explained a city plan with road axes in a work published in 1615, and later, he carried out the construction of the Palma Nova radiant and symmetrical urban plan phenomenon with a polygon protection wall and applied the urban plan from theory to practice (Kostof, 1991). In the late 1800s, when there were no concepts of urban planning and regional planning yet, city planners began to discuss urban forms (Ferriss, 1929).

Industrial Time

Theories and principles aimed at eliminating the problems that the services sector, which is increasing with the industry, will create in the city center, have also been developed. The "Garden City" model designed by Ebenezer Howard in 1892 is still the decentralization city model, which is a contrasting approach to the idea of a compact city center today (Ward, 1992; Fisher, 1903). The main idea of Howard is to create a model that unites the countryside and the city further from the crowds of London and takes the positive sides of both. As an example: Ebenezer Howard, "Ward and Centre Garden City Diagram," 1902, Extract from Garden cities of to-morrow (London, 1902), RIBA Library Photographs Collection. Analyzing the environmental indicators of the period, the scarcity of open and green spaces in the city center, noise pollution, and the chaotic planning situation in terms of urban health allow us to produce the concepts of Howard's ideal future urban model. Garden cities constitute the fiction of the model. Howard interpreted polycentric garden cities as a modern unit with a modern understanding, divided them into

regions through the main city and the satellite cities it forms around it, divided them into green belts, connected all areas with railway networks. Studies similar to this model in the modern trend include the industrial city of Garnier, the Linear City of Soria Y Mata, and the ideal city studies of Le Corbusier (Ward, 1992; Frey, 1999). Soria Y. Mata made the Linear City (La Ciudad Linear) proposal in 1882, and this first proposal, which was born from the problems caused by industrialization, eventually inspired an extremely important principle such as the linear city proposal for an industrial city (Özdes, 1985:132-133). Garnier proposed to leave a city that is a candidate for industrialization as it is in its current form, without growing it like an oil stain, and to develop the new city linearly on an axis connected to the existing city. Garnier, who concentrated the industrial zone in one place and separated only some special industrial facilities in a way that fits the linear format, created a transition to the idea of a 'Linear Industrial City' (Özdes, 1985:133). Garnier designed the industrial city horizontally, while 'Le Corbusier' proposed vertical elevation, arguing for forcing against nature. According to Le Corbusier, man will control nature and make it accept its existence. In 1922, Le Corbusier theoretically revealed the city of the 20th century, suggesting that the "modern city" should include tall buildings raised from the ground, with large numbers of people living in it, rather than the large number of buildings spread across the land by destroying green. With this understanding of planning, he aimed to ensure that nature would be protected and people would benefit more from green.

The researches decentralization approaches that promote sustainability and compact form issues, which are a centralization/dissemination model. After the 1900s, with the new urbanism approach in the 1960s, mixed-use urban functions and regions were separated as an alternative to today's unsustainable cities, thus studies with the idea of walkable, clustered, mechanical, self-contained, and sustainable urban models were put forward. Compact cities are denser, non-expanding, clustered, and mixed-use settlements, maximizing the protection of agricultural land. We can take examples of developing cities by rising in a vertical direction.

A human-scale design has been created in the divided city model (mixed-use urban functions and zones are separated), and all transportation systems with mixed-use layers are connected to the light rail system with five-minute transit stations (Jacobs, 2011). The density of transportation axes and the urban population growth has enabled the concept of a divided city to be established. It was understood from literature research that the indicators of the period caused the production of the concepts of layered transportation axes, close-distance transportation systems, and low carbon emission vehicles in traffic (Dahinden, 1972).

Industrial Time – Consumption Society

Cities have undergone great changes since the 1940s (World War II), and their consequences have been discussed for the past decade. The discussions are certainly not limited to the results, they are also aimed at ensuring better and sustainable living conditions for cities that have completed or are projected to complete the urbanization process. The Industrial Revolution has created great changes and brought new technological developments to different areas with it. After the 1850s, technological and economic progress began to make the transition from agricultural-based settlements to industrial-based urban areas. Each compo-

ment of modernization has become a risk-creating factor, in addition, it has been strongly argued that the main cause of the risk for the community is not scarcity, but overproduction (Beck, 1992). "Now we travel more, we want more, and we use more," with this understanding, cities have been under "extreme pressure" and are beginning to lose their natural value. Rapid and unplanned urbanizations through space uses and rapid developments brought about by the industrial revolution are important for the perception of the indicators of the period.

As a result of these important processes experienced by our world, rapid and unplanned urbanization has led to the fact that future cities are planned to be useful and divided into layers. An example is the work of Geoffrey Jellicoe – *Motopia: A Study in the Evolution of Urban Landscape*, 1961 - with dedicated and planned solutions for the user of the future city at that time. The ramped-up city model, which proposes the separation of transportation by creating a layered city consisting of raised streets that are specially reserved for the user (vehicle, pedestrian, green) of the transportation axes of the city, is encountered with today's large-mass construction such as shopping malls and residences.

After 1960 and nowadays, the tendency for increasing unavoidable migration from rural areas to cities has given impetus to urbanization and caused it to increase. Urbanization has caused population growth and, in parallel, high structuring. In this direction, it is more difficult to get to the desired place to go and more time is spent. Urbanization, population growth, and high construction, which were the indicators of that period, led to the idea of the ideal city of its era in the moving city (walkable city) model. As an example: Colin Buchanan, *Illustration from Traffic in Towns*, Ministry of Transport, 1963 and Department for Transport 2014.

Buchanan's walkable city model (Buchanan, 1963) is considered to have an approach to combining several transport principles, including elevated traffic reserved for transport networks, combining several principles of transportation, including pedestrian paths and peripheral areas (traffic deceleration and speed ramps).

Cluster city, Peter Cook's proposal, is a network of configurable clusters and interchangeable units that complement the city. An example of leadership of Plug-In City, Yona Freidman *Ville Spatiale* (1958) is Peter Cook (Archigram), *Plug-in City, Overhead View, (Axonometric)* 1964. Image supplied by the Archigram Archives 2014. It consists of a very large part of adaptable, dia-grid space frames that can change indefinitely, facilitate parceling, influenced by the Pop Art era. Modular reconstruction is available through cranes at the top of each structure. Transport axes connect different cities, while existing cities are connected by a monorail system and a parallel-flying hovercraft route path. With the benefit of the technological flexibility and convenience, it is seen that structures that could be protected by pneumatic roofs in bad weather conditions, modular roads that could be opened and closed, as well as railways and public spaces, have been thought (Perez-Gomez and Pelletier, 2000). They can be applied modularly with the influence of the era and the convenience provided by technology; It is understood that an ideal urban period was built in line with the indicators where perfect detailed solutions and flexible spatial solution planning are seen.

Industrial Time – Digital Society

A mechanical city is a city with architectural integrity that is considered mechanical, mobile, and compatible with its surroundings (Hollein, 1934). The decisive idea of the technology of future cities produced models that characterized a series of urban visions in the last half of the twentieth century, such as Buckminster Fuller's Tetrahedral city (1965) and the linear city of McMillan, Griffis and Mileto (1967). It is seen that an approach is exhibited in the produced model in which mechanization, mass production, adaptation, and technology, which are indicators of the period, are at the forefront.

Hollein fictionalized the Aircraft Carrier City in 1964 with a group of off-road photographs, giving up buildings altogether and proclaiming the forms of the land as architectural expressions - he evidenced the expression of "everything is architecture" by his photographing method. In connection with this ironic, politicized outlook, the aircraft carrier is an iconoclastic relic of its former function for Hollein; Its use here appears to be the common narrative of their search for ideas on what it means to build in the natural environment; For example, Hans Hollein, 1934: Aircraft Carrier City in Landscape. Project. Perspective 1964. Unbuilt. New York, Museum of Modern Art (MoMA). Cut-and-pasted reproduction on four-part photograph mounted on board, Philip Johnson Fund.

The fact that the mechanization and industrial period provided different kinds of materials created the utopian DIY architecture (do it yourself) approach of Jungmann and Ant Farm, 1967; Hans Rucker, 1967; Hall, 1974), for example, Jean-Paul Jungmann, DYODON flottant. Dyodon-Habitation pneumatique expérimentale Dyodon et constructions pneumatiques: annexes, 1967. Centre Pompidou, MNAM-CCI, Dist. RMN-Grand Palais/Jean-Claude Planchet. DIY Architecture is a self-built space made of floating and inflatable material. The use of fabric, which was the only material known up to that time in places or cities to be visualized with the help of air pressure, also paved the way for the production of different types of materials. Examples of works developed in accordance with the indicators of that era are the architectural technology of air structures by Dante Bini of 'Bini Domes'-inflatables, Fredric Price and Coop Himmelblau, 1970, Edinburgh Sports Dome in Malvern by architect Michael Godwin, 1977. These studies reflect an indication of material experiments in architectural research in the late 1960s and 1980s. It is understood that the increase in the possibilities of materials causes the diversification of the ideal city idea when approaching the city of the future.

Reacting to the functional structure of the city, which is constantly rising vertically with the post-war period of mechanization, C. Nieuwenhuys, 1948, tries to focus on the routines and actions of citizens in "everyday" life together with the Lettrist movement. Lettrism is a French avant-garde movement founded in Paris in the mid-1940s by Romanian immigrant Isidore Isou. Lettrists have applied their theory of thought to all areas of art and culture such as poetry, film, painting, and political theory (John, 1992). Lettrism has continued the concepts of detachment and repetition in the form of psychogeography in the ideal urban thought. As Guy Debord (1955:5) stated, the approach " the study of the precise laws and specific effects of the geographical environment, consciously organized or not, on the emotions and behavior of individuals " enabled a new graphic communica-

tion and critique of capitalist community architecture and urbanism to plan the psychological-geographical relief of urban centers, which apparently encourages or enables certain movements and activities (McDonough, 2002:55-87). In essence, the psychogeographic study, 1957, can be cited as an indication that the codes representing the new city, which will be an interrogation theme, are being investigated. Because the project proposed as a consumer-oriented urban landscape is a state of emancipation due to its emptiness and featureless state and allows us to be anyone on anywhere, anytime. The future city described here is the growth of the traditional and widespread urban form to create the unlimited reproducible anonymous structure model of the spatial logistics of supermarket and factories (Taylor, 1998), for example, Constant Nieuwenhuys, 'Symbolische voorstelling van New Babylon' (Symbolic Representation of New Babylon), Collage, 1969. Gemeentemuseum Den Haag.

With the addition of the current ecological crisis conditions to the utopian visions of sky cities in line with the ever-renewing world and the increasing population, Saraceno focused on the flying city model in 2011. In utopian thinking, his installations explore biological and sociological configurations and network relations between spaces (Unlike traditional works of art, installation art is a type of art created for a particular space that does not contain an environmentally independent art object, uses and examines the qualities of the space where audience participation is a fundamental necessity. It can be done indoors or outdoors). The idea of using helium balloons, developed as a competition project for disaster housing, emphasizes the action to remove people from the devastated area, while it generates the idea of hanging the space on another floor. For example, Tomas Saraceno, *Cloud Cities*, 2011. Sketch Installation view, "Cloud Cities," Hamburger Bahnhof – Museum für Gegenwart, Berlin 2011. Photography York, NY, USA, Andersen's Contemporary, Copenhagen, Denmark, and Pinksummer Contemporary Art, Genoa, Italy. Sketch by Studio Tomas Saraceno, 2011. Floating cities, being both air and water-based, focus on sustainability and indicate the vision indicator of the period, for example, Studio Linfors (Clouds Architecture Office), (Cloud Skippers, 2009; Saleh Y. et al., 2022).

Sustainable smart cities and communities have accelerated the development of smart technologies in cities by implementing the European Innovation Partnership after 2010. In this context, they focused their research topics on the themes of energy, transportation, and recycling (Riffat, Powell and Aydin, 2017). In 2013, €365 million of EU funds were allocated for the demonstration of smart urban technology solutions.

Ecological city, Eco-city, smart city plans have been formed with the concept of smart/digital cities. These plans, which include many proposals for plans related to technology, networking, and integration of urban systems, are clearly visible. Sample recommendations include 'Smart Alarms' using sensors to understand human daily routines, superfast broadband installation, and Wi-Fi areas of the whole city. However, it is understood that there are some indicators regarding the role of technology in future smart cities, ecological city plans prepared by cities, companies, and universities. We see that future city innovations are imagined holistically with environmental changes and new systems (Gary, 2014).

Case of idea/author		Time	Reasons	Future time	Indicators	Concept
Sforzinda Palma Nova	Pre-Industrial Time	1450-1650 1615 later	<ul style="list-style-type: none"> For agriculture and trade in agricultural products 	1965	<ul style="list-style-type: none"> Leadership Identity Security 	<ul style="list-style-type: none"> Wars Palace and settlement separation
Garden City/Howard E. Industrial City/Garnier T. Linear City/Mata Y.S Ideal City/Le Corbusier	Industrial Time	1898 1924	<ul style="list-style-type: none"> Lack of Green Space Chaotic planning 	1902	<ul style="list-style-type: none"> Percentage of usable green space Marriage of city and country 	<ul style="list-style-type: none"> Water garden Splash parks Recreational space
Divided City- Motopia City/ Jellicoe G.	Industrial Time – Consumption Society Period	1961 1962	<ul style="list-style-type: none"> Increasing number of transportation levels 	1913 1930 2009	<ul style="list-style-type: none"> Public transport facilities Increasing populations 	<ul style="list-style-type: none"> zoning of the multitude of urban transportation Inter-connected city Low carbon-energy grid
Moving city/Buchanan C.		1963	<ul style="list-style-type: none"> Rise of traffic 	2013	<ul style="list-style-type: none"> Urbanizations Rising populations Rising constructions 	<ul style="list-style-type: none"> Separated traffic-traffic calming and speed ramps Closed to public space
Cluster city/Cook P. Plug In City/ Freidman Y.		1964	<ul style="list-style-type: none"> Overhead view 	2009	<ul style="list-style-type: none"> Grinder module Precise ordered Prefabrication 	<ul style="list-style-type: none"> Megastructure Price detail Easy changing space
Mechanical city- Tetrahedral City/Fuller B. Linear City/ McMillan Griffi, Mileto	Industrial Time – Digital Society	1965	<ul style="list-style-type: none"> With the mechanical rethinking Complexity of human relation 	1965	<ul style="list-style-type: none"> Mechanization Mass production Adaptation Technology 	<ul style="list-style-type: none"> Aircraft carrier city is placed in situ to a pastoral landscape Without aesthetic
Aircraft Carrier City/Hoolein H. Diy city/Jungmann J.,Rucker H.,		1967	<ul style="list-style-type: none"> Floating Inflatable structures 	1977 2007	<ul style="list-style-type: none"> Differences of materials Practical and deferent 	<ul style="list-style-type: none"> Linear city Floating city Self-made space
Lettrism- Plucking and Repetition City /Debord G.,		1969 1992	<ul style="list-style-type: none"> Everyday life Routines 	2002 2013	<ul style="list-style-type: none"> Routine Monotone Repeatable 	<ul style="list-style-type: none"> Geographical relief of urban centuries Spatial logistics of the supermarket and factory can be repeated unlimitedly
Space city and cloud city/ Saraceno T.,		2009	<ul style="list-style-type: none"> Ecological cries Post-coastal disaster 	2011	<ul style="list-style-type: none"> Sustainable Reduced Resources Over populations 	<ul style="list-style-type: none"> Utopia of new space and life Another layer
Ecologic city, Eco-city, smart city/ European Partnership		2010 2019	<ul style="list-style-type: none"> Energy Transportations Overcrowded 	2014	<ul style="list-style-type: none"> Innovations High Technology Comfort 	<ul style="list-style-type: none"> Using natural resources efficiently Waste city
Healthy and comfortable City/ Inclusive city	Meta – verse – Time	2020- later	<ul style="list-style-type: none"> Pandemic Metropolitan Climate change 	2020 2021 2030	<ul style="list-style-type: none"> Loss of life Infectious, disease Water scarcity Ecological crisis Scarcity Famine Diversity & inclusion 	<ul style="list-style-type: none"> Reducing the urban density Sustainable, ecological efficiency Re-emerging public space

Figure 1. Table of periodic concepts and indicators in the formation of cities of the future.

Meta-verse Time

The effects of the information age have brought about rapid and fundamental changes in lifestyles, consumption habits, production methods, and interaction between individuals, societies, and countries, especially in communication methods. With the advent of the Internet and the development of social networks, individuals have started to realize new forms of communication such as acquaintance, political expression, and discussion on virtual spaces collectively rather than public spaces of the city. The production of cyberspace began not with the advent of computers, but with the reduction of the time of communication over long distances to a period that can be called insignificant. As the time required to overcome the geographical area decreases, this area also loses its context and is replaced by an area that is clearly not geographical (Tannöver and Kırılı, 2015). Although the trivialization of geographical boundaries seems to provide endless freedom of communication at first, in fact, this is not the case. Andreu (1999) says that when a boundary is removed, one of the other boundaries in this layer will be replaced. Discussing this issue through border situations at airports, Andreu (1999) emphasizes that while geographical borders have lost their importance along with flights, political borders have been crossed in different forms at airports, but checkpoints and electronic crossings have revealed new political boundaries (Tekkaya and Turkmen, 2018). The pandemic, that started in China in 2020 and has gradually spread all over the world, as well as the climate change crisis and the famine, has become the most basic criteria to be paid attention to in planning the cities of the future. Moreover, with the widespread acceptance that human rights are prominent in the design of public spaces and that no one should be excluded because of their differences, more inclusive, safe and violence free cities have had remarkable impact on planning the future cities (Skylstad, 2018; Punpeng, 2020). In parallel with the specified criteria, with the transformation of the digital universe into a meta-verse phase in its entirety, city planners should emphasize that it is important to understand the indicators for questioning the "cities of the future." It is believed that this study will help to understand the whole.

Evaluation

Theories about the cities of the future have been produced for each period, but within the scope of this article, how the indicators of the period created the theoretical ideas about the formation of future cities, prominent concepts including the period in which we are, and indicators related to these concepts were tried to be reviewed holistically.

It is seen that the existence of a land-based production system before the industrial period was reflected in the city plan and fiction. It is understood that there is a palace-centered planning attitude with an effort to establish a settlement order around the land. According to the indicators of the period of centralism, identity separation, and security concerns, it is seen that city projection planned for the future is preferred where there is a palace in the center surrounded by fortification walls and where the distinction is made according to the social and economic levels of the people.

In the industrial period, an effort is being made to produce solutions in city planning aimed at establishing the relationship between machinery and settlement. Mechanization has also created urbanization and increased population density. This situation has created indicators that indicate a complex setting and a lack of green space. It is understood that there are more green areas for solving these deficiencies, and planning of the cities of the future is carried out accompanied by re-creation regulations.

In the later years of the industrial period, with the acceleration of industrial production and the spread of the understanding of fabrication, the status of consumption society in a social structure was reached. The fact that it is now possible to move in masses has caused an increase in traffic and human density. Within the scope of these concepts, we understand that multi-layered urban plans have been created as a solution to the density (vehicle-human) problem that occurs when the cities of the future are planned. When a separate solution is produced for each transportation axis, we see that vertical growth is realized towards the ground and air in city plans. In this context, we understand that cities no longer have only one plan, but on the contrary, there are different city transportation plans for each layer.

The unstoppable rapid intensity and accumulation experienced in every direction during the industrial period have accelerated analytical thinking along with it. Now the era of digitalization has begun for mass consumption and practice, where machines are in mass production, rather than manpower. Now we know that problems are solved digitally and thinking machines-robots are designed for humans. This period of rapid digitalization has created the idea that human beings may one day run out of resources. We understand that the planned future in accordance with these considerations is built with an approach that aims to conserve the resources of urban plans and pass them on to future generations. Under these approaches, we see that utopian thoughts can also be realized in the planning of future cities. Today, with the digitally defined meta-verse period of the digital era, we read that the planning of the cities of the future is made for the solution of global problems such as energy, water, climate change, disaster, diseases, etc.

Even if the new thoughts and plans of the city planning of the future are utopian, today's utopias do not mean that they will not happen one day in the future. Let's not forget that the cities of this day were utopias in the past, and these dreams contribute to the science of urban planning by stimulating the progress of humanity, social and cultural development, creative thinking.

Discussion and Conclusion

The issue of "cities of the future" should be considered and evaluated with a multidisciplinary approach. Cities should be planned according to population growth not in a short-term understanding, but with solutions that can respond to problems on a global scale. It should be focused on the development of a human-oriented city plan within the framework of a technologically comprehensive,

environmental, social, and economic sustainability that can be integrated into the vision of the future without anticipating economic efficiency.

Developed countries anticipating that the young population will live in the city revise their urban plans for energy, water, food, housing, and other services while keeping the problems of the Earth in their agenda in addition to these needs. Problems of the Earth such as the fight against climate change, changes in population and demographics, energy, resource shortages, pressure on health care and basic resources, etc. lead us to the topic of sustainable, efficient, attractive, and durable cities of the future by transforming the cities of the future into innovative technologies-based unified cities.

The issue of the cities of the future continues to be discussed in dynamic integrity in line with new requirements in the changing environment as long as mankind exists today and tomorrow as it has been yesterday. We understand that the concepts that each period raises in accordance with its own conjuncture constitute the indicators of the city planning of the future. Our recommendations, which are foreseen in accordance with our periodic readings and indicators that we have determined, are as follows:

- When the cities of the future are evaluated within the framework of the sustainability concept, the metropolitan cities of the future become unsustainable (the demand for small-scale cities will increase).
- When the cities of the future are evaluated within the framework of the concept of efficiency, they should be considered in the meta-verse universe where renewable resources are used efficiently (there will be competition between cities that are compatible with advanced technological developments)
- When the cities of the future are evaluated within the framework of the concept of attractiveness, they should be some medium-sized cities where comfort conditions are provided (the demand for cities where individual comfort is provided will increase)
- When the cities of the future are evaluated within the framework of the concept of resilience, there should be city planning that is resistant to pandemics and destructive disasters (self-sufficient cities will increase in number).
- When the cities of the future are evaluated within the concept of inclusivity, no one will be stigmatized in contrary can participate to daily life (quality of life and social sustainability will increase).

The city of the 21st century will bring nature-man and technology into a new unity. In this union, humanity will cease to consume wildly and will continue to exist, realizing that it must care about nature for its own existence. Technology will continue to create virtual worlds and spaces, trying to satisfy the human desire for pleasure and consumption. Due to the problems experienced during the pandemic, small and medium-sized cities will be in demand instead of large and crowded megacities and metropolises. In these directions, the cities of the future will not only guarantee control of innovative technologies and sustainability components but also new strategies will be created to achieve short and long-term management, organization, and development goals.

To conclude, what will motivate the future cities? This is not an easy task, but, we can guess some characteristics as we understood by conducting diachronic comparative study on literature review of cities since the 15th century. We called them as indicators and can specify them for future cities as: loss of life, infectious, disease, water scarcity, ecological crisis, famine, diversity and inclusion. Unfortunately, future cities motivations consist of mostly negative indicators. This is deeply related to the Covid-19 pandemic, climate change and the rise of authoritarian regimes. Our prediction for future city concentrates on challenges about inequalities, scarcity and crisis in terms of social, ecological and economical. Public space will probably a rising feature of future cities. Moreover, future cities will be more inclusive in order to avoid all stigmatized actions against women, youth, refugees, LGBT and people with disabilities. The future cities will be democratically governed and tries to protect all natural resources with reduced urban population than now.

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