

# Space Design Guide for Public Areas in a Multicultural Environment: Based on the Theory of Social Atomism

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## Abstract

**Background** Since the pandemic began, people are becoming more individualistic through social distancing. This situation has led to a rapid increase in social atomization and it is necessary to reconsider the mission of multicultural public spaces. This article aims to provide suggestions on the design direction of multicultural public spaces in the increasingly atomized future world through a literature review and case studies.

**Methods** This article reviews the literature on social atomization. The atomization of society is caused by the lack of social connections. With the development of society, the atomization of society has become a new challenge. Multicultural public spaces design in the post-epidemic era is still a relatively new research field. Therefore, this article combines representative examples of multicultural spaces, comprehensively considers the trend of modern society, and provides new ideas for the development of multicultural spaces under the background of social atomization.

**Results** In this way, the designer must ensure that the task of the space takes into account the different needs of people, while providing the possibility to enjoy the space alone or by multiple people, so as to rebuild the connection between the individual and the society, and even build a vibrant intermediary community.

**Conclusions** The concept of social atomization provides a new perspective with which to understand public spaces in a multicultural environment. We can obtain basic suggestions on how to improve multicultural public spaces through combining the results of a literature review and case studies.

**Keywords** Social Atomism, Public Space, Multicultural Space

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*Citation:* Liu, J., & Kim, S. (2021). Environment: Based on the Theory of Social Atomism. *Archives of Design Research*, 34(2), 21-31.

<http://dx.doi.org/10.15187/adr.2021.05.34.2.21>

**Received :** Mar. 18. 2021 ; **Reviewed :** Apr. 24. 2021 ; **Accepted :** Apr. 29. 2021

**pISSN** 1226-8046 **eISSN** 2288-2987

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## 1. Research background and purpose

### 1. 1. The status quo of multicultural public spaces

As early as the 1950s, public spaces began to be used for political and sociological purposes as a specific term. Based on the current research status, most studies on "public spaces" are generally conducted from the following two dimensions: social and political. First, urbanists view a public space as a place for social life and communication from the perspective of urban planning. Second, from the perspective of political philosophy, scholars regard public spaces as a platform for political participation and a public sphere for citizens to engage in political dialogue.

In the book *Public Space*, architect Stephan Carr defines public spaces as open, publicly accessible places where people go for group or individual activities. (Carr, Stephen, Francis, Rivlin, & Stone, 1992) He believes that public spaces are mainly places that allow people to enter. He summarized the "accessibility" of space into three aspects: physical access – a space that is easily accessible; visual access - a space that is visually attractive, and symbolic accessibility – having spatial attractiveness to an observer. This classification method focuses on the attributes of public spaces as physical spaces.

The German philosopher Jürgen Habermas defines the public sphere as "made up of private people gathered together as a public and articulating the needs of society with the state". (Habermas, 1991) The public sphere exists between the state system and private interests, and public opinion is formed by citizens through equal exchanges. It is a third space between the state and society. It can be understood as a public domain formed by a collection of private individuals, focusing on the civic attributes of public spaces.

Different people and people's spontaneity are prerequisites for the creation of a public space. When redefining public spaces, the dimension of material attributes is not only the factor to consider but also more necessary to reconstruct the concept of a public space from the cultural symbolic attributes behind the space.

### 1. 2. Research purpose

Since the outbreak of the Covid-19 pandemic, people have been asked to maintain social distance, wear masks, and work remotely. When Covid-19 cases increased dramatically, the public were forced to stay home. Public spaces have been under strict control; for example, dine-in restaurants have been prohibited. These measures have to be taken for health and safety, but individuals have different reaction. Many people suffered and endured isolation, however, others have adjusted it and even enjoy life in isolation, they are willing to adapt to this individualistic social environment.

The rational life attitude of the metropolis drives people away from each other, but at the same time globalization has become an irreversible fact; modern society is gradually becoming atomized and rebuilt, while the publicity of space is closely related to the social nature; this phenomena and contradictions prompt us to reconsider the meaning of multicultural public spaces.

This article aims to make suggestions to regard the design direction of multicultural public spaces in the increasingly atomized future world through literature reviews and case studies as follows.

### 1. 3. Research methods

First of all, this paper reviews the literature of social atomization. In a nutshell, social atomization arises from the lack of social connections and becomes the deconstructive force of human life together. With the outbreak of the epidemic, social atomization has become a new challenge. The design of multicultural public space in the post-epidemic era is still a relatively new research area. Therefore, this article combines examples of multicultural spaces with representative characteristics, and on this basis, comprehensively considers the development trend of modern society. Moreover, this paper also derives a basic guide which hopes to provide a new guide for the development of multicultural spaces under the background of social atomization.

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## 2. Theoretical study

### 2. 1. Social atomism

Atomism is a theory according to which social institutions, values, and processes arise solely from the acts and interests of individuals, who thus constitute the only true subject of analysis. It also means the division of or tendency to divide a society into subclasses, groups, or units (Pickett, 2018). Author Andrew Heywood defined atomism in his book *Global Politics* as follows (Heywood, 2014): the tendency for society to be made up of a collection of self-interested and largely self-sufficient individuals, operating as separate atoms.

From the perspective of history, since the Industrial Revolution, social atomization has begun to appear throughout the world. Since the large-scale land annexation at the end of the European feudal era, farmers were forced to leave the land and their traditional collective life to cater to the needs of the subsequent industrial development, becoming mobile laborers. Therefore, with the process of industrialization, social atomization began to enter the European continent from the United Kingdom and then spread to all parts of the world following the wave of globalization.

From the perspective of social thought, atomization refers to the excessive development of individualism. In the process of anti-feudalism in Europe, a modern liberalism ideological trend formed in major western economies; it promoted individualism, encouraged progress, and promoted the development of capitalism.

Karl Marx has the most classic expression of the crisis of social atomization “an immediate consequence of the fact that man is estranged from the product of his labor, from his life-activity, from his species being is the estrangement of man from man.” (Marx & Engels, 1988, p. 78) Marx's view of estrangement is universal; estrangement penetrates society, infecting everyone. Distrust between people has contributed to the atomization of society. People's "self-awareness" must be constructed through contact and communication with others.

Georg Simmel mentioned in his essay entitled *The Metropolis and Mental Life* (Simmel, 2012) that the psychological foundation of urban character is contained in intensely stimulating tension. Urban life is based on the economy, implying that accurate calculations and extreme rationalism are some of the characteristics of urban life. He believes that in traditional societies, people often interact face-to-face and directly exchange goods with each other. However, in modern society, due to the development of the economy and the spread

of its operating logic throughout society, direct interaction between people has been broken. Modern society with commerce as the main form of economic activity requires people to face strangers, causing the connection between acquaintances to be weakened and individuals increasingly to become the basic unit of society.

Modern society has cultivated a type of distance, which disintegrates the intimate connection among people. Today, one can be physically in Seoul, swiping an American credit card to buy Japanese designs made in China. Things that used to be unreachable are becoming closer, but the price paid is that people are becoming more and more distant.

Social atomization is not only a phenomenon, but also a necessity. This kind of "distance" between people is indispensable. Without this kind of psychological distance, the crowded and disorderly interactions in the metropolis would be unbearable. The invisible distance between people is the inherent protection and coordination of overcrowding in our cultural life. As long as we can rebuild the connection between the individual and the society and build a vigorous intermediary community, there is no need to worry too much about the atomization. It is better to use public places to allow people to freely establish new social organizations rather than reintegrating independent individuals. People have choices, which not only meets the needs of contemporary social activities, but also prevents them from being separated from society.

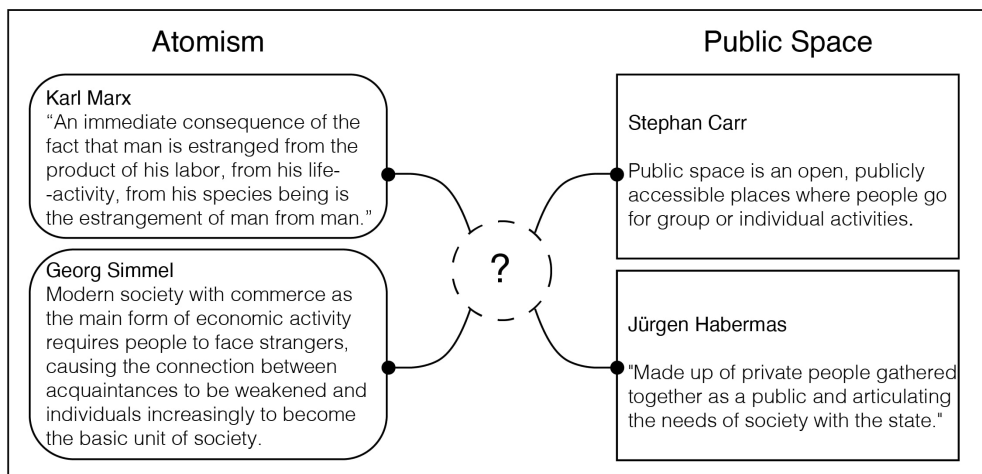


Figure 1 Focal point for the research on the basis of theoretical background

## 2. 2. Factors accelerating social atomization

### 2. 2. 1. The influence of the internet on atomization

"Fragmentariness," "contingency," and "discontinuity" are prominent features of modern life. The origin of fragmenting information is the internet. Cyberspace has become the fifth territory after the four territories of land, sea, air, and sky.(Xiao-Niu Yang, 2018) The mobile internet has entered all aspects of life.

Cyberspace is virtual, whereas the subject using cyberspace is actual. The essences of online social interaction are anonymity, rapidity and extensiveness. These are undoubtedly the advantages of online communication.

However, a shortcoming of social networking is that interpersonal relationships in cyber spaces are more fragile. When trust is generally reduced, social atomization will strengthen its momentum.

People hope to make up for the failings of real social life through social networking online, but one's energy is limited. If one spends a relatively fixed amount of time in social interaction, the number of social objects then becomes inversely proportional to the time spent on each object. Furthermore, when online social interaction takes up more time, the proportion of connecting with nature and others in reality will be reduced.

### 2. 2. 2. The impact of Covid-19 on atomization

Human beings are never atomized individuals, but social existence, and every decision we make affect others. Today, the highly contagious Covid-19 epidemic illustrates this basic truth: each of us must bear moral responsibility for the risk of infection posed by our behavior to others. People have posted "stay home, save lives" on Instagram, Twitter and other forms of social media. When isolating oneself is for the safety of all, the combat between sociality and atomization becomes sublime.

In *Life Between Buildings*, Jan Gale divides the activities of individuals in public spaces into three types: necessary activities, optional activities, and social activities (Gehl, 2011). Necessary activities are necessary everyday tasks for growth and life; optional and social activities, as important supplements to people's right to survival and growth, can assist individuals to complete their lives.

Self-quarantining and maintaining social distance during the pandemic limit people's activities to necessary activities. Methods by which to meet people's affinity motivation, social needs, aesthetic needs and interaction needs under limited conditions are important issues in the post-Covid era. (Gehl announcement, 2020, July)

During the Covid-19 crisis, we have witnessed creative behaviors to overcome social isolation and meet the needs of the community. The concept of the virtual digital happy hour enables people with access to the internet to socialize, and virtual community forums replace on-site meetings. In the absence of physical spaces, cyberspace provides a temporary refuge for public life.

On the other hand, not all spaces are accessible to everyone. In order to deal with possible instances of discrimination according to race, governments have also expressed criticism against racist forces, accusing some media and groups of xenophobia and racist discrimination against Asian groups during the Covid-19 pandemic. These discriminatory prejudices will inevitably lead to a loss of trust, which is the basic element of the orderly and stable operation of our society; it is also the main force by which to reverse the atomization of society. As a result, the role of multicultural public spaces is tremendously reduced during the epidemic.

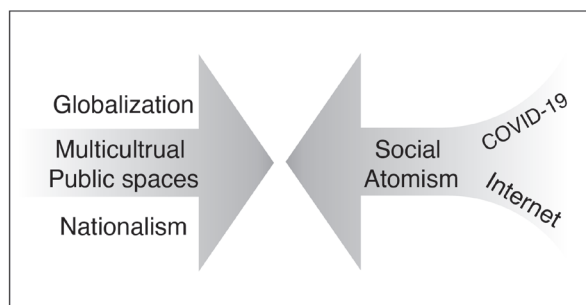


Figure 2 The conflict between multicultural public space and social atomism

### 2. 3. The significance of multicultural public spaces

Since the end of the 1980s, the sustainability and social duty of public spaces have attracted the attention of the public, from the end of the 1980s to the early 1990s, the privatization of public spaces and commercialization debates have become excessive. Moreover, since the 1990s, people have started to seek experiences in public spaces; in the 21st century, health and safety have become the top priorities. In the face of the global pandemic, our understanding of public spaces again needs to be updated to adapt to new changes in the world.

Social groups with parallel or comparable land values, economic conditions, social status, and common customs constitute a space for group living. That is, people living in the same neighborhood tend to have similar lifestyles. To a large extent, when people belong to the place where they live, it is not only a geographical identity but also a social identity.

In the process of social development, public spaces, as a necessary part of the urban structure and overall layout of the city, play an important role in the construction of urban civilization. At the same time, the acceleration of internationalization has made the number of multi-ethnic and multicultural communities continue to increase in the city, and the diversified elements of public spaces have become increasingly important for social stability. As Jane Jacobs said in *The Life and Death of American Big Cities*,

“In our American cities, we need all kinds of diversity, intricately mingled in mutual support. We need this so city life can work decently and constructively, and so the people of cities can sustain (and further develop) their society and civilization.” (Jacobs, 1992, p. 238)

Public spaces with cultural diversity attract more people, and the crowds in public spaces themselves can attract still more people so as to maintain the long-term stability of the space. Public spaces were never simply places of free, un-mediated interaction, they were just as often places of exclusion (Mitchell, 1995). For example, outsiders may have worked in gatherings in the Greek agora, but they were excluded from the local political activities in public spaces. However, with the development of social atomization, a good multicultural public space allows everyone to use it freely and prompts different people to meet and understand each other. In international metropolises, multicultural public spaces have become communal spaces for both local people and immigrants.

Multicultural public spaces occupy a crucial position in a city. They are places where diverse life materializes in an urban society, forming a platform for people to carry out daily life activities and engage in socialization. They unite people into a society. When “social interaction” and “social distance” occur at the same time, we should reconsider where such a multicultural public space will go in the case of an atomized society.

### 3. Case study

In order to supplement how social atomization affects the multicultural public space, and how people respond to it, this article has done two case studies. Firstly, we selected four offline multicultural spaces with high popularity and comprehensive information to conduct investigations and studies. Secondly, we also discussed the online multicultural spaces that take up a lot of people's time.

#### 3. 1. Four public spaces

Considering the natural environment, regional population composition, and measures to respond to the epidemic, the case study of physical multicultural public places selects four well-known areas which have a more obvious extent of multiculturalism. Among them, High Line Park and Central Park are based on the natural landscape, focusing on how multicultural interactions integrate with the environment. Reading Terminal Market and Superkilen are based on human activities and focus on how individuals behave in a multicultural environment. From these cases, we can see how social atomization and multiculturalism affect public spaces, and how these public spaces respond.

Table 1 Features of four public spaces

Public space	Aggravated / Slowed down	How does it reflect the development of atomism?		How does it reflect the development of multiculturalism?
		By internet	By COVID-19	
High Line (New York)	↑	Website, App: Facilitate the screening of personal information, information instead of interaction.	Maintain linear and unidirectional flow Limit entry and exit time Maintain social distancing	Regular activities allow residents of different identities and backgrounds to participate in the construction of the park, creating a sense of participation and belonging
	↓	Social media sharing: Individuals spontaneously search and create connections. Adopt plants: Carried out online and offline simultaneously, create online&offline connections. Provide high-definition background pictures of the zoom meeting.		
Central Park (New York)	↑	Virtual walk: For those who cannot be there. Park App: Realize cloud tours and individual tours, reducing the interaction between people.	Place signs to maintain social distancing in the park.	New York itself is a city with a multicultural background. The high accessibility of Central Park allows everyone to enjoy nature in the center of the city and do what they want to do.
	↓	Virtual drawing class:Interact with park artists through cultural activities.		
Reading Terminal Market (Philadelphia)	↑	Online shopping replaces on-site interaction.	Set exclusive time for the elderly: blocking interaction by age group No dine-in:	Reading Terminal Market has consisted of numerous shops, restaurants, and kiosks that offer an array of goods and services. In this highly diverse setting, people shop, eat, and stroll. Food is a major theme.
	↓	Share through instagram and other social networks with hashtag "experience the Market" to expand audience and build community.		
Superkilen (Copenhagen)	↑	Park app: Create independent tour guide, visualization instead of interaction	Residence ban, maintain social distancing.	It was designed with the extreme participation of local residents of different cultural backgrounds. Ninety-nine objects were brought in from around the world, representing people's different nationalities.
	↓	Google location reviews: Communicate between people who have been there and people who have not. YouTube, Music video recording: Attract people's attention and discussion.		

In different societies, although the manifestations of multicultural spaces are different, the factors that promote social atomization are similar. There are not many solutions for social fragmentation after the outbreak of the epidemic by physical space alone, but lots of methods that can be implemented in online spaces.

### 3. 2. Online multicultural space

The online public space, a new ethnic identity construction mechanism, is no longer solely based on countries, ethnicities, and races to limit people's interactions but is more condensed by personal consensus and interests to form a novel social public space. In order to express and even reshape self-identity and social identity, it provides a broader, more open and free field than those in the real world. A group of people can think of themselves as living a life parallel to the lives of another group of people; even if they have never met each other, they are moving along the same trajectory.

Sociologists believe that the social space in which people live have an important impact on their social identity. For example, Georg Simmel emphasized that if a certain set of social relationships forms around a static building, the building will act as a vital and socially significant hub during people's interactions. The rise of cyberspace allows people's social interactions to transcend the limitations of physical locations and allows them to stop relying on a physical co-presence. People can be in a physically empty space but still related to each other.

During the pandemic, online public spaces have been created for the stability of normal life; Zoom classes, remote offices, and various art schools have changed their graduation exhibitions online, as well as online graduation ceremonies, students from Berklee College of Music, Boston University and Emerson College recreated their campus on Minecraft to have an online graduation ceremony (Schaffhauser). There are even a large number of online marathons for people to participate in (Paige Triola).

Yet, Peter Wagner stated that while the internet has obvious enabling capacities for communication and information exchanges at long distances and high speeds, it also falls short of being a sphere to host close encounters between individuals in continuous, single interactions.

On the one hand, the online public space is a communication medium eager to pursue personal expressions and multiculturalism. This special type of cultural artifact breaks objective constraints and replaces physical capacity in the epidemic era to make up for the basic needs of human activities to provide a brand-new social scene. On the other hand, the particular fragmentation, fluidity and anonymity of cyberspace will facilitate the rapid spread of negative information and cannot completely replace people's experience in actual public spaces.



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## 4. Analysis and summary

### 4. 1. A guide to multicultural public spaces from the internet perspective

The oasis in the movie *Ready Player One* (Spielberg, 2018) depicts a virtual space that allows people to escape their dull reality by using head-mounted devices to achieve the visual effects of the entire interactive virtual system, including gloves and special clothing that cover the entire body to achieve motion input and touch feedback and mobile simulation equipment to realize walking and running in the virtual world. All of them can find corresponding product technologies in reality, but most still need to be improved in real life, and some even exist only in the prototype stage. Users of the mixed reality headset Microsoft HoloLens can play live Mali in Central Park, and tactile gloves are also being developed. Emoji has implemented a facial expression synchronization function. In the near future, virtual reality will evolve into an independent public space.

However, the spatial experience created by the internet now still only stays on the screen and in people's minds. People still need physical public spaces. In relation to the case above, more often the internet is only a supplement to information in physical spaces. The information in diversified public spaces is complex and requires efficient interaction means. In the future, technologies such as Microsoft HoloLens will allow users directly to interact with virtual objects more smoothly in the real world, allowing public spaces and virtual reality to be combined, information supplementation to be more direct, and interactions to be more efficient.

### 4. 2. A guide to multicultural public spaces from the Covid-19 perspective

According to the United Nations World Tourism Organization (UNWTO), the tourism industry is most affected by the epidemic. As of July of 2020, there has been a loss of 850 million to 1.1 billion international tourists. (The World Tourism Organization, 2021) Most people have canceled cross-border travel and adopted the principle of proximity. Instead, they have tours in nearby cities or near their community.

The process of social atomization is irreversible, but it is a foreseeable future to promote the connection between people on the basis of atomization and make atoms gather into molecules. Therefore, combining the four cases above, we believe that we can make suggestions in several aspects.

In the first, ensure natural spaces remain open. People have focused more on the natural aspects of parks; with no other concessions and events occurring, people are clearly enjoying the simpler amenities of parks, such as picnicking and getting lost in nature. Second, ensure the versatility of public spaces and encourage the creative use of these spaces, and set up the public spaces to suit the needs of active exercisers. Third, keep public spaces wide enough to allow for physical-distanced movement; if not, take measures to control the flow of people, similar to what was done in the High Line. Finally, keep public spaces within the reach of the residents. After the reopening of the High Line Park on August 2020, some people in the community considered it to be a bonus of the pandemic, and residents can be a tourist for the day and absorb all of the beauty very close to home. The UN-Habitat Guidance on Covid-19 and Public Spaces noted the concept of a plan for a self-sufficient neighborhood or a "15-minute compact city neighborhood," (United Nations Human Settlements Programme,

2020) offering a promising model that allows all residents to have all of their needs met within 15 minutes from their own doorstep by foot, bike, or public transport.

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## 5. Conclusion

During social atomization, when individuals become the basic unit of society, the role of the public space is to connect individuals, groups, and the space itself. Perhaps at the end of social atomization, cultural background units will also be atomized into individuals as well, and any place can be called a multicultural public space.

The epidemic is severe, and the whole world is fighting. Except for Covid-19 itself, there is also a direct correlation between social isolation, loneliness and poor health. The epidemic limits the scope of activities but cannot limit demand. At this time, as a double-edged sword, the internet has become handy by helping people connect socially.

Based on the two starting points of the pandemic and the internet, this paper combines existing cases to propose guidelines for the development of multi-cultural public spaces in the era of atomization.

First, ensure natural spaces remain open. Second, retain the possibility of maintaining spaces. Third, keep the public space wide enough to allow social distancing. Finally, keep public spaces within the reach of residents.

In addition, the use of technologies such as mixed reality technologies can enable users to interact directly with virtual objects in the real world, which could more effectively fit the characteristics of multi-cultural spaces and multi-information areas. Regardless of how the world will change, we hope that multicultural public spaces can always help to improve the quality of all individuals' lives. This paper lacks an analysis of multicultural public spaces in Asia for now. We will continue to focus on this theme, adding research on multicultural public spaces in Asia, especially South Korea, as we conduct a more comprehensive and in-depth study in the future.

## References

1. The World Tourism Organization. (2021, January 28). *2020: Worst Year in Tourism History with 1 Billion Fewer International Arrivals*. Retrieved from <https://www.unwto.org/taxonomy/term/347>
2. Carr, S., Stephen, C., Francis, M., Rivlin, L. G., & Stone, A. M. (1992). *Public space*. Cambridge: Cambridge University Press.
3. Gehl announcement. (2020, July). Public space & public life during Covid-19. Retrieved from <https://gehlpeople.com/announcement/public-space-public-life-during-covid-19/>
4. Gehl, J. (2011). *Life between buildings: using public space*. DC: Island press.
5. Habermas, J. (1991). *The structural transformation of the public sphere: An inquiry into a category of bourgeois society*. MA: MIT press.
6. Heywood, A. (2014). *Global politics*. New York: Springer.
7. Jacobs, J. (1992). *The death and life of great American cities*. New York: Vintage books.
8. Marx, K., & Engels, F. (1988). *The economic and philosophic manuscripts of 1844 and the Communist manifesto*. New York: Prometheus Books.

9. Mitchell, D. (1995). The end of public space? People's Park, definitions of the public, and democracy. *Annals of the association of american geographers*, 85(1), 108-133.
10. Paige Triola, J. S. (2021, February 20). Your 2021 Virtual Race Calendar. Retrieved from <https://www.runnersworld.com/races-places/a32600865/virtual-races/>
11. Pickett, J. P. (2018). *The American heritage dictionary of the English language*. Houghton Mifflin Harcourt.
12. Schaffhauser, D. (2020, February 4). Seniors Can Participate in Minecraft Graduation Ceremony. Retrieved from <https://thejournal.com/articles/2020/04/02/seniors-invited-to-participate-in-minecraft-graduation-ceremony.aspx>
13. Simmel, G. (2012). The metropolis and mental life. In *The urban sociology reader* (pp. 37-45). Abingdon: Routledge.
14. Spielberg, S. (Director). (2018). *Ready Player One* [Film]. Warner Bros. Pictures.
15. United Nations Human Settlements Programme. (2020, June). *UN-Habitat Guidance on COVID-19 and Public Space*. Retrieved from [https://unhabitat.org/sites/default/files/2020/06/un-habitat\\_guidance\\_on\\_covid-19\\_and\\_public\\_space.pdf](https://unhabitat.org/sites/default/files/2020/06/un-habitat_guidance_on_covid-19_and_public_space.pdf)
16. Xiao-Niu, Y., Wei, W., Xiao-Feng, X., Guo-Rong, P., & Chun-Lei Z. (2018). Research on the Construction of a Novel Cyberspace Security Ecosystem. *Engineering*, 4(1), 47-52.