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DIGITAL AGORA AS A NEW FORM OF PUBLIC SPACE

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ABSTRACT

In the ancient Greek city-state, the common area used by the people comes to life in the agora (Habermas, 1999, pp. 59–61). It is known that the agora was a focal point of the city where many social, political, or commercial events that interact with the people. Digital agora can be defined as an electronic place for citizens that is created online (Kirk, R., Schill, D., 2011) as an interactive screen technology as a component of urban infrastructure and monumental multimedia public venue (Fortin, C., Hennessy, K., 2014) or as a software component that enhances the awareness of users with common interests and generates communication and collaboration opportunities among them (Sánchez, J. A., Fernández, L., & Schnase, J. L., 1998). With a perspective from antiquity to futurism, In this study digital agora has defined a space that not only consists of physical space but keeps up with the "new" by being supported by a digital platform.

With the acceptance that the state of being one with the society, which determines the meaning of the public space, is only possible through the interaction of emotions between individuals; It is aimed to question the technologic supportive aspect of the chaotic public space which is a metaphoric and interactive space while at the same time it must not completely be disconnected from the physical real space and emotional. It has been found important in this study to discuss the digital agora approach to ensure communication of each user, whose demographic structure is different from today's technological point of view by uniting in a common interface.

With a perspective from antiquity to futurism, the questioning of the "digital agora", the meaning of public space and public space experiences are examined through changing life practices. Individuals with digital agora experiences; while preserving the image of belonging and existence given by the traditional, it also interacts with a global flow of information. In this context, it is aimed to research digital agora which is planned to use by digital humans. Digital agora is a new public space that is the interaction area of the citizens. According to this hypothesis, It will be examined who is digital humans, today's generation and their predecessors and how they use the digital agora the up-to-date examples in the Pandemic times.

The methodology of the study is determined to discuss digital people over the digital native and digital immigrant models defined by Prensky (2011a). How the dynamics of the space should be according to the digital agora user defined in these models has been researched. It has been concluded that the digital agora has turned into a common interaction platform that unites the "native" and "immigrant" users.

Today the meaning of social activity is transferred from public spaces to virtual spaces, and in post-industrial cities, the agora has been transferred to electronic media. The role of information technologies during the pandemic period has been to transform digital spaces into a platform where information is shared and individual interactions are possible. In this sense, it can be said that the pandemic has brought a different dimension to the interaction of individuals in the city and to the way they use real places.

Keywords: public spaces, space production, daily life, digital agora, pandemic

INTRODUCTION

The pandemic has affected especially users' social life which cannot be thought of without architecture and also has shaped our daily life routine which renewed rapidly and turned into our virtual experiences. The main problem of the study from this point of view; can be described as the change of existing city spaces in times of crisis and the need to adapt to the new situation. In public spaces where urban users are expected to interact with each other, the necessity of adapting to new urban life is even more considerable. For this reason, it is thought that the digitization of public space, which is accepted to connect urban users is worth researching.

Space and lifestyles are constantly changing due to rapid digital advancements; therefore, city users must harmonize those multivariate dynamics and adapt to the new conditions of public space. Within the scope of this identified problem, it is aimed to question the duality of technology, which is the necessity of the age and make flexible space predictions that can adapt to the "new public space situation" according to the changing living conditions.

The city users used technology-based virtual platforms to adapt to the daily flow, and created new public spaces by taking the "sharing" instinct that comes from the creation of the individual to a different level. In this context, the expansion of the problem determined by the literature research has been made. The potential of the chaotic situation in times of crisis to lead to new decisions has been researched, and accordingly, new-generation public space productions and uses have been considered. During the pandemic period, evaluations of the design process such as the layout, relationality, connections, and sizes of public spaces at the urban scale should be reviewed and more livable current structural revisions should be proposed. The examination of the "digital agora" experiences, which allow the public coexistence of various demographic and ontological groups, constitutes the "new" expansion of the study in public space.

According to the results of the literature research, as a prediction for the future; It is thought that the pandemic, which is a temporary situation, accelerates and triggers designers to re-discover social and recreational uses, redefine the use of space and design according to individual needs, as well as updates in the use of space and changes in the perspective of space in the post-crisis periods. Spaces defined as 3-dimensional, walled boxes will be insufficient in the face of changing habits and space use theories will develop in line with the "new digital situation". Thus, it is thought that it is possible to experience new digital public spaces based on individual interaction in cities, not only in physical spaces, but also in digital spaces consisting of different layers, independent of the concept of time, and the study is planned to be carried out in this direction.

THE DIGITAL HUMAN

Today's generation which is called N-[for Net]-gen or D-[for digital]-gen described as the first group born and grown in the internet World. They spend the nearly whole time on the screen like a telephone, computer, tablet, or any other toy or tool which connects digitally. Prensky (2001a) calls them "Digital Natives" who speak today's digital languages as native speakers. It is so obvious that as a consequence of predominant digital surroundings, the interaction of today's generations and their ancestors is entirely different. "Different kinds of experiences lead to different brain structures, " says Dr. Bruce D. Perry of Baylor College of Medicine. According to this argument; the young generation's brain structure has changed as a result of how they grew up (Prensky, 2001a).

So what about the others? According to Prensky (2001a), the predecessor of the "Digital Natives" who was not born into the digital life but adopted the most perspective of the new technological world, called "Digital Immigrants". As he says; digital immigrants behave like an immigrant who speaks with an "accent" and orient themselves to the environment although carrying always some footprints that come from the past. The immigrants interact, socialize and react differently from their kids because of the structure of the brain. They used to learn step-by-step, and choose to live slowly while their kids want to receive information fast, react faster, and prefer to experience multi-tasks in a parallel process (Prensky, 2001a).

It can be said that there are two kinds of content after the digital singularity: "legacy" content and "future" content. Legacy content is all about a "traditional" curriculum which includes reading, writing, and analyzing the readings and like minds of the "past". Although it is still considerable, it is from the old era (Prensky, 2001a). For this reason, the "legacy" content must be reviewed and updated to catch up with the new. Besides this, "future" content is a digital form to reach knowledge. Even though future content includes technology, software, and robotics, it also contains sociology, ethics, and politics that go along with them. With this view, digital immigrants are from future content but they also need to apply to education and entertainment perspective which is called "edutainment". For digital natives, entertainment and gaming are extremely significant (Prensky, 2001a). So it needs to invent a new methodology for all subjects at all levels to provide interaction with future content and legacy content.

The point of view that the human brain doesn't change physically according to the stimuli it receives from outside is wrong. "Research by social psychologists shows that people who grow up in different cultures do not just think about different things, they think differently," says Prensky (2001b). The culture and environment in which individuals are grown up affect and even define many of their thought processes. It also provides a strong argument that social psychology shows that one's thought patterns change depending on one's experiences (Prensky, 2001b).

Prensky (2001b) suggested that Digital Natives' brains can be changed physically as a result of digital data that they received in the growth process. Also, he submitted that learning something through digital games is one of the best way to interact with Digital Natives in their "native language" and this argument comes from studies which is done on children about using games for the learning process, neurobiology, and also social psychology. According to the latest research in neurobiology, it is no longer questionable that various kinds of stimulation change brain structures and affect the way people think, and that these transformations continue throughout life. While the popular term "rewired" is somewhat misleading, the general idea is true: the brain modifies and organizes itself differently based on the input it receives (Prensky, 2001b).

An important evidence of brain plasticity study is that brains do not rearrange themselves effortlessly and arbitrarily. (Prensky, 2001b) For example, digital natives spend most of their time looking at "a screen" such as a computer, tablet, or mobile phone. They use their fingers to perform actions instantly such as changing, undoing, selecting, liking, or disliking anything they see on screen. So their brains are regularly and constantly exposed to a digital interface to connect the others from the moment they open their eyes in the mornings. "Children raised with the computer think differently from the rest of us. They develop hypertext minds. They leap around. It's as though their cognitive structures were parallel, not sequential. While these individual cognitive skills may not be new, the particular combination and intensity are. We now have a new generation with a very different blend of cognitive skills than its predecessors – the Digital Natives. As a result of their experiences digital natives crave interactivity – an immediate response to every action" says Prensky (2001b). Digital Natives' skills and brain structure are exposed to the digital screen as a result of this they respond faster to expected or unexpected stimuli.

THE PANDEMIC AND SPACE EXPERIENCES

With the pandemic, significant revisions have been made to social life and public spaces in many cities, and in addition to "redesigning the space" approaches that foresee "designing this new process" have entered our lives. The isolation culture that emerged during the pandemic process can be defined as the victory of digital platforms as applicable communication tools and ensuring communication through "safe bubbles". (Banerjee & Rai, 2020 as cited in Alraouf, 2020)



Figure 1 Yoga Domes, Harrouk, 2020a

After the pandemic, revisions to social life and public spaces took place in many big cities. Green areas and restaurants that define social distance concretely and express it in physical areas, game, and commerce areas that produce specıal solutions, and approaches that design the process instead of designing the space have entered our lives.





Figure 2 Public Safe Zones, Harrouk, 2020b
Figure 3 Social Distancing Circles, Harrouk, 2020c

As of the crisis experienced, sudden changes in daily life have brought about changes in the spaces experienced by individuals. Our daily habits and accordingly, the use of the space we live in have changed. Each space, on an urban or personal scale, has been used for different functions within its potential. While talking about future foresight in space use and design, it is not possible to think independently of the concept of technology, which includes change and transformation.

With the restriction of the use of physical spaces after the pandemic, individuals shared in alternative virtual spaces. This new socialization method has emerged as a solution to the physical separation between individuals. The individual has access to information and interaction under all circumstances through online platforms during the pandemic process. These areas, which allow the transfer of data and emotions visually or audibly, can be defined as the new interaction spaces of our age. With this acceptance, the widespread use of virtual environments has changed the philosophy of architecture. For the continuation of daily life, individuals had to adapt to the new situation encountered during the pandemic period, changes in daily life, and relational transformations. They used technology-based virtual platforms to adapt to the daily flow and created new public spaces by taking the "sharing" instinct that comes from the creation of the individual to a different level.

NEW PUBLIC SPACES: DIGITAL AGORA

Examination of the "digital agora" experiences, which allow the public coexistence of different demographic and ontological groups, constitutes the "new" expansion of the study in public space. In this context, it can be thought that the leaps created by the moments of crisis, which are temporary, at the individual and social

level, have a permanent effect. This effect has the power to transform the meaning of the aforementioned digital native and digital immigrant groups to the concept of agora and the definition of publicity.

While networks in the virtual plane redefine the relations of individuals with each other and with the public space in a different layer, they also affect the physically existing public spaces in the city. The establishment of virtual networks on wireless systems, which is an invisible link, has transcended the physical limits of the concept of public space and transformed it into a form that can exist "everywhere". Public spaces with blurred borders have provided flexibility to the citizens and increased their communication potential. Individuals meet in "new public spaces" through social networks, which are the channels through which today's urbanites communicate with the world they live in, reach their likenesses and capture an interaction environment (Kaya &Kandemir, 2021).

Since it has become the largest metadata in today's world, the rapid transition in information flow and the possibility of instant access to all kinds of data has brought physical spaces to the secondary level and created a new opening in the question of time and space reality. The concepts of private space and public space, while approaching each other thanks to communication technologies, also diverge, and they have become new tools in terms of communicating with the other part of society and finding their own identity. At this point, the potential of media and communication technologies to create new public spaces gains importance (Özgül, 2012).

EXAMINATION OF CHANGING PUBLIC SPACE PRACTICES WITH EXAMPLES

In the digitalization process, which has become compulsory with the epidemic period, the use of digital tools has become mandatory to ensure the continuation of the daily life flow of individuals. Participation in online sharing platforms has been ensured in almost all layers of daily life such as art, education, and science, and virtual access roads have been opened to stay in touch with the citizens. Virtual spaces; it has become new public spaces where collective decisions are made by the citizens, the process of co-creation is experienced, the similar or the separate is discovered, discourse is produced and action is taken (Eker, 2020).

"Whole body has turned into a giant mouse or joystick" in virtual reality. With the new communication technologies, it has become accessible everywhere, regardless of time. With this perspective, it can be said that the dimension of space has disappeared in the 20th century (Manovic, 2001 as cited in Özgül, 2012). With the effect of developing rapid communication technologies and economic variables, the ground connection of individual movements has weakened and the concepts of public and private spheres are intertwined. Urban public spaces have been replaced by simulated spaces (Akyol & Düzenli, 2017).

With this point of view, it was found important to examine the practices of the public sphere, which existed before the pandemic period, but whose change accelerated with this period, within the scope of the study. There are many space usage examples showing that public space practices have been moved to virtual spaces and physical spaces with uncertain boundaries. Besides space forms, the interaction methods of individuals have changed also in these examples.

METAVERSE

The metaverse consists of the combination of the words "universe" meaning the universe we know, and "meta", meaning beyond: beyond the universe. It means a shared community of online worlds where physical reality and augmented and virtual reality merge. Metaverse imagines a common place where all virtual universes, game universes, movie universes, and even the physical world we live in are together, which was imagined in comics and then movies since the 90s and then created with wearable technologies. Beyond the existing universes, an urban environment in a binary system whose dimensions are determined by 1s and 0s: that metaverse (Özcan, 2021).

For architects, the metaverse is a wilderness full of possibilities and a Utopia without the constraints of the physical world. Architects can create unique designs powered by NFT (Non-fungible token) for people who

enjoy collecting one-of-a-kind assets. Architects can also create digital assets such as cities, buildings, furniture, sculptures, point clouds, and textures, and sell them repeatedly to virtual worlds, games, and movies. In movies like "Ready Player One", "The Matrix" and "Blade Runner" where anything people can imagine can exist, can get an idea of what life in the metaverse might be like, and can always connect to the metaverse to expand their real lives (Sun 2021).

THE SOUK

A digital jpeg image is expected to be exhibited in a digital environment. It is envisaged that world-renowned architects in New York were working to build this virtual monument, called "The Souk" and it will be held in this environment not only for exhibitions but also for live concerts, events, and meetings attended by opinion leaders. In a completely virtual environment, more precisely in the metaverse (Özcan, 2021).



Figure 4, The Souk, Özcan, 2021

MUVE (Multi User Virtual Environments)

Maher (1999), mentions that the virtual campus application, which they include in their study, displays a perspective in communication with the physical space. He states that the inspiration for this application is the MUVE (Multi-User Virtual Environments) program. In the application, users communicate with other users. Users in the same virtual room interact with others, users sitting at the same table see each other's writing, and standing ones see all users typing (Maher et al., 1999).



Figure 5 Virtual Campus, Maher et al., 1999

STRAVA

Strava, an application that defines the possibility of "partnership" between users through virtual spaces, records the user's real-time physical activities and creates various data analyzes. Thus, by transferring different properties of physical space to the virtual layer, it creates a real-time urban mapping and from a different perspective, the experience of public space is enriched by the virtual interface and it contributes to the formation of "community" in the framework of certain topics in the public area. The mapping of user movements in the public space is accepted as data to make sense of the use of the city and to explain

different relationships. In this example, the inclusion of virtual interfaces in user-oriented public space design is handled from a different perspective (Kaya et al., 2021).

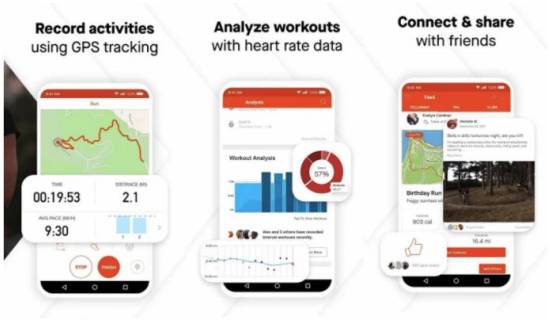


Figure 6 Strava Aplication, Kaya et al.,2021

STEDELIJK MUSEUM

In the example of Amsterdam Stedelijk Museum, by using augmented reality technologies, the elements exhibited in the museum were placed on the virtual plane at different points of the city, the boundaries of the museum space were blurred and the communication of the citizen with the space was enabled as it became easier to access the artifacts. A city route reaching the museum is determined by using the exhibition objects placed in different parts of the city. Thus, as an alternative to the traditional exhibition layout, the museum space offers a stratified experience that merges with the public space (Kut, 2013).

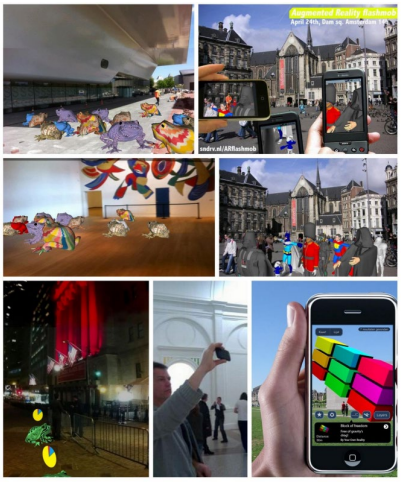


Figure 7, Stedelijk Museum, Kut, 2013

At this point, one of the issues to be questioned is whether is it sufficient to physically expand public spaces for the problem of socialization during the pandemic period, which seems to be a period problem for the moment but is likely to develop a new thinking system or should the ways of transforming the use of public spaces into virtual spaces that have become widespread lately should be explored? With the virtual interfaces presented in these examples, each individual has the opportunity to experience different space-event patterns simultaneously in the same physical environment. Instead of a stationary space approach with determining limits and potentials, flexible spaces with different, transforming limits, are ambiguous, permeable, and open to different experiences.

DISCUSSION

The behavior change of individuals during the pandemic period has played an important role in the prevention and control of the epidemic (Arden, M., A. et al., 2020 as cited in Liu et al., 2022). As Perra reveals

in her study, "pandemics" and "individual behavior" are two often intertwined situations (Perra, N. 2021 as cited in Liu et al., 2022). At the same time, the state of being closed during the isolation process triggered the need for interaction more and revealed the potential of the individual to develop "new methods of using the space" in the context of space. "The importance of real interaction" and "the necessity of virtual communication" have become two important entities that need to work together.

Examining the experiences of "digital agora", which enables the public coexistence of different demographic and ontological groups, constitutes the "new" explanation of the study in the public space. In this context, a shift, which is created by temporary moments of crisis at the individual and social level, can create a permanent effect. This permanent or temporary effect has the power to transform the definition of publicity.

Ewa Rewers states that today the meaning of social activity has been transferred from public spaces to virtual spaces, and in post-industrial cities, the agora has been transferred to electronic media (Rewers, 2005 as cited in Paköz et al., 2022). The role of information technologies in the pandemic era has been to transform digital spaces into a platform where information is shared and individual interactions are possible. The perception of real spaces, which are under the influence of virtual interfaces, has changed. Thus, both the meaning attributed to social interaction and the realization of social interaction have changed. The adaptation of the already existing infrastructural technology to the space and its acceptance by the user has accelerated with a mandatory effect like the pandemic.

With the restriction of the use of physical spaces after the pandemic, individuals have shared alternative virtual spaces. This new socialization method has emerged as a solution to the physical separation between individuals, allowing the individual to access information, thoughts, or emotions and interact in all conditions through online platforms. These areas, which allow the transfer of data and emotions visually or audibly, can be defined as the new interaction places of this age.

With this acceptance, the widespread use of virtual environments has changed the philosophy of architecture. While every individual's experience is different in public shares in physical space, this virtual-physical combined experience is expected to be different in a layered way (Akyol et al., 2017). As a foresight for the future, in the post-crisis period, designers will give importance to re-discovering social and recreational uses, and redefining and designing spaces according to human needs. Spaces, defined as a 3-dimensional box surrounded by a wall, will be insufficient against changing habits and theories of space use incompatible with the "new situation" will develop.

REFERENCES

Akyol, D., & Duzenli, T. (2017). Toplumsal Değişim Sürecinde “Kamusal Mekan”ın Dönüşümü.,5, ASOS Journal October.

Alraouf, A. A. (2020). The new normal or the forgotten normal: contesting COVID-19 impact on contemporary architecture and urbanism. Archnet-IJAR: International Journal of Architectural Research. https://doi.org/10.1108/ARCH-10-2020-0249

Eker, G. (2020, May 6). The Future Of Public Spaces After Pandemic: Ghost Spaces. UNDP. https://www.tr.undp.org/content/turkey/en/home/blog/2020/05/ghost-spaces-future.html).

Fortin, C., Hennessy, K., (2014). Roles of an Interactive Media Façade in a Digital Agora, PerDis '14: Proceedings of The International Symposium on Pervasive Displays June 2014

Habermas, J. (1999). Kamusallığın Yapısal Dönüşümü (T. Bora (ed.); 2. baskı). İletişim Yayınları.

Harrouk, C. (2020a, June 23). Socially Distant Outdoor Yoga Domes Invade the Open Spaces of Toronto. Arcdaily. https://www.archdaily.com/942247/socially-distant-outdoor-yoga-domes-invade-the-open-spaces-of-toronto

Harrouk, C. (2020b, April 29). The Gastro Safe Zone: A Public Space Proposal that Considers Social Distancing Measures. Arcdaily. https://www.archdaily.com/938599/the-gastro-safe-zone-a-public-space-proposal-respecting-social-distancing-

measures?ad_source=search&ad_medium=projects_tab&ad_source=search&ad_medium=search_result_all.

Harrouk, C. (2020c, May 25). Domino Park Introduces Social Distancing Circles to Adapt to the COVID-19 Crisis. Arcdaily. https://www.archdaily.com/940244/domino-park-introduces-social-distancing-circles-to-adapt-to-the-covid-19-crisis

Kaya, M., Kandemir, Ö. (2021). Kamusal Alanın Teknolojik Katmanı Olarak Sanal Ağlar ve Kentsel Mekanlar Üzerindeki Etkileri. Turkish Online Journal of Design Art and Communication, 11(1), 182–194. https://doi.org/10.7456/11101100/010

Kirk, R., Schill, D., (2011). A Digital Agora: Citizen Participation in the 2008 Presidential Debates, American Behavioral Scientist Volume 55, Issue 3, Pages: 325 – 347

Kut, S. (2013). Sibertektonik Mekan. İstanbul Technical University, Institute of Science and Technology, Thesis (PhD)

Liu, J., Kamarudin, K. M., Liu, Y., Zou, J., & Zhang, J. (2022). Developing a Behavior Change Framework for Pandemic Prevention and Control in Public Spaces in China. Sustainability (Switzerland), 14(4), 1–24. https://doi.org/10.3390/su14042452

Maher, M. L., Skow, B., & Cicognani, A. (1999). Designing the virtual campus. Design Studies, 20(4), 319–342. https://doi.org/10.1016/S0142-694X(98)00043-X

Özgül, G. E. (2012). Bir Görme Biçimi Olarak Yeni Medya: Kamusal Bir Alan İmkanının Araştırılması. Journal of Yasar University, 26(7), 4526–4547.

Özcan, B. (2021, Sep 19). İnternetten sonra bu mu gelecek? Metaverse nedir? https://barisozcan.com/internetten-sonra-bu-mu-gelecek-metaverse-nedir/

Paköz, M. Z., Sözer, C., & Doğan, A. (2022). Changing perceptions and usage of public and pseudo-public spaces in the post-pandemic city: the case of Istanbul. In Urban Design International (Vol. 27, Issue 1, pp. 64–79). https://doi.org/10.1057/s41289-020-00147-1

Prensky, M., (2001a). Digital Natives, Digital Immigrants Part 1, On the Horizon (MCB University Press, Vol. 9 No. 5, October 2001

Prensky, M. (2001b). Digital Natives, Digital Immigrants, Part 2: Do they really think differently? On the Horizon 9 (6): 1-6.

Sánchez, J. A., Fernández, L., Schnase, J. L. (1998). Agora: Enhancing Group Awareness and Collaboration in Floristic Digital Libraries. In CRIWG (pp. 85-95).

Sun, C. (2021, Nov 24). Architecting the Metaverse. Arcdaily. https://www.archdaily.com/968905/architecting-themetaverse