

## **The Devastating and Negative Impact of Coronavirus (Covid 19) in the Architecture and lifestyles of the Cities**

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### **Abstract**

*The outbreak of the coronavirus, inadequate medical facilities, poor implementation of the government laws for people to stay-at-home, maintain “social distance,” in time and space, created the abandonment of the formal and informal spaces in the cities. These resulted in over crowding of hospitals with sick people. As a result of this, the social and economic disconnect that exist in most parts of the world is now, more obvious. The rich could afford expensive and luxurious homes in expensive housing estates with abundance of spaces while the poor remains in poorly built units with poor spaces and ventilation problems, where spreading of the virus is high. This credits Lynch’s analysis of a city that states, “Nothing is experienced by itself, but always in relation to its surroundings, the sequences of events leading up to it, the memories of past experiences. Every citizen has had long association with some part of his city, and his image is soaked in memories and meanings.” Content base analysis, qualitative research method with data from secondary sources was adopted. The rich isolated themselves at luxurious hideaways while disadvantaged are crowded and facing a surge in deaths. The open spaces are now, abandoned. The antidote for a fast recovery of the cities would be for the medical researchers to develop and produce vaccines for the treatment of coronavirus, if we want a rebirth of the city centers and for the centers to blossom and regain their values.*

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**Key words:** coronavirus, architecture, hospitals, luxurious homes, apartments

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### **Introduction**

Looking at cities can give a special pleasure, however commonplace the sight may be. Like a piece of architecture, the city is a construction in space, but one of vast scale, a thing perceived only in the course of long spans of time. At every instance, there is more than the eyes can see, more than the ear can hear, a setting or a view waiting to be explored. Nothing is experienced by itself, but always in relation to its surroundings, the sequences of events leading up to it, the memories of past experiences. Every citizen has had long association with some part of his city, and his image is soaked in memories and meanings (Lynch, 1985). Cities develop from agricultural lands and grow over time. Agricultural lands are turned into buildable lands to sustain both life and the universe.

The universe is conceived of as unbounded yet not infinite and something similar has happened to our cities: their scale and size have grown beyond all expectations into the open country.

The old scale has lost its meaning. The first cities arose where and when agriculture was sufficiently advanced to supply food, not alone for the actual producers, but also for those who were not engaged in agriculture. This was the basic prerequisite, for artisans, craftsmen, soldiers, and traders who congregated in the cities. And even if they owned fields outside the city or gardens without it, they produced hardly more than a welcome portion of the food they needed in addition to the supply from full-time farmers (Gutkind, 1964). The growth of cities and their sustainability have largely depended on the production of food, housing and social and support services. The shortage or absence of these would lead to urbanization.

In all, the roots of urbanization go deep into human history. The conventional theory was well stated by Lewis Mumford (1961). He identified the first germ of the city in the ceremonial meeting place that serves as a goal for pilgrimage, a site to which early man with his family or clan group is drawn back from his wanderings at seasonable intervals because it concentrates, in addition to any natural advantage it may have, certain spiritual or super natural powers. From periodic meetings a few steps lead to settlement and agriculture, to villages and finally, to a differentiation of villages in terms of concentration of technical and religious power, the seats of power becoming towns' vis-à-vis the villages. In a counter thesis, Jane Jacobs (1969) advanced the claims of the city above those of the village. She argues that historically it was the development of cities that made possible and necessary the development of satellite agricultural villages; that agriculture was indeed "farmed out" from the city to the countryside.

Whatever its origins and individual peculiarities, an urban center is distinguished most fundamentally by its functions. It is essentially a central place, a center for the mobilization and organization of services for an area. The "basic" urban functions, which generally have to do with administration, commerce, industry, transportation, are facilitated by aggregation. This is in marked contrast to primary production-agriculture, forestry, fishing, mining, extraction and the like – which, spread over favorable sites tied to available sources, is necessarily dispersed (Ukwu, 1980).

Walter Christaller (1966), the pioneer urban theorist whose formulation of the problem remained the most elegant, in modern times, in its logic and simplicity, has likened the process of town formation to "the crystallization" of mass about a nucleus". The number, scale and variety of facilities and services concentrated about a given nucleus determine its status as a town and reflect the size and character of its hinterland.

For a given region, the historical process of urban development does not depend on a steady uni-directional pattern of concentration and coalescence of urban facilities and services about a number of given centers. Rather it hinges on a series of critical events in the socio-economic organization of the communities, events which create new nuclei or enlarge, change the character, diminish or destroy pre-existing ones, hence, the development of towns or systems of towns tends to be episodic and it is often possible to identify the key events and the phases of urban development associated with them. The intervallic or gradual development of towns and cities resulted from movement of the population and events to the area.

The city is a fundamental and universal human creation. It is a unique center for social life as well as individual and collective fulfillment. The frantic, irreversible urban growth that societies throughout the world have experienced over the past few decades has caused a transformation of cities and agglomerations, which rarely correspond to inhabitants' legitimate needs, expectations and aspirations (Lerner, 2003). Various current movements in urban design seek to create sustainable urban environments with long-lasting structures, buildings and a

great livability for its (Ewing, 2009). Urban environments would include the urban areas' creations and the images of the cities, enjoyed by the inhabitants.

Environmental images are the result of a two-way process between the observer and his environment (Lynch, 1985:3). There seems to be a public image of any given city which is the overlap of many individual images. The content of the city images, which are referable to physical forms, can conveniently be classified into five types of elements: paths, edges, districts, nodes, and landmarks (Lynch, 1985). All these, have now changed, following the Corona virus pandemic in the world. Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment (Corona virus (2020)). They are required to be isolated in places where they would not have contact with people to avoid infecting them. To avoid contacts with people and easy infection, most city centers are closed and cleared of their inhabitants.

Corona virus is leaving empty spaces everywhere. The novel corona virus is putting much of the world on hold. To try to slow the spread of the virus, people are being asked to avoid crowds and limit their travel. Many governments issued stay-at-home orders and organizations are doing their part to help. Sports leagues have suspended their seasons. Museums, theme parks and other popular attractions have shut down. Many schools have closed, and companies are requiring employees to work from home. Religious communities are modifying their traditions and what's left behind is an eerie emptiness (Vasily Fedosenko/Reuters, 2020).

There is a certain beauty in the expanses of public space, now vacant amid the pandemic, these photographs (below) from around the world show. There is also a reminder: True beauty comes when the builders roam the built. During the 1950s, New York's Museum of Modern Art organized a famous photo exhibition called "The Family of Man." In the wake of a world war, the show, chockablock with pictures of people, celebrated humanity's cacophony, resilience and common bond. Today a different global calamity has made scarcity the necessary condition of humanity's survival. Cafes along the Navigli in Milan hunker behind shutters along with the Milanese who used to sip aperos beside the canal. Times Square is a ghost town, as are the City of London and the Place de la Concorde in Paris during what used to be the morning rush (Kimmelman, 2020).

Public spaces, as we think of them today, trace their origins back at least to the agoras of ancient Greece. Hard to translate, the word "agora" in Homer suggested "gathering." Eventually it came to imply the square or open space at the center of a town or city, the place without which Greeks did not really regard a town or city as a town or city at all, but only as an assortment of houses and shrines. Thousands of years later, public squares and other spaces remain bellwethers and magnets, places to which we gravitate for pleasure and solace, to take our collective temperature, celebrate, protest. Following the uprisings in Tiananmen Square, Tahrir Square, Taksim Square and elsewhere, Yellow Vest protesters in France demonstrated their discontent last year not by starting a GoFundMe page but by occupying public sites like the Place de la République and the Place de l'Opéra in Paris.

Both of those squares were built during the 19th century as part of a master plan by a French official, Baron Georges-Eugène Haussmann, who remade vast swaths of Paris after the city passed new health regulations in 1850 to combat disease. Beset by viruses and other natural disasters, cities around the world have time and again devised new infrastructure and rewritten zoning regulations to ensure more light and air, and produced public spaces, buildings and other sites, including some of the ones in these photographs (plates 1 and 2 and 3 to 32 in panels 1 to 5), that promised to improve civic welfare and that represented new frontiers of civic

aspiration. Their present emptiness, a public health necessity, can conjure up dystopia, not progress, but, promisingly, it also suggests that, by heeding the experts and staying apart, we have not yet lost the capacity to come together for the common good (Kimmelman, 2020).

They also remind us that beauty requires human interaction. I don't mean that buildings, fairgrounds, railway stations and temples can't look eerily beautiful empty. Some of these sites, like many of these photographs, (plates 1 and 2 and 3 to 32 in panels 1 to 5) are works of art. I mean that empty buildings, squares and beaches are what art history textbooks, boutique hotel advertisements and glossy shelter and travel magazines tend to traffic in. Their emptiness trumpets an existence mostly divorced from human habitation and the messy thrum of daily life. They imagine an experience more akin to the wonder of bygone explorers coming upon the remains of a lost civilization (Kimmelman, 2020). A city open space devoid of life and human activities questions the sustainability of the open space over time.

Sustainability has been defined in many different ways however, according to the United Nations 2005 World Summit on Social Development; it is the potential for long-term maintenance of wellbeing, which has ecological, economic, political and cultural dimensions that require the reconciliation of environmental, social equity and economic demands. It is further indicated that sustainability is studied and managed over many scales (levels or frames of reference) of time and space and in many contexts of environmental, social and economic organization. The focus ranges from the total carrying capacity (sustainability) of planet Earth to the sustainability of economic sectors, ecosystems, countries, municipalities, neighborhoods, home gardens, individual lives, individual goods and services, occupations, lifestyles, behaviour patterns and so on.

The lifestyles, behaviour patterns and sustainability of the people in Chicago, Illinois, USA as well as those in other parts of the world changed following the outbreak of the coronavirus. The Chicago's finest and popularly known as "the bean" at the Millennium Park was closed as a result of the coronavirus outbreak (plate 1). Cloud Gate Plaza at Millennium Park, which includes "the Bean," is closed while Millennium Park itself remains open, according to the Chicago Department of Cultural Affairs and Special Events. The bean is a public attraction both during the summer and winter as seen in plate 2. It attracts visitors in millions to the park and now, close as a result of the coronavirus pandemic.



**Plate 1.** Chicago bean closed following Coronavirus outbreak  
**Source:** Scott Olson/Getty Images (Retrieved April 29, 2020)

To most people, this stainless steel figure is a work of art – but to tourists, it's the best opportunity for a selfie. The Cloud Gate sculpture also known as 'the Bean,' is one of the top things to see in Chicago, Illinois, USA. The bean is a large public sculpture that was unveiled at the opening of Millennium Park in 2004. It now serves as a famous symbol of Chicago and is one of the city's most photographed attractions (Mike Warot / Flickr, 2020), but now, closed following the coronavirus outbreak.



**Plate 2.** A busy Chicago bean during the summer  
**Source:** Scott Olson/Getty Images (Retrieved April 29, 2020)

### **Aim of Study**

The present work aims to give credence to Kevin Lynch's (1985) analysis of a city that states, "Nothing is experienced by itself, but always in relation to its surroundings, the sequences of events leading up to it, the memories of past experiences. Every citizen has had long association with some part of his city, and his image is soaked in memories and meanings." With the coronavirus pandemic and abandonment of city centers, the architecture of the cities and open spaces are derelict without the inhabitants to enjoy them.

### **Research Methodology**

This paper looked at the photographic presentations of cities, following the Coronavirus (Covid-19) pandemic that resulted in abandonment of city centers and open areas in communities all over the world, to avoid spreading and contamination of the disease. The authors were careful with the analytical instruments and tools used. The disciplinary area of focus is architecture of the cities, tourism and abandonment of open spaces or better said, the architecture of abandoned spaces. As such, the authors adopted content base analysis, qualitative research method with data from secondary sources. According to Mayoux (2005), qualitative method investigates the *why* and *how* of decision making, not just *what*, *where*, *when*, or "who."

### **Findings**

Within the past decades, the architecture of different cities have gone through changes and according to Shane (2011), different urban actors in different periods during the last 60 years worked to create different urban models, using the basic urban elements of enclaves, armature and heterotopias. With the coronavirus pandemic (Covid-19), these basic urban elements that beautified the towns and cities are noticeably empty and without human activities (1 to 32, panels 1 to 5). A beautiful and delightful city environment is an oddity, some would say impossibility. A legible city would be one whose districts or landmarks or pathways are easily identifiable and are easily grouped into an overall pattern and that legibility is crucial in the city setting. Although clarity or legibility is by no means the only important property of a beautiful city, it is of special importance when considering environments at the urban scale of size, time, and complexity. To understand this, we must consider not just the city as a thing in itself, but the city being perceived by its inhabitants (Lynch, 1985). Covid-19 is leaving city open spaces empty to the dismay of the inhabitants and all the urban design values Lynch expressed abandoned. Secondly, the harmony and communal tranquility expected in the areas are a thing of the past because the cities and open spaces are witnessing a huge vacuum resulting in the rich and poor placing themselves where they belong and according to the race and income. The coronavirus pandemic has exposed this and a lot of studies are showing that the people of color and disadvantaged people are dying from the virus more than the affluent.

In her article on, "What you need to know about coronavirus on Sunday, April 25, 2020, CNN, Ivana Kottasova (2020), indicated that, one does not need to believe what celebrities say, that the novel coronavirus does not affect everyone the same way. Stories around the world paint a grim reality: Far from being an equalizer, the coronavirus has hit minorities and people from disadvantaged groups in disproportionate numbers. It is deepening the divide between rich and poor, fuelling racism and xenophobia. Take Singapore, where migrant workers are suffering the brunt of the outbreak, stuck in overcrowded dorm rooms, they have nowhere to escape to. They share toilets, shower stalls, laundry clothes lines and storage spaces, while lining up together to receive food. In India, Muslims have been targeted in attacks online and on the streets, accused of spreading the virus. Impoverished Roma communities in Europe have been scapegoated while stuck behind fences erected around their settlements. And school closures

are affecting low-income children more than their wealthier peers. In the US, the virus has been especially lethal to African Americans. The divide is so stark that some black leaders say the swift reopening of some businesses in Georgia is an attack on people of color.

In furtherance to her indication that the coronavirus is deadly and impacting disadvantaged people more, in her “What you need to know about coronavirus on Sunday, April 26, CNN,” Ivana Kottasova (2020), indicated that, “Coronavirus exposes deep divisions everywhere. The pandemic has had very different consequences for the rich and the less well-off. In France, billionaires have isolated themselves at luxurious hideaways on the Mediterranean, while residents in more disadvantaged and crowded areas of France are facing a surge in deaths, along with unrest on the streets. People living in Hong Kong's "cage homes" -- subdivided apartments that often have space for only a bed and some clothes -- find it impossible to self-isolate and stay safe. In the United States, hundreds of thousands of people have joined the gig or underground economies after unexpectedly losing their jobs. People of color, women and teenagers have been particularly hard hit.

Some of the consequences of coronavirus in the architecture and city open spaces are detailed in the pictorial presentations, shown on panel 1 to 5, plates 1 to 32. The open spaces, restaurants and other public gathering places of interest in cities are closed and in most cases, leaving millions of people unemployed.

**Panel 1. Photographs of abandoned public spaces and roads**



Plate 3. A lone taxi drives over a typically gridlocked highway in Dubai, United Arab Emirates, on April 6.  
Source: Jon Gambrell/AP (Retrieved April 25, 2020)



Plate 4. Caution tape is looped around Mexico City park benches to discourage people from sitting on them on April 4.  
Source: Fernando Llano/AP (Retrieved April 25, 2020)



Plate 5. Children play on an empty residential street in Matawan, New Jersey, on April 1.  
Source: Eduardo Munoz/Reuters (Retrieved April 25, 2020)

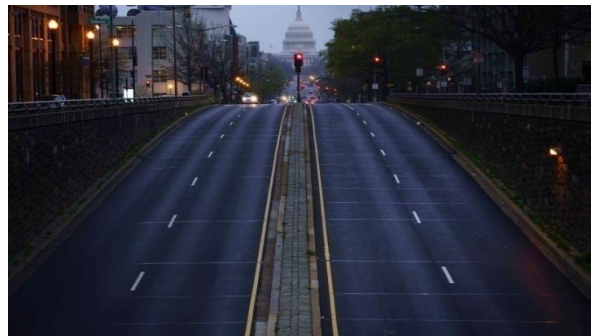


Plate 6. In Washington, a mostly empty North Capitol Street is seen at dusk on March 31.  
Source: Drew Angerer/Getty Images (Retrieved April 25, 2020)



Plate 7. Mountain goats roam the quiet streets of Llandudno, Wales, on March 31. "They sometimes come to the foot of the Great Orme in March, but this year they are all wandering the streets in town as there are no cars or people," said Mark Richards of the hotel Landsdowne House.  
Source: Christopher Furlong/Getty Images (Retrieved April 25, 2020)

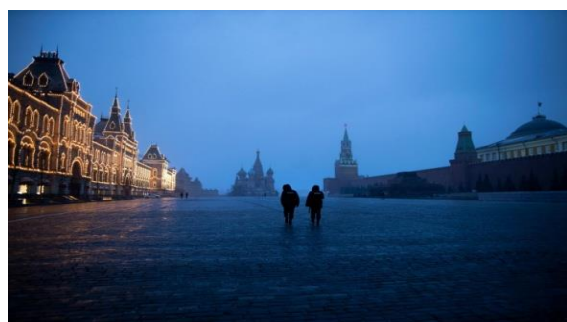


Plate 8. Two police officers in Moscow patrol an almost empty Red Square on March 30.  
Source: Alexander Zemlianichenko/AP (Retrieved April 25, 2020)



**Panel 2. Pictures of abandoned and empty train and public spaces**

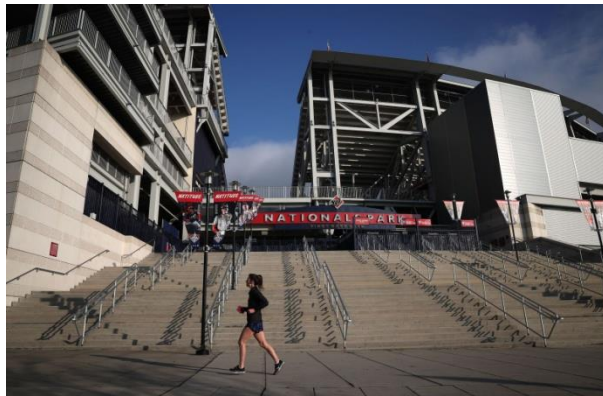


Plate 9. A jogger runs past Nationals Park in Washington on March 26. It would have been Opening Day for Major League Baseball.  
Source: Win McNamee/Getty Images (Retrieved April 25, 2020)



Plate 10. London's Leadenhall Market is seen a day after Prime Minister Boris Johnson issued a stay-at-home order for the United Kingdom.  
Source: Yui Mok/PA Images/Getty Images (Retrieved April 25, 2020)



Plate 11. An empty subway train is seen in New York on March 17.  
Source: Jeenah Moon/Reuters (Retrieved April 25, 2020)



Plate 12. A single sunbather remains following the closure of Sydney's Bondi Beach on March 21.  
Source: Loren Elliott/Reuters (Retrieved April 25, 2020)

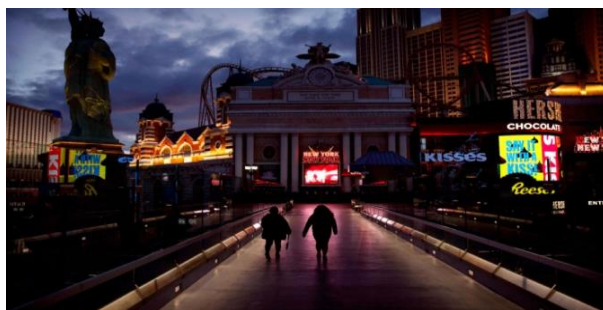


Plate 13. People walk along the Las Vegas Strip on March 18 after casinos were ordered to shut down.  
Source: John Locher/AP (Retrieved April 25, 2020)



Plate 14. A woman in New York walks through a lightly trafficked Times Square on March 16.  
Source: Seth Wenig/AP (Retrieved April 25, 2020)

**Panel 3. Picture of Pope Francis, transport hub and empty open spaces**



Plate 15. Pope Francis delivers his blessing to an empty St. Peter's Square at the Vatican on March 15.  
Source: Vatican News via AP (Retrieved April 25, 2020)

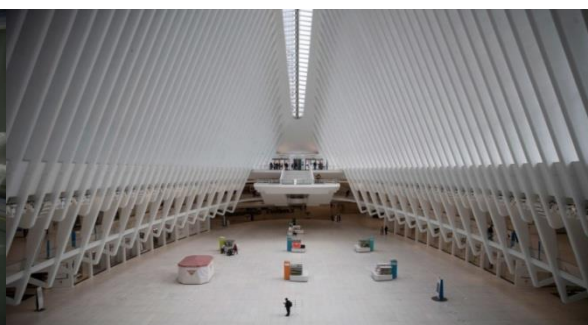


Plate 16. The Oculus transportation hub in New York was mostly devoid of commuters and tourists on March 15.  
Source: Victor J. Blue/The New York Times/Redux (Retrieved April 25, 2020)



Plate 17. A bullfighting arena is empty on March 11 after events were suspended in South Korea's Cheongdo County.  
Source: Kim Kyung-Hoon/Reuters (Retrieved April 25, 2020)

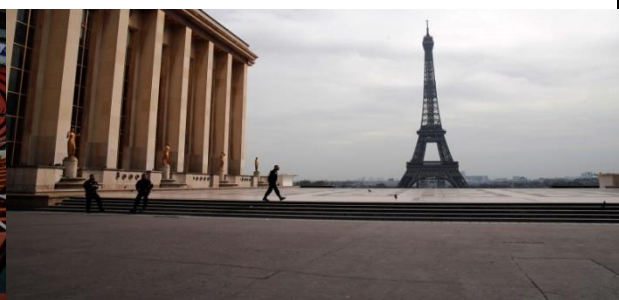


Plate 18. Police officers patrol the empty Trocadero plaza next to the Eiffel Tower in Paris on March 17.  
Source: Francois Mori/AP (Retrieved April 25, 2020)



Plate 19. Empty chairs are lined up at the Vatican before the Pope's Sunday Angelus prayer was streamed via video on March 8. He later appeared briefly at the window to bless a small number of people gathered in St. Peter's Square.  
Source: Antonio Masiello/Getty Images (Retrieved April 25, 2020)



Plate 20. This aerial photo shows the empty Legend Siam theme park in Pattaya, Thailand, on March 8.  
Source: Mladen Antonov/AFP/Getty Images (Retrieved April 25, 2020)

**Panel 4. Picture of an empty airport-check-in area and other public spaces**

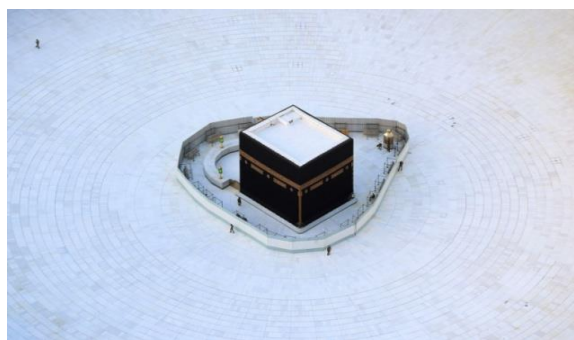


Plate 21. The Kaaba in the Grand Mosque, Islam's holiest site, is normally surrounded by people in Mecca, Saudi Arabia. But it was nearly empty on March 6.  
Source: Bandar Aldandani/AFP/Getty Images (Retrieved April 25, 2020)

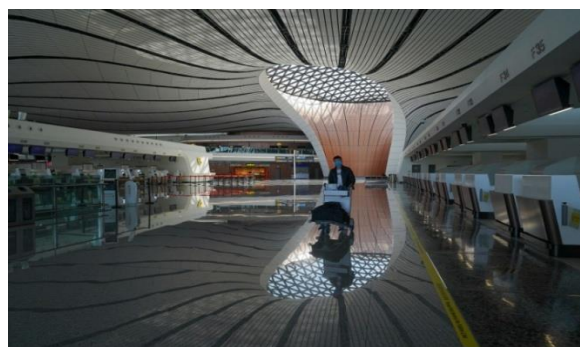


Plate 22. A passenger walks in the empty check-in area of the Beijing Daxing International Airport on March 3.  
Source: Andrea Verdelli/Getty Images (Retrieved April 25, 2020)



Plate 23. This aerial photo shows an empty street in Wuhan, China, on February 16. The novel coronavirus is believed to have started at a wildlife market in Wuhan.  
Source: Getty Images (Retrieved April 25, 2020)

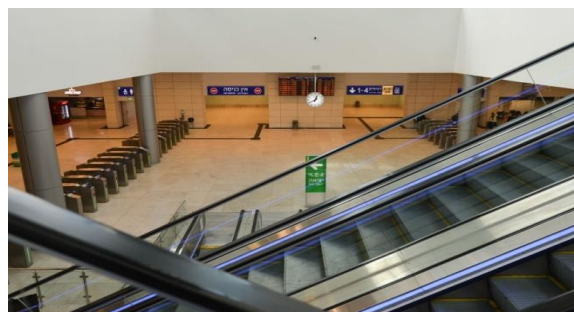


Plate 24. A hall is empty inside a train station in Jerusalem on March 11.  
Source: Artur Widak/NurPhoto/Getty Images (Retrieved April 25, 2020)



Plate 25. Ancient Roman ruins, normally filled with tourists, are empty on March 10. All of Italy was put on lockdown as coronavirus cases continued to spread in the country.  
Source: Antonio Masiello/Getty Images (Retrieved April 25, 2020)



Plate 26. An inside view of the European Parliament building in Brussels, Belgium, on March 11. More than 100 programs in the building were canceled.  
Source: Dursun Aydemir/Anadolu Agency/Getty Images (Retrieved April 25, 2020)

**Panel 5. Picture of a shopping mall and other empty open spaces**



Plate 27. Amazon's headquarters in Seattle was virtually empty on March 10. Amazon recommended employees there to work from home.

Source: John Moore/Getty Images (Retrieved April 25, 2020)



Plate 28. The Missouri Senate chamber sits empty on March 12 after senators adjourned for the day and announced they would not reconvene in a full session until at least March 30.

Source: David A. Lieb/AP (Retrieved April 25, 2020)



Plate 29. The Louvre museum in Paris was shut down on March 1.

Source: Rafael Yaghobzadeh/AP (Retrieved April 25, 2020)

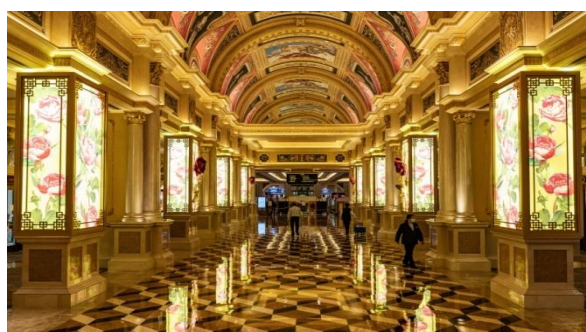


Plate 30. Staff members walk inside the Venetian Macau after it closed its casino on February 5.

Source: Anthony Kwan/Getty Images (Retrieved April 25, 2020)



Plate 31. Horses gallop past empty public stands at the Sha Tin Racecourse in Hong Kong on February 23.

Source: Lo Chun Kit/Getty Images (Retrieved April 25, 2020)



Plate 32. A delivery worker wearing a face mask walks at a nearly empty shopping mall in Beijing on February 27.

Source: Nicolas Asfour/AFP/Getty Images (Retrieved April 25, 2020)

### **Recommendations**

The only antidote for a fast and sustainable recovery of the cities and town centers, would be for the medical researchers to quickly, develop and produce vaccines for the treatment and eradication of coronavirus. In that way, there would be a rebirth of the city centers, the inhabitants would come out in mass to start enjoying their open spaces again. The centers would once again, blossom and through the experience of the coronavirus divide, the urban and city players (architects, urban planners, city planners, researchers, government workers, politicians, etc ) would plan inclusive and communities devoid of racial and economic divides and this is our recommendation.

### **Conclusion**

Conceptually, this paper adopted coronavirus (Covid 19) and the Architecture of the Cities as the theme that was used in putting together the identified nations around the problems surrounding the coronavirus pandemic all over the world. These notions have substantially been sustained by some fundamental issues or phenomenon originating in the process and product of or in the spreading of Coronavirus all over the world. Taking into considerations the impact of three important issues or phenomenon taking place or happening at the same time; spreading of the virus, abandoning of the open spaces all over the world and exposing racial divide in handling the crisis because of the “sit-at-home” therapy to curb the disease, with their unavoidable spatial consequences, the way they are been handled, as explained properly (in process and product) in this paper, gave rise to the very evident competition for access to space or spatial access, in the city, by both the rich and the poor.

However, the inadequate medical facilities, production of the medical protective materials and the poor implementation of the government laws for people to stay-at-home and equally, maintain “social distance,” in time and space, in process and product, created the emergence of the abandonment of the formal and informal spaces in the cities of the world and over crowing of hospital with sick people. The competition for medical space in the city hospitals by the poor and rich gave rise to the phenomenon which this paper regards and calls the “Coronavirus (Covid 19), Architecture and the life style of the Cities.” The low level of medical supply development and not enough hospital spaces in some parts of the cities up till date constituted an attraction and explosion in the number of sick people needing medical attention and not enough access for medical spaces or hospitalization programmes in both public and private hospital all over the world. Again, the rich and advantaged could afford expensive and luxurious hones in the expensive subdivided housing estates with abundance of spaces while the poor still remain in poorly built apartment units with poor spaces and ventilations problems where spreading of the virus is in mathematical progression. These poor and disadvantaged are the people that so much depended on their governments for awareness and medical help. The people, characterized as, "frustrated by the inadequacies and failure of the conventional approaches to providing them with medical help and services, a significantly large enough proportion of the people in the communities of both developing and developed nations, these ever-increasing class of populations have in most cases, resort to self-medical help detrimental to their lives and in most cases, early death.

### **References**

- Corona virus (2020). [https://www.who.int/health-topics/coronavirus#tab=tab\\_1](https://www.who.int/health-topics/coronavirus#tab=tab_1)
- Ewing, R "Growing Cooler - the Evidence on Urban Development and Climate Change". Retrieved on: 2009-03-16.
- Gutkind, E.A. (1967): Urban Development in Southern Europe: Spain and Portugal, Vol. III, The Free Press, New York, Collier – Macmillan Limited, London.

- Ivana Kottasova (2020). Coronavirus exposes deep divisions everywhere Saturday, April 25, 2020. CNN. <https://edition.cnn.com/2020/04/26/world/coronavirus-newsletter-04-26-20-intl/index.html> Retrieved April 26, 2020
- Ivana Kottasova (2020). What you need to know about coronavirus on Sunday, April 25, 2020. CNN. <https://edition.cnn.com/2020/04/25/world/coronavirus-newsletter-04-25-20-intl/index.html> Retrieved April 26, 2020
- Jacobs, J. (1969): *The Economy of Cities*, Penguin, London.
- Kimmelman Michael (2020). The Great Empty. <https://www.nytimes.com/interactive/2020/03/23/world/coronavirus-great-empty.html>
- Lerner, J. (2003): Keynote Address to IUD
- Mike Warot / Flickr (2020). The Cloud Gate Sculpture. <https://summerspringboard.com/wp-content/uploads/1000x667-Bean-of-Chicago-Millennium-Park-Illinois.jpeg> Retrieved April 29, 2020
- Mumford, L. (1961): *The City in History*, University of London Press, London.
- Lynch, Kevin (1985). *The Image of a City*. The M. I. T. Press: Massachusetts Institute of Technology Cambridge, Massachusetts, and London, England. p. 1, 3, 105.
- Shane, David Grahame. 2011. *Urban Design Since 1945: A Global Perspective*. Everbest, China
- Ukwu, I.U. (1980): "Urbanization and its Implications for the Development of Nigeria", in *Readings in Social Sciences*, Fourth Dimension Publishers, Enugu. Pp. 167-182.
- Vasily Fedosenko/Reuters (2020). The Great Empty (2020). <https://edition.cnn.com/2020/03/12/world/gallery/coronavirus-empty-spaces/index.html> Retrieved April 25, 2020
- Walter Christaller (1966). *Central Places in Southern Germany*. Translated by Carlisle W. Baskin. Englewood Cliffs, N.J. Prentice-Hall