

IDU SPAD'20 International Spatial Planning and Design Symposium

ABSTRACT BOOK



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IDU SPAD'20

**International Spatial Planning and Design Symposium
Abstract Book**

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PREFACE

As it is known, all living things need "space" in order to survive and they change and shape "space" with their vital activities. Human beings are also a part of the space where they lived within all stages of their existence. However, the intense urbanization process experienced especially in the 1950s and the new production-consumption model and life styles specific to this period, caused the disruption of harmony of people-space relation and the emergence of many environmental problems that we face today. Especially, Particular consequences such as the climate change, biodiversity and habitat loss have also influenced social life substantially, and the ecological and social fragilities have become more visible. Familiar to the history of humanity, but external to our daily routines, the epidemic period that we started experiencing very recently is actually a phase that we can practice very frequently in the near future, especially in the context of climate change, and thus it stands as a phase that we need to learn to live with. All these experiences highlight the necessity of reconsidering and evaluating the planning and design actions at different scales.

Our symposium, which hold with the main theme of "The Future of Planning and Design, Planning and Design of the Future", aims to develop suggestions for the future of society and settlements with a holistic approach by bringing together urban planning, architecture, landscape architecture, product design, geography, ecology, sociologist and other design disciplines who can take part in drawing the future. The purpose of this symposium is to examine the change and transformation caused by the interventions of humanity on the earth throughout history in all kinds of settlement scales and forms, and to have expert discussions on the proposals and examinations of possible habitats that can be a guide for future generations.

I am very pleased to share this publication of the papers presented at the symposium, where many similar subjects such as environment, urbanization, human and society, climate, ecology, sustainability and legal regulations were discussed. I hope it will contribute to both science and practice.

Prof. Dr. Bedriye TUNÇSİPER
Rector of Izmir Democracy University
Head of Symposium Organizing Committee

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Scholarship of Teaching Landscape Architecture in Digital Environment

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ABSTRACT

We are living in a post-industrial age, but our education (primary, secondary and higher) system still reflect the design of an earlier era. The last major changes to curriculum were effected in the late 1800's as a response to the sudden growth in societal and human capital needs. Recent advances in educational technologies and the pandemic forced migration to online teaching and digital technologies have suddenly ushered in both additional needs and changes. Despite all of incremental changes, the world of the 21st century bears little resemblance to that of the 19th century, education curricula need to be deeply redesigned for the needs of 21st century and beyond as supported by interdisciplinary educational research, workforce development research, and evidence based principles. Although we have learned from our rapid responses to online education, we are still learning as the pedagogy is going through a serious evolution. Landscape architectural educators and our counterparts in allied design and planning fields face serious challenges to urgently adapt to emerging pedagogies born by the digital technologies and online education as an evolution and revolution.

This presentation will be based on a personal belief that as higher education establishing ways to adapt, instead of just bouncing back, perhaps our efforts and time can be used to strategize ways to bounce forward.

Online learning as a modality of teaching and learning has been thrust upon education and can no longer be considered an emerging reality. It is here Until now, in many institutions of higher learning across the country and globe, online courses and programs have been managed as a separate entity. The current reality has shifted education and distance learning into an integral part of the education system. Education has become virtual, and educators should accept that online learning is a permanent part of learning in today's academy. It is an opportunity for the compartmentalization or silos within the educational organizations to be deconstructed and reshaped so that the varied online initiatives throughout the institution can collaborate more effectively. In order for higher education institutions to survive, it is an imperative for them to maintain a vision of the current and future trends of modern education and work to promote student success.

Following questions and considerations will be posed:

- How studio teaching would be modified to take advantage of our learned experiences with the online platforms?
- How would student interaction, engagement and experience be maximized and protected as a critical component of design education?

- What are some of the major paradigm shifts in higher education that would influence design education? Would interactive/simultaneous online studio plus office internship be possible and acceptable?
- Is there an emerging pedagogy in design education (post-studio) which benefits from the online technologies?
- How should on campus facilities for design education be modified for future challenges in higher education?
- What are some practical considerations for resilient and optimistic future in both higher education, especially in design and planning education?
- How can we ensure an equitable campus and design/planning education in a campus of future?

Keywords: Online Pedagogies, Digital Learning, Online Design Studio

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Shaping New Urban Project Cultures

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ABSTRACT

The subject of my talk are urban projects and intervention that accompany urban transformation processes by complementing the classic planning and urban design tools by contextual, participatory and artistic approaches in order to make our cities worth living in. Nowadays there are more and more of such experimental, contextual, participative and alternative interventions such as alter-architecture, micro-urbanism aiming to re-enchant the city and the urbanity through the involvement of artists, designers and citizens. The main hypothesis is that these new urban projects promote new urban cultures, and that at the same time, new urban cultures also require a new type of urban projects.

What is meant by urban project cultures? The work of an urban designer or city planner is a work on the long run, and it is determined by continuous negotiations with a multitude of codes, stakeholders and factors. Shaping a city is a heteronomous work which, as the city itself, remains always unfinished and barely perceptible through slow changes in the urban space. The work of the artist, however, can be a voluntary and immediate act, an act which asserts its autonomy and imposes by its physical or emotional presence. The dialectic between art and urban design is all the richer if art reveals what planning experts are unable to express, or what the public cannot perceive, provided that artistic expression is not only an integral part of urban culture but also of the urban project culture.

My presentation consists of three parts: background and two case studies. The discussion of some examples that may stand for the huge number of alternative, contextual and artistic design experiences in Western Europe ranging from the 1970s to present time shows a common background: the paradigm shift in planning doctrines and methods during the 1970s which falls together with the rediscovery of the European city, the old city as a cultural heritage, the city as a living, dynamic organism. The presented examples have in common that they put forward the collective and multidisciplinary work with the people themselves, experiment new ways to conceive and to practice projects by participation and mediation processes.

The first case study presents the City of Vienna which practices for forty years now a policy combining urban renewal with participative artistic and cultural activities. The long-term work led by the Neighborhood Management Teams for Urban Regeneration in Vienna-Ottakring is combined with a multitude of artistic and cultural initiatives. Partnerships are stable, but the various joint actions are often short-lived and do not leave permanent traces. All together they yet manage to capture the attention of a variety of audiences and users and work as an invitation for the local population to engage in the urban regeneration of their neighborhood.

In the second case study, we show in which ways the Basel Eurodistrict, through artistic interventions, seeks new narratives for the cross-border area being developed at the meeting corner between Switzerland, France and Germany. In contrast to the Vienna case and its aims on the long-run, the choice of a big scale art project for a single and special moment is motivated by the context of conflict

due to a top-down planning process where people do not agree on an urban planning project that has to cope with metropolitan issues but at the same time with specific neighborhoods located in three different countries, and also with the needs of their inhabitants. Retrospectively, it seems that the art project opened a breach towards new experiences on site and also in the planning process.

In both cases, bottom-up initiatives and artistic expression mediate between planning and its recipients. Planners and designers who define their work as going beyond mere planning tools in order to initiate, moderate or accompany urban and social processes, should acquire and mobilize skills of social science and communication techniques. It thus appears a space for negotiation between different stakeholders, a hybrid space that requires for us, architects and planners, skills from other disciplines and opens new practices and new fields of project culture for the city.

Keywords: project cultures, contextual art, urban planning, participation

Beyond a Tool: Virtual Landscape

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ABSTRACT

With the advance of computer technology, design domains such as landscape architecture, urban plan, and architecture are trying to adopt various gears and methodologies to enhance their design process. Starting from simple visualization tools like Photoshop and Illustrator, simulation program as BIM and cutting-edge tools like HMD using VR and AR are beginning to be adopted to these domains. These are to design and maintain real space more efficiently and more aesthetically by using a virtual environment as a tool. However, there is another direction to merge technology with our domain. Not as a tool, but using a virtual environment as a new design domain.

Currently, the digital game market is the domain using virtual environments most aggressively. The market size is getting more prominent than any other industry. Also, more and more delicate technologies are developing at this very moment. However, it has been challenging to maintain the content and the whole industry's quality without any involvement with space designers.

We will discuss the current condition and limits of virtual landscape design in the game industry with this lecture. We will investigate and understand the characteristic of the virtual landscape as a design domain. These approaches will help us overcome the idea that the virtual landscape is only a tool and will lead us to boldly no man has gone before.

Green Performance Using ENVI-met Software

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ABSTRACT

Greenery in the city could be one possible strategy to preserve biodiversity and avoid extreme urban heat island effects in cities in distinct climate contexts. Among other functions, trees have a robust capacity to help lower the accumulation of CO₂ in the atmosphere. Additionally, trees play a vital role in shaping a more comfortable microclimate, reducing extreme conditions and physiological stress accrued during warm seasons. In this sense, green landscapes promote healthier and safer environments by regulating urban temperature, controlling extreme events such as floods caused by intense rainwater run-off, regulating air quality or wind speed, reducing noise, and promoting biodiversity. For this research, I will present three cases of studies developed in three countries: Brasília (Brazil), Lisbon (Portugal), and Boston (Massachusetts – USA) that evaluate the power of green scenarios to promote thermal comfort. For this, I will follow three steps: selecting the study area, modeling and simulating, and data visualization using ENVI-met software, which has the simplicity of the modeling process. The use of simulation reveals the complexity of the urban environment and the necessity to implement greenery to improve our cities' environmental quality and establish public policies to balance green areas on the territory surface. This research builds cross-disciplinary collaborations between different specialists from diverse environmental engineering fields, landscape architecture, urban planning, and geography.

Natural Based Solutions in Urban Areas and Social Distances as an Effect of Coronavirus

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ABSTRACT

Urbanization has a growing influence on the wellbeing of the inhabitants of urbanizing areas through harmful effects on environmental quality, climate change sensitivity and human health.

Nature-based solutions aim to support humanities address a variety of environmental, social and economic challenges in sustainable ways. They are actions, which are stimulated by, supported by or copied from nature, offered by the natural parts of the urban environment, the urban green infrastructure. However, due to the heavy competition with other interests, these parts of urban space are under heavy pressure.

The recognition that nature can help provide viable solutions that use and deploy the properties of natural ecosystems and the services that they provide in a smart, 'engineered' way has become increasingly popular and understood. NBS provide sustainable, cost-effective, multi-purpose and flexible alternatives for various objectives (Frantzeskaki, 2019). Furthermore, "working with nature, rather than against it, can further pave the way towards a more resource efficient, competitive and greener economy." (EC, 2015)

Nature -Based Solutions therefore, explore and demonstrate the role of urban green infrastructure as an often inexpensive way to concurrently subsidise to the mitigation and solving of e.g. heat island effects, flooding risks and air quality problems although at the same time contributing to better-appreciated surroundings and therefore improving health and well-being.

The aim of this paper is to present an outline of current tools and frameworks designed at serving and developing cities and metropolitan areas that strive to be liveable, healthy and climate adaptive. These solutions and preferably include examples of the use of the presented methods and instruments in urban areas.

Responding to the COVID-19 crisis offers the world an opportunity to chart a better urban future. Cities around the world need to take the step into the 21st century by accepting crises as a new reality and finding ways to function during these disturbances. Therefore, preserving or cumulative space for nature in the urban metropolis and protecting it accessible to the public should be part of the sustainability program, aiming concurrently to attempt towards healthy and sustainable resilient cities. During these extraordinary circumstances of social distancing, urban nature offers resilience for maintaining well-being. The idea of this suggestion is that even in these extreme conditions the urban nature can provide opportunities to escape household quarantine and enjoy positive well-being effects while maintaining social relationships even with distance and p.

Keywords: Green Infrustrctures, Urban Green, Natural Based Solutions, Social distance

A Postcard from the Initial Epicenter of COVID-19

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ABSTRACT

The paper consists of two sections. First, it reviewed the timeline and its relevant key events during the unpredictable outbreak of COVID-19 in Wuhan earlier 2020, to clarify that what measures have been taken in Wuhan are responded effectively for the prevention and control of the transmission of this deadly disease. Second, the paper illustrated investigations which have been conducted at 30 hard-hit neighborhoods in Jiang-an, Hong-shan and Qing-shan districts in Wuhan city. Based on the investigation, people's Daily activities restricted within its own home and guarded neighborhood environment, neighborhood infection data from Wuhan Municipal Health Commission, and residential environment characteristics retrieved from CRIC database between 4th-20th February have been studied and analyzed. The results show that the infection index of COVID-19 in urban residential areas has significant positive correlation with number of households per building and the age of residential buildings, but negative with the green area ratio and property management fee. The research also found that aged neighborhoods and neighborhoods without sufficient material and manpower resources became vulnerable, and were hard to accommodate the extra amount of daily work, mainly including to manage 1) enhanced entry and exit registration process, 2) disinfection, 3) delivery of grocery and other emergency supplies, 4) monitor, report or transfer of residents with possible symptoms of COVID-19 or other health conditions, 5) update of COVID-19 development to all residents, and 6) mental health first aid. Therefore, the further environmental design strategies for urban residential communities should consider resilient methods and transitional spaces to serve vulnerable neighborhoods and assistant property managers, community workers and volunteers' daily work in order to cope with the outbreak of infectious disease.

Keywords: Infectious Disease; Neighborhood; Environmental Design; COVID-19

Art for Survival

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ABSTRACT

The lecture is an overview about MK Associates practices in the Mediterranean region and their role in introducing the profession of landscape architecture via Academia and Professional Practice, it covers a vast majority of projects in public and private sectors. The presentation will touch upon a major park in southern part of Jordan at Aqaba City in an area of 200,000 m². One gets the sense of sea breezes in the proposed architecture of Aqaba Town Park. The forms in plans and perspective reflects the natural gradation of the land; how the moves across the land, the necessity of having the air rise in relief of the heat. The poetics of the natural landscape applied to the man-made environment. The park will play an important role in the social infrastructure in the city of Aqaba.

Another important role for the project is to efficiently and effectively manage stormwater runoff by decreasing the amount of impervious area on site. The park will be a model for current green infrastructure practices, displaying bioretention cells, cisterns, pervious pavement, and our unique water conveyance system. Moreover, the project will serve as an outdoor classroom for visitor to get more knowledge about green infrastructure and the missing lesson for Jordan's different climatic regions.

A Case Study on Landscape Performance

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ABSTRACT

Decades of research in post-occupancy evaluation have provided architects and engineers with significant insights on attaining health, efficiency, and sustainability in building design. Parks, plazas, and promenades are also a significant part of the built environment, yet there is a lack of research focusing on measuring post-occupancy landscape performance. Quantifying the landscape's contribution to sustainability is important in supporting the development of better design standards and providing opportunities to bridge the gap between research, design, and implementation. Additionally, a significant amount of knowledge is embodied in built work. This research reports on a case study developed in association with the Landscape Architecture Foundation's grant-funded Case Study Investigation Program. It focuses on contributing to the development of methods and techniques to quantify social, economic, and environmental benefits of a highly acclaimed streetscape revitalization project and an urban park project located at the two ends of the Lincoln Road Mall, an open air pedestrian-only shopping and entertainment promenade in Miami Beach, Florida, United States. The study sequence included identifying possible performance benefits by reviewing the projects' unique challenges and solutions, determining appropriate metrics for each benefit, gathering data, and determining appropriate methods for performance measure. Primary and secondary data collection methods included on-site user surveys, user counts, user behavior observations, temperature comparison studies, and review of design and construction documents obtained from the designers, stakeholders, and different public databases. Significant findings indicated increases in plant species diversity, native/non-native planting ratio, carbon dioxide sequestration, property values, tax revenues, and user satisfaction. Findings also showed decreases in surface temperatures on adjacent sidewalks and stormwater runoff volumes generated through the site. This research is valuable in revealing insights on designer's goal, local challenges, and user satisfaction, and also generating new methods in measuring landscape performance.

Keywords: landscape performance, post-occupancy evaluation

Metropolitan Landscape Performance: Case Study Lessons from North Texas

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ABSTRACT

21st-century cities are challenged with population growth, rapid urbanization, climate change, and ecological and environmental degradation. United Nations' projections suggest that 55% of the world's population lives in urban settlements, and this proportion is expected to increase to 68% by 2050 (UN, 2018). Such demographic, socio-economic, and environmental changes raise critical questions regarding the value of landscapes within metropolitan regions (Ozdil, 2018), and the influence of landscape architecture to help solve the defining issues of our times (LAF, 2020).

Landscape performance is a measure of the effectiveness with which landscape solutions fulfill their intended purpose and contribute to sustainability. It involves the assessment of environmental, social, and economic parameters to document measurable outcomes (LAF, 2020). Although evaluative research has its roots in design (Hall, 1966), it found stronger the ground in architectural fields with Post Occupancy Evaluation (POE) which is the assessment of the performance of physical design elements in a given, in-use facility (Preiser et.al, 1988). Landscape architecture's focus on the topic can be attributed to the early '90s (Marcus & Francis, 1998) but the increasing environmental awareness and sustainability movement around the turn of the century opened the way to more rigorous project base research (Francis, 2001; Ozdil, 2008; LAF, 2020). Yet, the gap remains especially in regards to performance research in metropolitan landscapes.

This research evaluates the performance of three acclaimed urban landscapes within mixed-use, residential, public settings in order to discuss such projects' impact and value for their metropolitan context. The three Dallas-Fort Worth region case studies are completed as part of the Landscape Architecture Foundation's (LAF) *Case Study Series*. The research includes both quantitative and qualitative methods (Deming & Swaffield, 2011; Ozdil et.al, 2015; Ozdil, 2017, 2018). The landscape performance methods and data are derived from: The case study methods in design literature (Francis, 2001), LAF's *Case Study Briefs* (LAF, 2020), the primary data collection methods through; site observations and online surveys (Whyte, 1990; Marcus & Francis, 1998; Gehl & Svarre, 2013; Ozdil, 2016) and finally secondary data collected from project firms, stakeholders, and public resources. The research uses case studies as a springboard to draw lessons for future metropolitan landscapes.

The findings include project profile and overview, sustainable features, challenges/solutions, lessons learned, cost comparisons, performance benefits, etc. The research also discusses the performance criteria and measures selected for each project, such as the findings on social (i.e., % increase in quality of life), economic (i.e., % increase in property value), environmental (i.e., % runoff reduction), other performance benefits, and their relevance to metropolitan landscapes.

In conclusion, the research highlights the lessons learned from three very distinct North Texas projects by documenting and evaluating their performance in order to inform future landscape architectural research and practice in metropolitan regions. It is concluded that scientific understanding of the performance and value of nature is immanent especially in metropolitan landscapes for a resilient future, and landscape architecture has the potential to help solve the defining issues of our times in collaboration with allied fields.

Keywords: Landscape performance, design evaluation, urban landscape, metropolitan regions, post occupancy evaluation

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Agglomerations of Baku City as Post-industrial region

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ABSTRACT

The consequences of the past mass industrialisation have received much scholarly attention in recent years, mostly about their environment recovery, change purpose of area and its role in social impact.

Latest challenges in front the society result that the economy towards to post-industrial principles of city drivers with good planning attractive and safe environment for life, work and development, including good urban management, people participation, high quality of life and environmental sustainability. The results of past decades indicate that the social, economic and environmental aspects of urban agglomeration unfavorably moderate the territorial resource of Baku City.

Actual processing of unqualified transformation inside of the city escalate the segregation by economic status of peoples. The new districts for very rich peoples are emerging, generally with the territory fenced by high wall. Thereafter evidently, there is a growing process of dissatisfaction around middle and creative class. Baku is also a relatively high-density city where the main driver of its urban sprawl is the inhabitants desire for privacy, and hence, home ownership of single-family detached houses, which have become the predominant residential building-block of agglomeration with little to no provisions of in-neighborhood community services and amenities such as basic parking, health, education, and recreation. Consequently, this urban form has resulted in long and frequent commutes for individuals and families, increasing the number of vehicles in traffic almost every hour of every day, traffic congestion, high transportation-related CO2 emissions, additional expenses, and loss of quality family time, among several other environmental, social, and economic sustainability impacts.

Meantime this actual processing of unqualified transformation inside of the city escalate the segregation by economic status of peoples. From 2017, the new districts for rich peoples are emerging, generally with the territory fenced by high wall. Thereafter evidently, there is a growing process of dissatisfaction around middle and creative class.

Morphological research has generally focused on centrally located urban centers and much of the peri-urbanity that constitutes the majority of informal development in Baku City remains under-researched. Jane Jacobs noted that good urban revitalization requires a dense population. Revitalization of urban area depend from urban public safety, socioeconomic, resident health, walkable

The visual observation opens up a series of questions about the morphology and morphogenetic processes in the agglomeration and establishes a framework for future post-industrial city.

How do we explain the issue between various developments of unqualified construction and city decentralization?

Do the processes that characterize the agglomeration restrict the prospective urban development and social scope of post-industrialization?

Keywords: city, post-industrial, decentralization, resilience, community, agglomeration

The Future Of ASOUI Away From The City Center

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ABSTRACT

Azerbaijan State Oil and Industry University is one of the largest, oldest and most significant universities in our country. Placed right in the city center, these gorgeous old buildings of ASOUI are being drowned among the big shopping centers, city noise, crowds of thousands of people on their way to huge business centers and offices. Apparently, the growth of population and development of technology led to the inevitable need for the expansion, which implies more students, more faculties, more laboratories and less space. Additional floors are not safe from the constructional point of view, as there bigger loads are being held by the same foundation. Underground tunnel is not comfortable and has no aesthetical value. Expansion into the inner yard reduces the amount of open space, which is vital when it comes to educational premises. This space could have been used as a recreation area but instead what we have is the representation of the only feasible way to make it possible for 11.5 thousands students to study. Besides the auditoriums and administration, many premises of various functions are needed for laboratory practice and extracurricular activities.

Considering all the requirements and judging from the international experience (for example University of Bergen in Norway or RWTH Aachen University in Germany), the best proposal in this case is relocation of ASOUI to a place, far from the city center. There it could successfully perform all the functions as a wholesome complex that has conditions for not only education but also recreation, co-working, research, dwelling and sport. Khojasan region is the best from the point of accessibility and surroundings. Breathtaking scenery of mountains and lake and fresh air will improve mental and physical health of students. This site represents the perfect environment that is violated in ASOUI's current location. Last but not least about the site – the opportunity of prospective growth. The main issue of current site is solved before faced again – there is enough space for expansion if it is needed.

The faculties that use the same laboratory equipment and have the similar amount of students can now be placed in one building. Arranging 7 faculties into 4 separate 2-3 storied buildings would reduce the crowds and make it possible to add more buffer zones per level (which now is even more important than ever).

Administration would now have its own small complex, away from the academic classrooms and auditoriums, and large library would include different types of reading halls and co-working rooms.

Finally yet importantly, one of the main advantages of relocation the campus to this area is a dormitory within a walking distance from the main buildings unlike the current one.

Keywords: university, campus, relocation, ASOUI

Public Transport Shaping the Urban Spaces in Baku

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ABSTRACT

A significant role in the continuous process of shaping and definition of the public spaces, are playing streets, railways, stations and transit stops. As an active part of an urban environment, public spaces must be inclusive i.e. provide all groups of citizens with necessary conditions to participate in society and not face issues with accessibility. The area of 28 May square is one of the most important and complex transport hubs of the Baku, due to the metro, railway and a bus station located there. The presence of different types of transportation and the historical structures side by side makes this square one of its kind. The research focuses on analysing the human behavior and traffic flow in the square and aims to reorganize the public space in this area.

The main problem of this area is the strong presence of private, parked or circulating cars that prevent from generating a functional and useful space for the physical and visual well-being of society. Considering also a diverse group of people using this square the situation becomes more complicated. The similar case can be seen in the Rotterdam Central Station (Netherlands, 2014) which is also an important transport hub with about 110.000 passengers per day. Conceiving of the station as a square helped to overcome the complexities and offer comfortable urban space for users.

Public transport stops are undoubtedly concurring to shape the urban space and their importance is often overlooked. They are usually considered with respect to their functionality, without any specific adaptation to the urban context where they have to be inserted. In the 28 May square, the replacement of 4 bus stops to the underground can be proposed as an approach aimed to reduce the traffic and crowds.

Correcting automotive flows and preventing private cars from entering the 28 May square can be the best solution. Creating a square for people, not for cars will reduce air pollution and positively impact the ecology. Making this large pedestrian space would allow the city to have a new vision of the pedestrian who should take back his value despite the machines. In order to achieve holistic urban plans incorporating transport infrastructure, public spaces must be designed taking into account the behavior of people in these spaces. Based on human behavior in the square there can be determined "attracting points", which can be given different functions. In order to reduce the congestion of people in one area, there can be added an alternative path like a pedestrian bridge which will diversify the view they see every day. This square should be a space that people don't just use as a transitional space to pass by but a space that tempts people to slow down or stop and experience the place. Thus by applying these methods several goals can be achieved: no crowds, no cars, no mess, instead we get a modern multifunctional city center, which would manage to recreate a transport hub and public space within the limits of one square.

Keywords: public space, transport hub, 28 May square

Adaptive Reuse of Industrial Areas on the Baku Waterfront

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ABSTRACT

The city of Baku has a long-lasting industrial history and is known as one of the birthplaces of the oil industry. It has experienced a thriving and expanding economy after its first oil boom that started in the 1870s. As the city is constantly evolving, the industrial spaces, which lost their former functions, have been relocated and abandoned. Some of these sites were rebuilt into residential and commercial premises. The other ones became brownfields waiting to be adjusted to the current urban fabric. These unoccupied spaces have a high potential for repurposing and reconstruction by transforming old industrial buildings and landscapes into a sustainable public space, and for highlighting the industrial heritage of the place. The research focuses on the waterfront industrial areas that are planned to be a part of the Baku Boulevard alongside the eastern part of the Baku Bay, and aims to explore the possibilities and advantages of producing public space by assigning new, appropriate and beneficial uses and functions to old industrial shells and sites.

There are many examples that prove that adaptive reuse of industrial landscapes and buildings can create new public spaces. These examples show diverse approaches towards incorporation of green spaces into the new urban structure depending on the conversion potential of the site and other factors. However, they all aim at showcasing the authenticity, integrity, sustainability, flexibility, memory, and legibility of the heritage. The Duisburg-Nord landscape park (Germany, 1991) demonstrates the approach of regeneration of historic industrial complexes to parks, and intends to recover the lost greenspaces. Former industrial buildings have been remodelled to host corporate and cultural events. Drawing from other examples such as Gemini Residence (Denmark, 2005), Gasometer (Austria, 2005), Stary Browar (Poland, 2003) and many more, there is a possibility of further development of residential, commercial and other functions by conversion of industrial shells into public places. The new functions must be integrated according to the scale of heritage assets respecting the memory of these places.

Conversion of urban industrial areas towards greenspaces brings both social and environmental benefits such as the provision with recreational zones, reduction of the ecological footprint, significant increase in the land value with low impact, densification of the urban structure, enhancing of the urban panorama and many others. Applications of such an approach in the waterfront industrial areas of Baku should create destinations and spaces that possess value and memory for local people, restore the local ecosystem and reduce waste production. Due to the adaptive reuse of the industrial heritage of Baku waterfront, the area can become an attractive destination for citizens by bringing together the functions of education, culture, history and recreation. Thus, an opportunity is created to introduce a "Petroleum Museum" building that should function as a social capacitor for this area. The museum is a modern building with the educational and cultural volumes. Its distinctiveness increases the

dominance of the form as the museum presents the history of the oil industry and creation of the industrial waterfront in Baku.

Keywords: Industrial heritage; Public spaces; Regeneration; Sustainability; Urban fabric

Urban Development Beyond the Economic Profit: Using SDGs to Create Values in Cities. The Case of Waterfront Industrial Areas of Baku (Azerbaijan)

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ABSTRACT

The city of Baku, being one of the first oil centres in the world, is pursuing the Urban Development along its Waterfront. The ongoing significant Urban Development along the industrial waterfront based on Oil Revenues and aims to create a new brand of the city which projects itself as a Global City.

Throughout the presentation, the aim is to present ongoing remediation projects on the industrial waterfronts of Baku and highlight their specificity. The current remediation projects of Baku are unidimensional, which focuses primarily on economic valuation and beautification. This obsolete and unidimensional process of Urban Remediation is not responding to the multi-challenges of Baku, which is facing the Environmental and Climate Change. In addition to the risks associated to coastal cities (irregularities of precipitation, cyclic changing of water level, etc.), the Baku's coastal zone urban infrastructure is also dealing with the particular risks related to the patterns of urban and industrial development on the Caspian Sea.

In the present context of challenges, the interdisciplinary targets of Sustainable Development Goals can help to develop multidimensional approach which includes Disaster Risk Reduction for Waterfront of Baku and Sustainability strategies for natural and industrial risks and identify the opportunities and historical knowledge. The vulnerable places – the industrial waterfront areas – of Baku should be remediate beyond the economic values in a sustainable and resilient manner for responding the multiple challenges, create new values (ecosystemic, environmental, social and economic) and tradeoffs / co-benefits (for the population, for the stakeholders, urban planners).

Keywords: city, sustainable, economic profit, urban, industrial areas

Issues in Urban Planning of Residential Building: in the Case of Baku Districts

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ABSTRACT

After the industrial revolution, when the role of agriculture decreased in society, and people no longer depended on land cultivation, they started to migrate to cities seeking opportunities. This changed the face of cities and they became not only the leading places for people to live and work but also magnets for economic, cultural and social activities. Now, cities attract not only a new generation of city dwellers, and a previously suburban generation that rediscovered the appeal of city living and urban lifestyle, but all businesses and institutional investors that are focusing exclusively on urban areas.

Despite the benefits of high urbanization, there are also problems of highly populated cities. As population growth and urbanization continue it needs to build new residential areas and it brings a number of challenges such as urban planning issues, air pollution, congestion, social issues, pressure on housing markets, transportation, etc.

Baku one of the oldest cities and the capital of Azerbaijan. It is the most industrialized city of the Caucasus which also faced industrialization starting from the end of the 19th century. During the last century, especially in USSR and in modern and postmodern period, Baku grew dramatically, and also face the same urbanization problems as other big cities in the world.

Therefore, in this article, I would like to discuss main issues in urban planning of residential buildings on the example of Baku's residential districts and give solutions which have been used to solve these problems in other big cities, which may help to change the current situation and make it a more livable place.

Keywords: urban planning. Baku city, architecture, urbanization, residential areas, urban sprawl

Taking Design Decisions Regarding Creating the Zoning Plan After Analysis and Evaluation Process in Landscape Planning: The Example of Selçuk District of Izmir Province

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ABSTRACT

Cities have the characteristic of being a landscape with the natural structures such as mountains and streams and cultural structures such as industry, settlement and transportation, passing through the historical process. Various studies are carried out to protect these structures, which are important sources of life and income for cities, and to transfer them to future generations. One of these studies is landscape planning. Landscape planning is a study in which urban and rural relations are established, natural structures are preserved and transferred to future generations, and cultural structures are planned to develop in a way that will cause minimal damage to the city. A healthy development plan can be created as a result of the analyzes and evaluations made during the work process in landscape planning. With this plan, the preservation, restoration, management and design decisions of natural and cultural structures in cities can be taken and implemented correctly.

In this study, the relationship between landscape planning and the zoning plan and design criteria was established in the example of Selçuk District of Izmir Province. It was aimed to put forward the need for landscape architects to take an active role in the creation of zoning plans and the need to create zoning plans in urban design projects.

Keywords: Landscape architecture, ArtLandscape planning, Zoning plans, Urban design

Coastal Ecosystem Services of Erdek Bay: Assessment of Natural Dynamics and Identity

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ABSTRACT

The seas provide socio-economic benefits to humanity by providing the most critical ecosystem services of our planet and growth in the fields of development, transportation, energy supply, health, tourism, especially food security. However, the increasing pressures on the seas and oceans, caused by human and climate change, put these important values and services at risk. Especially coastal areas have become attractive for economic and social and competing activities such as intensive urbanization, industry, transportation, tourism in the last century.

Coastal zones are very dynamic areas due to their special location at the interface between land and sea. Coastal regions take the pressures and effects accumulated in the river basin and also cause a certain pressure on the sea side. The common indicator within the scope of the coastal / coastal ecosystem and landscape assessment is the monitoring of "The effects of man-made structures on a shoreline along the shoreline" which is stated under the Ecological objectives (UNEP (DEPI) / MED IG 20/8) assessed within the scope of the "Mediterranean Action Plan (MAP) - Integrated Monitoring and Evaluation Program (IMAP)" according to the "Marine Environment and Coastal Zone of the Mediterranean Convention. The objective of Coastal / Coastal Ecosystem and Landscape Assessment (EH-08) is indicated as preservation of the natural dynamics of the coastal areas that is defined as the protection of coastal / coastal ecosystems and landscape.

Within the scope of this study, the Erdek Bay / Peninsula, where the change has been observed due to terrestrial pressures in the Marmara Sea, which is of international importance in terms of maritime transport, is selected as the pilot area.

The steps determined in the Pilot Area within the scope of the Coastal / Coastal Ecosystem and Landscape Assessment and ecological targets (UNEP (DEPI) / MED IG 20/8) which are briefly as follows:

- Determining (i) artificial structures, man-made structures that cause physical deterioration / degradation (ii), evaluating the physical changes produced by these areas and the pressures on the ecosystem,
- Mapping these areas, monitoring the change in our Pilot Areas with Remote Sensing Methods, monitoring the temporal change with Sentinel images. Sentinel images are one of the important open source remote sensing sources.

- Determining the Monitoring Method and strategy

Keywords: Ecosystem Services, Remote Sensing, Urban Planning

Evaluation of Perspectives on Ecosystem Services Provided From Urban Afforestation

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ABSTRACT

People meet their vital needs from natural resources, in other words, people's quality and safe of life depends entirely on the benefits they get from nature. All of the benefits people get from nature are generally defined as ecosystem services. The concept of ecosystem services refers to the goods, benefits and services that people provide from natural resources and systems. In one aspect, the importance of the ecosystem service to people can also be assessed by the importance people attach to these benefits. In this study, it is aimed to evaluate perceptions about ecosystem services provided from urban afforestation. With the study carried out using Q methodology, different perspectives and priorities regarding the benefits obtained from afforestation were determined. The results obtained are intended to guide urban afforestation studies and similar studies on the subject.

Keywords: Urban afforestation, perception, Q methodlolgy.

Participatory Public Space Design Urban Identity Relationship: A Case of İzmirDENİZ Project

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ABSTRACT

This study evaluates the place of the urban design and regeneration of urban public spaces, on the reinforcement of urban identity and sense of belonging to the city and thus on the quality of urban life. In the first part of the study, the concept of public space is discussed within the framework of the urban right. For this purpose, the way in which the concept of public space is handled in different paradigms in the literature has been discussed and the roles of such areas on the development of urban identity have been revealed. In the second part of the study, the İzmirDENİZ project of Izmir Metropolitan Municipality, which redefines the use of public space-spatial design relationship and realizes this as an urban policy, is examined. In the realization of the project and the creation of a public space aimed at effective use, it was evaluated how the policy-design-implementation stages were designed and which urban, spatial and social results were achieved. As a result, the role of the applied participatory planning method in reaching such results was revealed.

Keywords: public space, urban identity, participatory urban design

Architecture of Transport in Socialist Albania. Railway Stations as Iconic Public Buildings for the Image of The Socialist City

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ABSTRACT

Due to the specific historic and political developments of the 20th century, Albania presents a distinct reality within the Balkans and in the Eastern Europe's reality. The specific political shifts and conditions of the country are mirrored in its territorial and built reality.

The paper tends to envisage the development path of a country that goes from a rural reality to a rapid but centralized growth in terms of economy and spatial organization, for less than five decades. This is due to the immediate installation of the communist regime in the country, right after the Second World War.

The role of the railway system in the process of urbanization of the country was of an enormous importance. Many new cities were born, and many other existing settlements were radically transformed under the guidance of the communist paradigms. From typical post-ottoman structures or vernacular Mediterranean ones, they were turned into centers where propaganda took place and continuously modelled the "radiant" new communist society and the "new individual".

The main focus of the research tends to bring into light the relations between train stations as public building typologies and the image of the socialist city.

The research brings out many case studies, including valuable historic information concerning the political propaganda, its role in the design process, and significant hints about the role of architects and planners in these dynamics. On the other hand, a theoretic analysis in terms of aesthetics and language is done, in order to decode the image of the socialist building and of the socialist city.

The study offers an optic that provides to architects and researchers means for understanding a communist landscape, and more specifically the Albanian communist landscape. It is important to mention that the study contributes in the completion of the mosaic of the history of architecture and planning in the Eastern Bloc. Due to many unresolved questions, researchers are used to refer to it as a unified panorama, by neglecting the local particularities of countries. On the other hand, many sustainable answers concerning the future of the railway system in Albania and in the region are related to the communist past.

Keywords: Socialist city, Railway System, Albania, Train Stations, Iconic Building

Historical and Spatial Transformations of the Exhibition Spaces: From Modernist Whitewashed Walls to Black Screens

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ABSTRACT

This paper stems from a question, which is “Why the exhibition spaces are whitewashed?”. Triggered by this question, this paper aims to initiate a discussion on the historical and spatial transformations of exhibition spaces by presenting a review on exhibition design throughout the architectural history of art museums.

With this aim, this paper traces how and why the exhibition spaces’ white walls had emerged and where they have reached today.

The journey of this paper starts from the cabinet of curiosities, which are accepted as ancestors of museums. Then, it arrives to the first exhibition spaces in the 18 century. By following their transformation to the first public art museums in the 19th century, this paper reaches the modern white cubes in the 20th century. Finally, it ends with today’s exhibition spaces and the changes in their spatial experience under the restrictive climate of the Covid 19 pandemic.

Keywords: History of exhibition design, white cubes, changes in spatial experience

A Review of Art Museums' Publicness in the Architectural History

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ABSTRACT

This paper is about art museums' publicness, which is a hot topic not only on museums' agenda, but also on the agenda of the cities that follow culture-oriented development since the 1990s. Art museums that this paper is concentrated on, are one of those alternative forms of public spaces that have seen particularly with the rise of neoliberalism in the 1980s and have intensified during the 1990s. As being an alternative form of public spaces, these museums are publicly accessible but privately managed or owned spaces, which provide some other activities in addition to exhibition, such as buying various merchandise, socializing in cafes or restaurants, watching movies, or even attending concerts and fashion shows in these museums.

This study seeks how art museums' publicness in the context of architectural history has been changed since the opening of the Louvre to the public in 1793, and where this change has reached throughout the years. In order to answer this large question, what are these changes, how these changes have evolved, what are the nature, scope, explicit and implicit motivations of them are presented. Although the history of the art museums does not follow a linear process, this paper precedes in chronological order in parallel with their transformations throughout architectural history.

Keywords: museum publicness in the architectural history, public art museums, history of art museums.

Housing Approaches After The Global Crisis: The Pandemic and The House of The Future

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ABSTRACT

Throughout history, the idea of creating an ideal space for an ideal society always has been existed. The term of utopia, which has an important place in this intellectual environment, has described the spatial productions as a result of the future aspirations. Urban utopias, developed with a hope of achieving a better social life, have tried to find solutions to the social crises and it was developed on the basis of the idea of establishing a future-oriented life model. When the main topic is about expectation from the future, the concept of housing and living conditions have been the focus of these approaches in both theory and practice.

Today, there is a new global crisis experienced that changes the way of using space and predicts a different future by affecting daily life. At this point, the meaning of housing during the pandemic and the approaches about house of the future are a new matter of curiosity for society.

In this study, which was developed based upon the idea that utopias have similar concerns and visions, even in different circumstances and periods, the focus is on housing approaches developed as a result of today's conditions. In this context, it is aimed to find an answer to the question of whether the proposed new life models for housing in the current crisis environment can be considered as examples of contemporary utopia and to discuss the intellectual exercises presented in this period.

Keywords: housing design, utopia, pandemic and architecture, house of the future, Covid-19

Changing Meaning of Safety in Public Space under Pandemic Conditions

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ABSTRACT

There are contemporary studies on changing understanding of public space to get an overall frame for its variables in terms of planning and urban design. The definition of public space has been evolved and included not only streets, squares, parks or gathering places, but also indoor spaces like shopping malls and even private places. Recently, the definition and meaning of public space are redefined or re-examined again with changing daily routines and familiar usages in public space due to pandemic conditions.

The study mainly aims to evaluate one of the essential features of public space, safety. According to Maslow's hierarchy of needs (1954: 39-40), safety follows basic physiological needs like food and water for survive. There are varying components of safety that base on guarantee for daily rhythms within predictable, lawful, orderly and secure world, which means perceiving safe in a physically secured places like public spaces. The publicness of public space is directly related with feeling safe. In this context, safety is a key component of the making of public space with its actual and perceived forms. Lack of sense of safety is one of the major problems that prevent people from feeling comfortable in public space. Therefore, physical safety for social life with appropriate measures is a planning and urban design issue. However, recent occasions of pandemic force us socialising with keeping social distance and with some preventions. It looks like a dilemma on the freedom of public space with controlling social life and daily routines. On the other hand, pandemic conditions evoke us on the need of eligible and accessible public services like public transport to public spaces.

Especially, experiences on changing usage of public spaces like parks or squares with pandemic preventions open a new challenge for planners and urban designers. How public spaces would be planned or re-designed for future crisis, which will be not only pandemic but also other catastrophes? In defined context, the methodology of the paper bases on field investigations during pandemic preventions, such as restrictions for different age groups or fines related with social distance. The comparison of daily routines and usage patterns of varying social groups before, during and after pandemic preventions will guide us to develop planning and urban design strategies.

It now has different criteria for safety in public space. This includes physical criteria such as social distance, people walking nearby, the desire to stay in closed areas for a shorter time, people who do not wear masks and contact. On the other hand, the gains that the public sphere adds to the city and people must be protected. As a result, sense of safety should now be taken into account in the planning and design of the public space.

Keywords: Public Space, Safety, Sense of Safety, Perceived Safety, Pandemic

The Relationship Between Space-body-distance Affected by the Pandemic Process in Urban Design: Readings on Personal Space Theory

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ABSTRACT

Global warming manifested by the effect of human intervention in natural habitats; Many problems such as climate change, a decrease in biodiversity, bushfires, floods, and epidemics cause people to rethink life forms and spatial experiences in urban areas. As of 2020, the epidemic known as COVID-19 is one of the high mortality pandemics of recent times. After the emergence of COVID-19, social distance rules are applied as one of the primary mitigation strategies that force individuals to stay at home and avoid close contact with others in order to limit disease and death rates and prevent transmission of the pandemic. Since the day Covid-19 started, the importance of distance/space theories between people has increased and studies have been made to make them applicable in practice.

The theory is a controversial explanation of how you interpret phenomena in the world, how we understand experiences, how we discover patterns, and how you produce meanings. Based on the controversial nature of the theory concept, the terms space, body and distance, which gained importance with the Covid-19 pandemic, were associated with the personal space theory, which is one of the urban design discipline theories. Personal Space Theory covers the studies on how people use the physical space surrounding their bodies. The basis of the Personal Space Theory is that the desire to determine the physical distance of a person from others is a protective and innate need.

In this context, it should be considered how the changing space-body-distance relationship with the pandemic process will relate to design within "new normals". The readings on how the Personal Space Theory can be included in the design and how it can change the protection distances of people are discussed. In order to support this, the way the designers perceive the pandemic process was taken as a basis, and the designers' understanding of personal space during the pandemic process was evaluated through online discussions. Although design is accepted as a selection process for how to develop relationships, it is seen that developing a theoretical framework in the selection of the space-body-distance relationship is a rather problematic area.

Keywords: Urban design, space and body, social and physical distance, Personal Space Theory

Urban Mobility on the COVID-19 Pandemic: The Case Study of Istanbul

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ABSTRACT

The new coronavirus which is known as COVID-19 (SARS-CoV-2) virus has affected urban mobility exogenously in 2020 in all over the world. After the first case in Turkey was confirmed by the Minister of Health on March 11, 2020; the Turkish Government has taken measures to decrease the spread of the virus. The prohibitions and recommendations of the government have been concentrated on March 16th to May 31st, 2020 due to the increasing cases. The measures consist of nationwide school and university closure, general and age specific curfews and flexible work arrangements. Therefore, this research aims to investigate how public transport users' behaviour in Istanbul has changed with measures and after the measures were loosened on June 1st, 2020 as part of the normalization process. The methodology of this research is shaped by qualitative and quantitative data. The statistical data was collected from the Istanbul Metropolitan Municipality Statistic Office and the user behaviour questionnaires were conducted online. Based on the statistical data, every public transport mode has lost its users over 50% between March 11th and May 31st. The user behaviour questionnaires put forward the reasons behind the decrease of public transport users related to the pandemic. It stands out that the measures taken by the government and personal protective measures are not accepted as safe to use the vehicles. Thus, based on the participants' answers, the public transport users have preferred alternative commuting option such as walking, using a taxi or car sharing depends on their commuting distances instead of using the public transport due to the existing cases. In addition to these, even though transportation vehicles are disinfected and use of masks became mandatory, public transport is less preferred than before the pandemic. Overall, according to the existing research, public transport users tend to continue their routines. However, this research shows that the unexpected and external factor, COVID-19 has changed the public transport users' routines since the March 11th.

Keywords: Public transport, mobility, COVID-19, İstanbul

The Expectations About the Future of Architecture and Landscape Architecture Under the Effects of Covid-19 Pandemic

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ABSTRACT

This study aims to determine the expectations of students about the future of architecture and landscape architecture and their working areas such as architectural buildings and open and green spaces, under the impacts of the Covid-19 Pandemic. Additionally, differences between students' mutual expectations about the future of the other professionals will be investigated and compared. This research is designed as a quasi-experimental study to achieve the goals. The universe of the survey is determined as the last two class students of Atatürk University Departments of Architecture and Landscape Architecture.

The future of the architecture and landscape architecture fields, which is the study focus, has gained a new dimension under the Covid-19 Pandemic sway. It has affected many regions of the world for about one year. Pandemic has affected people and societies as well as the space and habits of space usage. For this reason, in the 21st century's information society in which the changes in space and space usage habits have already been discussed, discussions have gained a new dimension as the impact of Pandemic. This subject inevitably is on the agenda of architects as actors of the built environment production, and landscape architects as actors of the open and green areas production in the built environment and the natural environment management. "What will happen in the future under the influence of the Covid-19 pandemic?" stands as a wondered subject. From this point of view, the present study focuses on the expected future of Architecture and Landscape Architecture from the perspective of senior students of the Departments of Architecture and Landscape Architecture. Therefore, the senior students of two departments at Atatürk University are determined as the research's universe. Seventy samples are selected within the 270 student population. A Likert-type questionnaire is applied to 70 students, 35 from each departments' students. After the data collection process in October 2020, collected quantitative data is analyzed through simple and complex relationship analysis techniques.

This study is determined and compared; (1) Positive or negative expectations of the respondents mainly about the future of Architecture and Landscape Architecture under the effects of Covid-19. (2) The relationship of respondents' expectations with their socio-demographical characteristics and their departments. (3) Differences between respondents' group expectations about the future of Architecture and Landscape Architecture and the other variables under the effect of Covid-19. (4) Expectations of the Landscape Architecture students about the future of Architecture and expectations of the Architecture students about the future of Landscape Architecture.

Keywords: Architecture, Landscape Architecture, Covid-19 Pandemic, Future of the Professions

“Evolving” Urban Experience(s) via Locative Media: When Far Becomes Near

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ABSTRACT

The use of locative media and smart technology has started to present new forms of everyday activities as they become a substantial and essential element of ordinary everyday practices. As far becomes near, the more the ambiguity between public and private space distinction increases, as well as the more public and private lives and activities mingle into each other. Thus new approaches and definitions of space and place are required in the digitalizing world. The aim of this study is to question what kind of an effect the locative media has on the transformation of the everyday lives, some part of which used to occur in the public space - especially before the COVID-19 pandemia broke out.

This study focused on locative media applications (LMA) most popular in AppStore and Google Play and pioneers regarding their functional categories (Whatsapp, Instagram, Foursquare/Swarm, Google Maps, Getir ve Bitaksi) and tries to understand what effect they have in changing urban experiences. Within the context of the research, semi-structured interviews have been conducted with 25 participants various in gender, age, education and income level, occupational status and locative media usage habits. Participants were asked how often and how they use the previously mentioned applications, which mode (public/private) they set up their personal accounts, what kind of content they share, whether they tag location, and if so whether they do this simultaneously or consecutively, and whether they have security and safety concerns while using locative media. Considering each application corresponds to distinct urban activities, additional questions were designed related to the nature and function of each application to sense how participants' habits and physical and perceptual experiences in the city get affected. Interviews were recorded with the permission of the participants and recordings were deciphered for further analysis. By pointing out the commonalities and differences in participant's experiences, main findings of the study were reported.

After the interviews with the users, company executives of previously-mentioned applications were interviewed. The findings from participant interviews were shared to be evaluated and discussed over. As companies receive feedback from a larger user pool, they have also been asked how they develop their applications taking into consideration the constantly changing and transforming needs of users, what kind of parameters they attend in updating the previous versions.

This study seeks to reveal how newly advancing urban everyday practices start to replace common patterns in the urban public space, to grasp how the brand-new urbanity alters the way locative media users perceive, experience and learn the city. Most of the participants stated that LMA made their life easier yet admit that LMA to introduce new habits that they are not always satisfied and accustomed

with. The participants stated that the inter-communication becoming virtual and untraditional and unusual relationships both with counter-people as well as the city affect social life negatively. They affirmed because of LMA they get less aware of the city. It is clear that for the future of planning, this newly developing relation types with the city changes the notion of public space and thus the ambiguous distinction between public and private demand new approaches. Planning of the future will require urban planners and urban governors to take into account the expeditious transforming power of locative media both in the shape of the cities of today and in the experiences about cities, as “far becomes near”.

Keywords: Everyday life, locative media, perception, experience

Spatial Configuration Analysis of Five Metropolitan Cities: Berlin, Mexico City, Singapore, Toronto and Vienna

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ABSTRACT

Fractal theory has been at the forefront of recent discussions on urban morphology and urban geography. The theory that depends on the fractal object's irregularity, scale-dependence and self-similarity is one of the contemporary approaches to understand the spatial changes in cities. For urban studies, its basic criterion is the fractal dimension which shows the degree of irregularity and fragmentation. Fractal dimension is a way to measure the morphological transformation (like sprawling, the degree of fragmentation of the urban landscape, compactness etc.) of the cities throughout the years. It is an instrument to understand the urban growth process of the city. Besides, fractal dimension creates a clear way to compare the morphology of different cities[1],[2].

Based on these notions, the study aims to read the fractal dimension analysis, which is a new approach in the measurement of urban macroforms shaped as the spatial reflection of urban growth, through different world cities. The exploration of the concepts is based on the application in randomly selected five metropolitan cities from different continents; Berlin, Mexico City, Singapore, Toronto and Vienna.

The frame of this study basically consists of two parts. First, it is briefly reviewed that what fractal theory is and how it is compatible with urban areas. Second, the changes in the built-up area of these five metropolitan cities in 1990, 2000, 2013 are observed by calculating fractal dimension values. Lastly, these observations and urban development histories of these cities are discussed in the light of fractal analysis.

For the present study, fractal analysis was applied using the digital images of these five cities. The main tool is software called "Fractalyse", which has been developed especially to measure the fractality of cities. Fractal dimension values were calculated with box counting method on the built-up area visuals of the years 1990, 2000 and 2013 of each city. For each city, changes in population, spatial growth, projects that affect the urban macroform and the history of urban development are examined and the change in fractal dimension values are interpreted. After making this brief review for each city, possible reasons for the differences in fractal dimension values in cities are compared.

According to studies held in the 1990s, in cities with homogeneous, compact and uniform urban growth such as American or Australian cities, fractal dimensions are near to 2; although fractal

dimension value varies for European cities, it is between 1 and 2 but close to 1 for cities that dispersedly grow from the city enter through the peripheries[1],[3],[4]. As a result of the study, it is obvious that Berlin, Mexico City, Singapore, Toronto and Vienna show exceptional cases for inferences based on previous studies. The reasons for this situation are tried to be explained for each city based on the urban development of the city.

[1] Batty and Longley, 1994

[2] Frankhauser, 1998

[3] Batty and Longley 1987a, 1987b

[4] Frankhauser, 1994

Keywords: fractal dimension, urban morphology, spatial growth, metropolitan cities

Evaluating Visual Diversity and Complexity in Residential Areas with Different Land Values via Information Entropy: A New Methodology to Objectively Measure Environmental Aesthetics

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ABSTRACT

Visual diversity and complexity are significant components in environmental design as they influence aesthetic evaluations. Promoting visual diversity, avoiding monotony, avoiding chaos is necessary to create aesthetically satisfying, preferable physical environments. However, the guideline to achieve high visual diversity and moderate complexity is unclear and subjective. "Information entropy" is proposed as an objective measure of complexity and diversity. This study aims to propose a new methodology to measure entropy scores in two types of urban scenery. One represents low market value residential settlement and the other represents high market land value residential settlement. After calculating the entropy values for given images, the extent to which these entropy scores correlate with people's perception is also analyzed. Forty-seven participants evaluated the perceived complexity and diversity in general and 166 participants evaluated the diversity and complexity considering the variation in images for 6 variables; 1) building form, 2) building height, 3) facade material, 4) building color, 5) building typology, and 6) landuse. Results show correlation for some variables but not for others. The limitations of this methodology are discussed as well as the applied value in urban design.

Keywords: visual diversity, complexity, environmental aesthetics

Urban Security Planning: Models for Building Threat-Free Environments with Spatial Design Tools

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ABSTRACT

From the early ages to the present day, cities and living environments demanded the need for common and uninterrupted safety. The city not as a collective form of built environment, but also as a base for safety and technological defense systems varied from border security to protection of urban cores and crowded places like squares and public buildings. These modes of varying systems of peace keeping and threat-free zoning builds up with digital and physical defense systems ubiquitously encompassing our lives. Furthermore, basic expectations of livelihood for cities and countries encompass; population dynamics in the periods of migration and outmigration, urban dwelling through deliberate action and cooperation for daily basic activities, ideological / religious / cultural communities, tensions between middle age relic feudal modes and modern societies. Such motivations and/or conflicts create the expectation of people not be harmed by any kind of threat.

In this context, this paper will give findings from three sets of inquiry for building the foundations of a "Urban Security Planning Model". In the first part of this paper; risks posed by war, asymmetrical war and terrorism in a context of safety / security expectation and motivation and security in space and safety strategies for terrorism resistant cities and safety and risk management theories will be discussed. In the second part; discussions on the use of space and urban geography on different sides and terrorist group attacks in regional or civil war will be given. In the third part, urban and rural cases for PKK terrorist attacks in the last 35 years, ASALA Terrorist attacks between 1975-1985 and a prominent international case of Afghanistan-Kabul case which is underpinned as a case of urban life under the threat of war, occupation and terrorist groups will be evaluated.

In the concluding chapter, uses of space and geography for the synthesis on reducing the risks of security service provisions, discussions of risk management in the contexts of security, war, terror and defense activities, and model representations of spatial design tools and prospects for urban planning and design discipline will be speculated.

Keywords: urban security, war, asymmetrical war, terrorism, spatial design

The Analyzing of the Construction Systems of the Field Hospital Applications around the World

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ABSTRACT

Defining the Problem: There have been many epidemic diseases and natural disasters throughout the history of humanity. One of the epidemic diseases is Covid-19 epidemic that affects recent past and near future significantly. This unpredictable situation affects the society in terms of socio-cultural, economical, health as well as in the fields of architecture and engineering. During the time when the epidemic cannot be prevented, places where infected people can be treated in isolation from the society are needed. Field hospitals that produced with different construction systems have built in many countries as a solution for this problem. **Purpose of the Study:** In this research, it is aimed to examine the construction systems of the field hospitals built around the world within the period of the Covid-19 epidemic. In this context, the construction systems of field hospitals that built world's various countries and Turkey were analyzed. Based on this analysis, there have been made inferences that why countries may have preferred this construction systems. **Methodology of the Study:** In this framework, the use of qualitative research methods has been emphasized. Documents were examined and literature was searched. The basic criteria that affect the determination of the construction system have been determined. Based on these criteria, analysis has been made and field hospitals have been evaluated. **Findings:** In line with the decisions taken in many countries, it is seen that different construction systems are applied. The differences in the own resources and technological infrastructure of the countries explain the diversity of the construction systems that used. Structural systems of field hospitals have been analyzed through applied sample structures. The field hospital established in Wuhan, China, is formed by placing the containers on top of each other and side by side. In the application in İstanbul, Turkey, is produced the mild steel is made of two single-storey hospital. In Central Park, America, and as well as Cremona, Italy, hospital is built with a pneumatic system. In Sao Paulo, Brazil, hospital is constructed with mild steel and membranes. In Mulhouse, France, hospital is built with steel frame and membrane coating. Likewise in Rafah, Gaza, and in Gothenburg, Sweden, hospital is built with steel frame and membrane system. In Russia, is constructed the mild steel is made of single-storey hospital. **Result of the Study:** In theory, by emphasizing the positive and negative aspects of construction systems, field hospital applications in different countries were examined and inferences were made as a result of the analysis. Inferences regarding this analysis are presented in the conclusion section of the paper.

Keywords: Field Hospitals, Covid-19, Construction System Applications, Pandemic Disease

Reading Globalization on Health Tourism Buildings

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ABSTRACT

With the reorganization of production as a result of the restructuring of the economy and communication network with globalization and the addition of new knowledge-based branches in the service sector, differentiations has started in health services. As a result of this differentiation, the health facilities, which are a part of the service sector, have also been included in the production network, leading to the emergence of the concept of health tourism. The aim of this study is to read health tourism through the phenomenon of globalization and to examine the development of health buildings. Beyond being international, globalization refers to a situation where production and consumption are planned on a world scale and under the control of supranational organizations. This situation shows that globalization is based on economy. However, globalization refers to a situation far beyond the economy. A new international culture has emerged associated with the movement of capital and has taken place within the concept of globalism. Developments in the information network in the new world brought an active and intense interaction. The free market economy and developments in the information network unite cultures by removing the concept of time and space. Reflections of this situation show itself in the field of architecture. Architecture is transforming into a universal structure beyond a regional phenomenon as a result of both the possibilities of its location and different cultural exchanges. With globalization, space, which is the center of production, has begun to be considered as an object produced and consumed. Developments in production and consumption have led to spatial changes. Environmental problems resulting from industrialization and intensive urbanization and heavy working conditions resulting from globalization affect health negatively. A mobility has begun to regain their health in people. This situation has revealed the concept of health tourism over time. Throughout history, people have made efforts to maintain their mental, physical and social well-being, in other words, their state of health. Starting from primitive times, they took actions to treat their illnesses. Health tourism is the case of associating the mobility that started with the aim of restoring health and protecting health with tourism elements. Considering the historical evolution of globalization, the development of health tourism has progressed in relation to the development of globalization. The understanding of health covering all segments of the society became widespread after the World War II. Along with globalization, services that were mainly being by the public sector, started to be provided by the private sector. This situation also manifests itself in the field of health. The fact that health tourism does not have a specific period but covers the whole year is identified with the continuity of production. Considering this continuity and the dimensions of globalization, health tourism will become the main element of the tourism sector in the future. The traces of globalization on health tourism can also be seen in health tourism buildings. The buildings created for this purpose are mixed-function, which includes tourism activities as well as treatment units. In addition, these buildings are the products of a global culture far from locality. These buildings will change over time depending on the developments in global culture.

Keywords: Globalization, health tourism, architecture

In Search of Lost Paradise

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ABSTRACT

Nature, vital force, the opposite of the artificial or the nonexistent, the power to perpetuate life... This vital force, which is the source of existence for everything and which abides in everything, has been portrayed in many different ways throughout history. With the fear of the unknown which existence infused in him, humankind accepted nature, which has the power to create itself and which is both at the source and is the source of everything, as the creator almighty. Humankind has equated nature sometimes with mythology, sometimes with creation myths, sometimes with formulas, and sometimes with profit sheets. Naturally, differences in meaning regarding nature will shed light on different periods.

This study explores how nature is perceived in the collective memory, from myths to religions, from the Scientific Revolution to the Ecological Crisis we are experiencing today. In the light of the different shapes nature has taken during different eras, and which were represented through sexual identity, the meanings attributed to nature will be investigated. These investigations focus on the sexual differences in social structures and on the concept of nature constructed by human history along a background melody that belongs to the history of politics, science, and technology.

Keywords: nature, Scientific Revolution, the Ecological Crisis, myths

Pay Forward with Infographics

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ABSTRACT

Since industrial revolution, design has an catastrophic effect on world's ecosystem due to creation of new materials of permanent garbage pollute the air and the earth. Today sustainability, energy security, climate change are the challenging issues that concern every business, government and every designer on earth. Towards the loss of the world's ecological balance, uncontrolled population growth, rapid growth of the parallel economy, natural reduction of resources, over consumption, ecosystem degradation and biodiversity led graphic designers to reconsider not only economic but also social, ecological, and ethical consequences. Graphic design is sophisticated discipline that creates visual content to communicate messages while serving consumption and effecting the habits of the society.

One of the rapid way of communication is the data visualization is information graphics for informative purposes. Information design uses complex data to transform into understandable visual expressions such as universally interpretable symbols, graphics. This research aims to examine the role and effects of infographics as a visual representation of information and communication method on sustainable actions. Within this scope Enviromental NGO's: Heal, The Nature Conservancy, World Wild Life (WWF), Greenpeace, Mapping Ocean Wealth, Oceana's etc. infographics have been examined on waste materials, biodiversity of oceans, renewable energy, climate change and environmental catastrophes within the framework of literature review.

Keywords: infographics, sustainability, green graphic design, sustainable design, renewable energy.

An Optimisation Study of Spatial Ad-Hoc Encounters with Quad-Tree Algorithms in the Context of Gldani Microrayons

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ABSTRACT

Soviet houses in Tbilisi were built low-budget, high-rise and brutalist in a collective mindset under the influence of socialism. Situated at the northern periphery of the city, the Gldani microrayons are representative to the post-Soviet living in Tbilisi. The spatial development of Gldani microrayons offers interesting evolution of informal architecture along with suburbs living conditions, which have been subject to radical changes since the fall of the Soviets. After the establishment of Georgia in 1991, informal spaces occurred due to the lack of state support for maintenance and management of the houses. This study looks at the potential for the creation of a novel building layout that is correspondent with the arbitrary intervention of Gldani residents in the space syntax of Soviet housing blocks. First of all, the intervention motivation of the users is sought by analyzing Gldani's existing typologies. The function, adjacency and the type of adjacency for each room constitutes computable architectural compositions. In this regard, we applied a quad-tree (q-tree) algorithm to optimise spatial ad-hoc encounters. In Gldani, designing an optimisation for housing typologies that can be adaptive to the users' needs reveals a series of novel spatial possibilities. In this work, it has been found suitable to use q-tree algorithm to simulate spatial optimisation for ad-hoc encounters.

The q-tree algorithm is based on dividing a two-dimensional space into four equal parts. The partitioning automatically occurs when the number of objects to be kept for each node is exceeded. In this case, the tree node is split once more and the spatial objects are distributed to these nodes. These nodes are then customised with contextual parameters. The parameterisation helps for mapping new spatial distributions to intersections and encounters between original building typologies and user interventions in Gldani.

This paper proposes future integration to the Gldani housing phenomenon by developing a vision for ad-hoc encounters which are decoded from Gldani blocks. An ad-hoc encounter area in a residence can interfere with both the spatial syntax and the physical integrity of the space. According to the French historian Fernand Braudel, in French residences the maids had to pass through the main bedroom to reach other rooms, and this connection built the intimate space by isolating the bedroom. Connecting with such theoretical connotations, the paper discusses the spatial productions of new coincidences that may arise when the users' choices are compulsory ad-hoc optional, over the mixed use case.

In recent year, the informal architecture in Gldani is restricted by state laws due mainly to safety concerns, but also the complexity that it involves for the creation and maintenance of new spaces. In this study, a design-research approach is deployed along with an axial view which is obtained in Gldani by reconstructing the historical housing information produced with the existence of existing living spaces and the usage information by its users. Therefore, the paper emphasizes the plurality and diversity of the urban life in which individuals can transform and modify space within a participatory housing phenomenon.

Keywords: Informal architecture, Soviet architecture, quad-tree algorithm, ad-hoc encounter, space optimization

Investigation of Urban Scale Projects Developed Using Parametric Methods

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ABSTRACT

Urban pattern is formed by the effect of many factors such as building blocks, parcels, defined construction areas, setback distance limitations and the rules of historical buildings. Traditional and parametric design methods are used in the development process of urban scale projects.

In the traditional design method, urban projects are developed manually or with CAD software. Manual drawing method depends on the hand skill of the designer. The designer is expected to have a high knowledge of mathematics and geometry in order to design in different forms and geometries. In the use of CAD software in urban scale project design, all project elements must be drawn one by one, and all documents must be updated in the project while editing. Urban-scale projects include many sub-disciplines. The larger the scale, the harder it is to update the project and the more complicated the interactions are between project participants. Thus, some of the limiting factors for projects developed using traditional methods are form, time, and error risk. This led to the search for novel design methods in the development of urban projects.

With developing technology and software, parametric design tools have started to be used in urban scale projects. The parametric design environment is based on calculations and algorithms. While there is a visual thinking and drawing development approach in the traditional design method, the parametric design method requires numerical and algorithmic thinking. The parametric design approach allows the use of different forms, ease of making changes and the development of different design alternatives.

In this study, the development process of urban design methods will be examined and the transition process to parametric design method will be detailed. In this context; Differences between traditional urban design method and parametric design method will be compared and evaluated. The role of the designer in the parametric method and the development process in urban design will be explained. Three projects designed using parametric methods will be examined.

Keywords: Urban Design Methods, Parametric Design

User-centered Design in Furniture Layout: Reviewing the Potential of Mobile Augmented Reality Technologies

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ABSTRACT

Augmented Reality is examined by many academic studies for its diverse uses in the field of architecture. However, its use for furniture layout is understudied since it is a relatively new area for these technologies. Today, AR technologies can superimpose virtual data onto real world objects with high precision. With the rise of mobile computing, they will become more accessible for everyone in the near future. This study aims to fill the research gap on mobile AR applications in architectural furniture layout by focusing on their potential to strengthen user's participation in the design process. Building on the concept of "user-centered design", the study traces how these applications can ensure an efficient exchange of ideas between the client and the designer and improve the decision-making processes by exploring many design alternatives quickly. By presenting a literature review on the methods of choosing and placing furniture in architectural design, offering a brief description for the concept of "user-centered design" and finally providing the definition, classification, development, history and usage areas of mobile AR technologies; the study discusses how mobile AR technologies can improve practices in architectural furniture layout.

Keywords: augmented reality, furniture layout, user-centered design, mobile AR

Re-Formation of Waste Plastics through Digital Manufacturing: An architectural point of view

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ABSTRACT

Plastics are a vital component of thousands of products we rely upon every day. On the other hand, plastic wastes are major causes of environmental pollution, and for reducing the excessive use and then the harmful effects of plastics, several campaigns, policies, actions, agreements, etc. have been initiated. From this respect, studies on recycling and reusing plastic waste are significant. It is possible to say that, like in other designs the use of waste plastic in the architectural field with and without changing its physical and chemical properties can lead to promising developments. Main concepts like “sustainability in architecture” that shapes policies and practices by seeking fewer footprints in the ecosystem and “digital technologies” that force all design disciplines re-think each phase from initial design to end product have become prominent and promising. Architecture is being transformed through digital tools; digital fabrication methods, techniques, and processes are affecting the use of material, way of constructing, and craftsmanship so-called —the tectonics of architecture. This paper argues that using waste plastics in architecture has the potentials to explore new forms and structures. For this purpose, a literature survey has conducted to reveal the good practices performed in this context. Selected examples have been discussed according to parameters defined as sustainability, economy, an expedition of production, possibility to assemble into various forms, and usability. Results show that some projects have been actualized to use waste plastics through different manufacturing methods, accomplished the parameters mentioned above. This demonstrates the feasibility of using waste plastics in the context of architecture.

Keywords: waste plastic, reuse-reshape, architectural tectonics, digital manufacturing, and sustainability

Future Planning Approach: Low Carbon Cities and Urban Tree Management

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ABSTRACT

About half of the world's population live in cities. This ratio is expected to reach 60% by 2030, and by 2050 two thirds of the total population will live in cities. It is predicted that the amount of urban area will increase in parallel with the increase in the urban population, even more than the population increase. It is estimated that the area of urban areas will increase by 1.2 million m² between the years 2000-2030. Even in developed country cities where population growth is slow, urban area is expected to increase 2.5 times between 2005 and 2030, although urban density decreases.

According to UN-Habitat's "Cities and Climate Change" Report, the share of cities in greenhouse gas emission caused by human activities is approximately 40% - 70% in calculations based on production; In the calculations based on consumption, it was determined to be approximately 60% - 70%. On the other hand, the change in the land cover area due to the increase in the amount of urban area changes the heat balance between the atmosphere and the surface. While the urban vegetation surface decreases, the increase in the built environment ratio increases the heat storage capacity of the surface, exacerbating the effect of climate change and increasing the effect of the urban heat island.

In the fight against climate change and the urban heat island effect, new urban development strategies are being developed that will help cities to evolve into a more sustainable model in the future, which is more holistic to the city system. Low carbon urban development is one of these strategies. Accordingly, many cities around the world try to adapt their development policy to a low carbon economy in order to reduce energy consumption and CO₂ emissions and aim to create a low-carbon city. Accordingly, increasing the awareness of energy conservation in cities, developing compact and flexible urban spatial structure, using environmentally friendly transportation plans, creating green living environments and creating a green city system, protecting existing carbon sink resources and ecosystems, and creating new ones come to the fore.

The planting of landscape units in low-carbon urban development strategy is a very important issue in that the plants change according to the location, time and plant-specific characteristics. For this reason, the choice of tree species used in planting may differ according to the properties such as carbon storage level, type, density, and size of the trees.

In this context, the study aims to reveal the basic principles of the characteristics of the tree species to be used in low-carbon cities that are resistant to urban heat island effects and in urban planning actions and strategies within the scope of future sustainability.

Keywords: Low carbon urban, Tree management

Planning and Design for Energy Efficient City: A Meta-Theoretic Analysis

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ABSTRACT

Due to the increasing energy consumption and environmental problems in the world, various policies and measures are adopted to reduce energy consumption in cities. In this study, design principles and criteria for energy efficient urban planning and design are investigated. The research is designed to conduct a meta-theoretical analysis about the empirical studies in the literature. In this framework 51 papers about energy efficient urban planning and design issue were found. The principles, criteria and measures depicted from the empirical studies were classified in four categories: urban macroform, land use, urban design and urban transport.

It is found that there is a consensus about the following principles and criteria among the studies reviewed: undispersed urban form, walkable city, reduced dependency to motorized transportation, integrated transportation system, mixed land use rather than zoning, poly-centered city, limited building heights and proper design of building layout to allow sunlight exposure, optimal density, proper design of landscape. Researchers offer some design principles and measures in relation with geography and scale of the city: landscape design in relation to wind and sunshine characteristics, layout design with reference to natural ventilation, building order in relation to the climate conditions.

Although there has been an increasing number of studies dealing with the energy efficient city, those studies do not suggest specific and universal standards about urban form. Most of the studies found that the compact urban macroform is energy efficient, on the contrary, some of them argue that compact form may not be as effective as expected in reducing energy costs. Researchers suggest an integrated approach on coordinating land use, urban design and urban form. The majority of studies found similar results about the contribution of mixed land use in reducing energy consumption. Researchers added that mixed urban functions and increasing rates of density reduce auto dependency in urban transportation and hence energy consumption. In almost all studies; there is a consensus on designing walkable urban environments, enhancement of public transport and cycling.

Studies focusing on building layout design come up with contradictory results, because some of them measure the contribution of advanced technology while the rest give emphasis to traditional design methods. The former one found that detached and high-rise building layout is more efficient, while the latter one offered that low-rise buildings, facades with more openings, and solar orientation in layout design is more effective in achieving energy efficiency.

Although the energy efficient city planning and urban design approaches are introduced to the literature in the last decades, the principles and the design proposals do not differ from the traditional approaches in principle, since both approaches aim to reduce construction and operating costs by proposing climate-sensitive solutions.

What makes the recent studies about energy-efficient urban planning and design is that the introduced methods and techniques provide measuring energy consumption and assessing the impact of measures and design solutions. On the other hand, it suggests the adoption of advanced technologies in air conditioning, transportation and energy production

Keywords: energy efficient city, urban planning, urban design, urban form, design principles, planning literature

An Evaluation on Low Cost and Energy Efficient Housing Design in Tropical Climates

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ABSTRACT

One of the most basic human needs can be called as proper housing. Today, there are millions of people who cannot meet this basic requirement. It is quite important to give efforts on the design and production of low-cost, comfortable, environmentally friendly and sustainable houses for providing shelter for these people. Especially, there are countries with limited energy supplies in tropical regions, the population increases rapidly and thus the need for housing increases. Yet, it can be easily seen that climatic conditions are highly ignored in newly built homes. It is possible to claim that "low cost" and "energy efficient" housing design, in which the economic conditions of the local people are taken into account, is a solution to overcome these problems. In this context, this study examines good practices selected from low-cost and energy-efficient housing designs in tropical regions, and it is aimed to determine a road map for new designs in the region. The parameters like, land use, sun protection, natural ventilation, sustainable building material, local workmanship, renewable energy use, rainwater harvesting and natural lighting features were studied and evaluated in detail. The evaluation of the data obtained from the examples shows that low-cost housing design is possible for low-income groups, which is comfortable, compatible with climate data, and integrates sustainable design principles. Finally, a roadmap is proposed for low cost, energy efficient and comfortable building design with spatial characteristics suitable for the living culture of the local people with local materials and local workmanship.

Keywords: Energy efficient architectural design, Sustainability, Tropical climate, Guinea, Low cost housing

Effect of Hospital Buildings on Sustainable City

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ABSTRACT

Comfortable living, which is the result of industrialization and technology, causes an increase in energy consumption and a decrease in natural resources. While creating our built environment, providing our basic needs such as shelter, heating and light by using resources efficiently constitutes the prerequisite for a healthy life. In recent years, this approach has been adopted further with studies aimed at reducing the effects of the built environment on human health and the natural environment. This situation has transformed environmentally sensitive policies into a sustainable city phenomenon that evaluates the city and the buildings that make up the components of the city as a whole. This concept highlights environmentally friendly buildings in the architectural discipline. Public buildings have an active role in shaping cities with their dimensions and functions. Considering public buildings as environmentally friendly/ green buildings in a sustainable city setting will help the emergence of urbanization that will meet the needs of future generations. In this context, the aim of this study is to examine the location of hospital buildings, the energy they need, and their effects on the sustainable structure of the city with the way they provide uninterrupted service. The rapid population growth, the environmental problems experienced and the depletion of resources bring the concept of being considered from a different perspective and the concept of sustainability as a result. Nowadays, the concept of sustainability is matched with ecological, green and environmentally friendly buildings. Sustainable buildings emerge from the selection of the land, considering the environmental effects, the design process for the needs, the construction phase, the materials used, energy consumption, water consumption, transportation and waste control as a whole. While in the 90's, sustainable architectural approaches were a result of the sensitivity of architects and users about the environment, after the 90's it became a necessity with the increase of environmental problems and the emergence of green building criteria with the policies developed against them. In architecture, Vitruvius's function-aesthetics-durability approach has turned into function-aesthetics-durability-sustainability in this century. While constructing the built environment, resource planning has also started. Considering the effects of public buildings on the city in particular, the impact of resource use in these buildings on the morphology of the city in terms of sustainability is considerably greater. Accordingly, today, besides the formal effects of public buildings on urban morphology, their impact on sustainability is also evaluated. Health facilities built in our country in recent years can be given as an example. Health facilities are buildings that have a great impact on urban morphology, both with their location and their function. In addition to being the focal point in shaping the city, it is one of the buildings with the highest resource consumption as a result of having a structure that works 24/7. As a result of this, sustainability has become a sought criterion in addition to the function that determines the design of health facilities today. Studies are carried out by taking into consideration the sustainability approach, from the beginning of the design process of health facilities to the construction and after-use process. Studies must meet certain standards in order to be evaluated. Certification systems are used for this.

The sustainability criteria in these systems will turn into determining factors in the design of hospital buildings over time, and will enable the emergence of sustainable hospitals and contribute to the sustainable city phenomenon.

Keywords: Sustainability, Architecture, Hospital Buildings

Self - Assembling Cities as an Ecological Utopia

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ABSTRACT

What will be the role of architecture in solving environmental problems and how architects will contribute to the solution is a controversial subject. One of the main reasons why the subject is controversial is that, according to many theorists, ecological architecture is still in childhood. Ecological utopias come into prominence at this point with their visionary and courageous approach to ecological architecture by revealing environmentally compatible

alternative models. When these ecological utopias are examined carefully, it is seen that many designers inspired from the forms and functioning of nature. therefore ecological utopias often came up with designs arguing that nature's production models could be applied to architecture. This study aims to discuss the ecological potentials and possible problematic

of self – assembling cities by examining several utopian approaches systematically. Although many examples seems science-fiction, study accepts as a hypothesis that these approaches give important clues about the architecture of the future.

Keywords: self-assembling cities, ecological utopia, ecological architecture

Ancient Habits of Planning System in Turkey: a Removal Proposal

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ABSTRACT

The purpose of the paper is to pragmatically rethink about the planning regulations and practice in Turkey by critically questioning ancient habits which survived so far despite contemporary planning approaches. Paper is organized around the dictum which rules that context matters in social science. Planning systems, approaches and tools are expected to modify and re-modify themselves in order to propose effective spatial arrangement decisions and practices. However, Turkish planning system is overloaded with many out-dated and disrupting rules, land uses, interventions and customs. In fact, the overall claim of planning to predict future possibilities and organize places accordingly requires a system which is equipped appropriately.

Methodologically, research is designed as archival analysis and history research - according to Yin's (2003) relevant situations for different research strategies - where the dead past is investigated over official archives. Main question is taken from the four Flyvbjergian (2001) phronetic research questions and adapted to the research subject as follows: "where are we going with these planning habits?" A systematic review of planning codes, regulations and practices back from the pre-modern period through current 21st century in Turkey is presented. It is argued that there are critical elements embedded in the laws, rules and regulations in planning system, and some persistent elements settled in the behavior of planning practitioners and authorities that are not appropriate for a sound planning system; not only in terms of mid-range future but also for the actual contemporary spatial problems. Paper proposes that a lengthy categorical list of dysfunctional habits (in the forms of professional behavior, technical instruments, land use types, and political interventions) should either be abandoned, modified or adapted.

Keywords: Planning system, habits, contemporary planning approaches

The Impacts of the Covid-19 Pandemic on Public Space: Preliminary Observations From England

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ABSTRACT

The impact of Covid-19 on the built environment has become the subject of research in many disciplines. Main areas of research are outlined by several authors such as: environmental quality, socio-economic impacts, management and governance, transportation and urban design (Sharifi and Khavarian-Garmsir, 2020), use of public space, changing behaviour and perceptions of the users, design of public space, and the issues of inequities and exclusions (Honey-Roses et al., 2020), design and disease transmission, street design and furniture, shared facilities and services, flexibility and transformation (Megahed and Ghoneim (2020).

As well as impacting on economy, society, health and politics, Covid-19 pandemic significantly affected personal lives, lifestyles and the way we relate to cities and use public spaces. Amongst them is the increased reliance on digital technologies and the virtual space which as Megahed and Ghoneim (2020) argue will reduce the need for the physical space and will have significant impacts on architecture, urban planning theory and practice.

On the other hand there are others who argue that public space is more important than before in the time of pandemic (Gehl, 2020; Mehta 2020). Mehta (2020) discusses that Covid-19 restrictions have created a new use of public space and the need for social solidarity. Contrary to the debates that physical space is being replaced by virtual space, Mehta's (2020) observations from America introduce a new dimension that needs to be questioned in different locations. Mehta (2020) shows that people use in-between spaces for socialising with the neighbours; for example driveways and entrances of their houses. Children use the streets as playgrounds since there is less traffic during the lockdown days. Furthermore, we have seen the extended use of public space such as balconies, as places of social interaction with the neighbours in many Mediterranean countries or the rooftops as the places for social gatherings of neighbours. In England, during the lockdown, people gathered in their gardens, at the front entrances or in the driveways, or at the end of a cul-de-sac for different social activities, such as street meets, bbq parties, sing-alongs, picnics, or just to cheer National Health Service. Saner (2020) also introduces different use of public space during the lockdown and suggests that neighbours are connected to each other and use the nearby public spaces, immediate spaces around the houses more than before.

While there is much to discuss about Covid-19's impact on the built environment, the focus of this paper is how the related public health concerned governmental-restrictions have affected the use of public space. Since the beginning of the pandemic, The English government has introduced precautionary measures to protect the public health. Amongst them, physical distancing and lockdown of the population are the significant ones which directly have impacted the use of different types of

indoor and outdoor public spaces. At this point, the question is to what extent the physical distancing strategies and the fear of getting infected change the way we use physical space and whether they have generated new spatial patterns, configurations of uses and new possibilities for social interaction. The study aims document the different use of public space in England through the analysis of news, reports and the direct observation of daily life. The findings are based on the preliminary observations and should be further researched in depth through a more rigorous methodology.

Keywords: Public space, social interaction, Covid-19 restrictions, physical distancing, England

Transformation of Hospital Areas in the world after Covid-19 Pandemy

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ABSTRACT

Covid-19 is an airborne infectious disease that affects the entire world. Since this disaster profoundly affects human health, community psychology and the country's economy, interest in related hospital and ward design has increased around the world in order to prevent the spread of covid-19, and improve the treatment process. While some design strategies focus on improving existing building against pandemic conditions, some others try to overcome the disaster by planning new health care extension regions with the use of modular systems. In this article, the proposed modular hospital ideas for pandemic process will be investigated and their similarities and differences will be discussed in tabular format. First, Emergency Modular Hospital designed by MMW architects, Container Ships Coronavirus Hospitals designed by Weston Williamson and partners, Shipping Containers designed by Italian Architects Carlo Ratti and Italo Rota, STAAT Mod Units designed by HGA, Mobile Modular Hospital designed by Golden Hour MMH, Losberger Emergency Modular Hospital System designed by Evolve Emergency, and Modular Hospital Ward Prototype designed by Miniwiz will be examined according to their layout strategies, building features, ventilation systems, air borne filter usage and suitability of these design ideas to future adaptations will be compared. Since covid-19 is not believed to be the final contagious health threat for communities of the world, to examine the available adaptations and derive further planning and design strategies for treatment and well-being areas is crucial to study on. Adaptations will also be analyzed in the context of our country and region to improve the mechanical and design coherence of applications prepared for pandemic diseases.

Keywords: Covid-19, hospital, modular design, disaster, transformation of space

Potential Risks of Urban Transformation Policies and Project Implementations on Disaster Prevention and Sustainable Urban Development

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ABSTRACT

Sustainability and disaster risk terms were highlighted both in Hyogo Framework for Action 2005-2015's strategic goal that relate to 'the integration of disaster risk reduction into sustainable development policies and planning', in paragraphs 186-189 under the sub section 'disaster risk reduction' of the Rio+20 outcome 'The future we want'. As in global scale, these terms have started to be used in Turkish disaster risk management policies as well. Disaster Risk Management (DRM) and Sustainable Development (SD) will improve risk reduction and building resilience.

The main objective of this study is to realise the importance of "disasters and sustainability" in determining the process of urban transformation areas and construction period. Most of the urban transformation projects were done mainly to regulate urban rent. There were many tools to do this but by new transformation laws, disaster risk used as a tool to lessen expropriation and property ownership problems.

Essential questions which going to be answered during this study are; what is the level of disaster risk for the major urban areas and urban structures in Turkey? Are existing / domestic disaster legislations sufficient to reduce the risk? What are the circumstances that are not sufficient? Whether the existing risky structures which have been made illegally have been brought to amendment due to the abandonment of disaster by means of the abolished conversion laws? How transformation of urban areas reduces the risk of urban disaster? To what extent is the sustainability principle considered in the urban transformation projects? In the context of these questions and their answers, the physical and social problems of the city will be discussed through implemented cases.

Methodology; Urban transformation project practices in different cities in Turkey will be evaluated within the framework of current legislation, implementing regulations and general rules on urban transformation and will be evaluated by support of the literature on theoretical basis of disaster risk reduction and sustainability. Legal contradictions and institutional authority confusions will be clarified by legal texts. Court files of Chamber of City Planners and Architects, observational experiences and judicial decisions is going to be used.

Findings; A very important part of the urban transformation areas are close to the city centres where the land exchange value is high. Urban transformation practices were hardly ever done in areas where the urban rent is low but disaster risk is high. Tough not very detailed. There was adequate legislation in the issues of disaster risk reduction and urban transformation in Turkey. Although the existing of disaster related legislation, contradictory structures have been realized. Deficiencies in supervision and construction practices in the

urban areas of the last fifty years, constitute the present risky building stock. Recently updated and new published legislation, which makes it easier to forcibly confiscate, brings forgiveness to illegally constructed buildings, facilitates the sharing of rents but, insufficient in terms of risk reduction and creation of sustainable living spaces.

Keywords: Urban transformation, Disasters, Sustainability, Urban rent.

Who is Living Next Door? The Perception and Attitude Towards Each other: Turkish Citizens and Syrian Refugees in Konak, İzmir

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ABSTRACT

This study is a part of a conjoint research funded by Turkish Scientific and Research Council 1003 Prioritized Fields and R&D Projects Programme; entitled “A New Perspective on the Processes of Adaptation and Integration of Urban Refugees: A Social Innovation Experiment Aimed at Building Inclusive Cities”, coded 117K826 (main project and two sub projects coded 117K805 and 117K829). The conjoint study is conducted in three cities -İstanbul, Hatay and İzmir- offering different characteristics as host cities in Turkey with a vast number of emigrants.

In this paper, we will discuss findings of İzmir case. In this paper, we aim to discover and discuss the general perception and attitudes of “the new neighbors” through statistical findings that the questionnaires and interviews provide. We discuss living together experiences, attitude and perception of urban refugees and Turkish citizens living in the same neighborhood. Our findings briefly show that both groups are urban poor and have similar roots, native language, and cultural habits. In some cases, they are relatives by affinity. Space which two groups most come together or encounter is neighborhood or street. However, the attitude towards each other does not reflect their similarities. Main reasons lying behind this perception and attitude are labor market relations, attitude of the government.

The method of the study encompasses ethnographic methods. We conducted questionnaires -conducted with Turkish citizens-, in-depth interviews -conducted with urban refugees- that live in the same neighborhood in İzmir, Konak County. The surveys and interviews were held within the same neighborhoods that the Syrian refugees were densely situated. Therefore, 10 neighborhoods were chosen as the research site in Konak County according to 2017 statistics of Directorate General of Migration Management. Further, we collected data through interviews with government officers, mukhtars and NGO representatives. We documented a focus group meeting with participation of 36 participants from 24 different local institutions, international institutions, NGOs and local government officers.

Among these data sources, a total sum of 231 questionnaires with Turkish citizens and 60 in-depth interviews with emigrants of mostly Syrian Refugee and Asylum Seekers were conducted with a method of geographical weighted sampling. The questionnaires consisted of households and workplaces, while the in-depth interviews are carried out with the household members. The household questionnaire consisted of eleven sections of total 52 questions which are General Profile, Living Conditions and spatial preferences, Labor market, Safety, perception and values, rights and protection, social rights, education and health, daily life and integration including living together and public

exclusion, migration and reactions to migration policies, and participation preferences to attend a living together experience. In-depth interviews were consisting of six main thematic frames such as General Profile, Migration Story, Labor Market, Urban Relations, Access to public services and preferences to participate to Living Lab.

Keywords: Migration, Syrian Refugees, Perception and Attitude, Neighborhoods of Migrant Populations, İzmir

Landscape Fragmentation Caused by Urban Transportation Network; Sample of İzmir Bayraklı - Adnan Menderes Airport Route

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ABSTRACT

Transportation network is a vital need of modern cities. However, building comprehensive highway networks has some adverse consequences such as fragmentation of natural landscapes and reduction of ecosystem services both in quantity and quality. Reduction of the ecosystem services of the natural landscapes in a city causes inconveniences in whole city ecosystem, which is the main reason of environmental problems caused by human activities. İzmir is the third large populated city of Turkey with a rich range of natural and cultural landscape features. As in many parts of the world, city centers are in high demand among people to work, live or migrate from rural areas. İzmir is one of the most immigrant receiving cities which means the urbanization will even get more rapid year by year. Therefore, this study aims to investigate the landscape fragmentation caused by transportation network in İzmir, sampling one of the highways that have the heaviest traffic in city, the highway between Bayraklı district to İzmir Adnan Menderes airport. For this purpose, the fragmentation rate of natural landscapes of the sample area was calculated and compared within the years of 1984 and 2020 via Geographical Information system and Arcgis software.

According to the results of this study, generally, the fragmentation rate has started to increase since 2005, while the fragmentation of urban green areas is at a very low rate in 1984, it has started to increase with the increase of highway numbers. Additionally, the increase of transportation construction causes an increase in carbon rate and unhealthy environmental conditions both in rural and urban areas day by day. At the final part of the study a solution landscape plan for the case area was proposed aiming to reduce the fragmentation and carbon rate.

Keywords: Landscape fragmentation, low carbon solution, GIS,İzmir.

City Square Design: The Case of Çanakkale Republic Square

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ABSTRACT

The most common usage area of urban life since history is urban open spaces. City squares also are among the most effectively used urban open spaces. They reflect the urban identity due to their characteristic of being unique to the city they are located in. The squares, which are the focus of social activities, carry the history of the city to the place. The squares, which have undergone less change despite the changes and developments of the cities, have continued their existence for a long time as an important public and urban element that reflects and determines the culture and identity of that city. "Çanakkale Cumhuriyet Square" also has these features. Cumhuriyet Square, which is the focal point in the center of Çanakkale and has witnessed important events in the city's history, was chosen as the subject of study due to its qualities. The area should also be reconsidered and designed in accordance with today's needs in terms of landscape architecture. In the study, it was opened to make a future design proposal by making an environmental analysis of the square.

In the study, Cumhuriyet Square was examined and the occupancy gap analysis, environmental analysis, transportation analysis, function analysis, green area analysis of the area were made. Thus, all the components that make up the area (physical environment, reinforcements, plant elements, etc.) and their compatibility with each other were evaluated. As a result of the evaluation, it had been deemed necessary to reconsider the field in terms of functionality and aesthetics. As a result of the study, design suggestions has been made that will contribute to the implementation of the public and private sector in the field.

Keywords: Çanakkale, Cumhuriyet Square, Urban spatial, Square design, Landscape design

Comparison of Current and Future Spatial Characteristics of Cities; The Case of Malatya Yeşilyurt District

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ABSTRACT

Populations in the cities, migration from rural areas to cities dramatically increase in the last decades. In 2050 almost seventy percent of the global population may live in cities.

Urbanization and changing the earth's surface for urban use have made a serious impact on the global use of space and the environment. These changes revealed the necessity of sustainable city models. Intelligibility and accessibility values, which are one of the most important features of sustainable cities, can be increased by planning the cities in a programmed and systematic manner. Malatya is one of the places where these population changes are experienced extremely. In this paper, we reviewed how will change spatial features in the future in Malatya - Yeşilyurt district. The space-syntax method used to determine the spatial features. The existed map used to analyze the current situation of religion. To analyze the future situation, last settlement plan map was used. Axial maps created which will be used as a base for other analysis. These axial maps analyzed by DepthmapX software and created integrity maps that form the basis of movement. Then, basing this integrity maps intelligibility (INCO: Correlation of Between Integration and Connectivity) and accessibility (INCH: Correlation of Between Integration and Choice) values obtained. By comparing these obtained values, as a result, the contribution of the development plan to the spatial characteristics of the city was discussed.

Keywords: Accessibility, Intelligibility, Malatya, Space syntax

Public Parks as Health Infrastructures: Branch Brook Park

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ABSTRACT

It was 1870, when Olmsted illustrated his social theory in his speech of Public Parks and the Enlargement of the Towns. The smog-shrouded and overcrowded environment of 19th century's urban districts was struggling with unhealthy conditions, when nature has become to be considered as a redeemer of industrialized societies. As a landscape architect, Fredric Law Olmsted acknowledges park systems as an infrastructure to gather all different social classes in a healthy environment. His vision was creation of vast recreational and cultural facilities in American cities would improve American society and so would bring about a harmony to regain the sanity. This study unearths the improvement of public health by sanitation measures. How were parks designed as health infrastructures? How could it be possible to provide provisions of urban facilities to people in a democratic way? Following these questions, the study focuses on Fredric Law Olmsted's very rare known park design of Branch Brook Park, in NJ, in USA. The study envisions to make connections to ill-conditioned cities of 19th century and contemporary condition of urban life under Covid-19.

Keywords: parks, health infrastructures, Fredric Law Olmsted

Planning Principles in Making New Cities in the 21th Century

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ABSTRACT

The population of metropolitan cities in different geographies of the world is increasing rapidly. One of the solutions to reduce this problem is to develop new cities. In this study, the new cities designed and built in the last decades are examined. Although many new city projects are developed and announced by governments only four of them (Putrajaya in Malaysia, Songdo and Sejong City in South Korea, Nanhui in China) are partially or fully implemented.

In the first stage of this research, the factors behind the planning of these cities, geographical location selection, city scales and functions are examined. In this sense the following objectives and concepts are depicted from project reports:

Adopting new technologies and value added from emerging economies,
Representing the urban image of the new political system,
Adopting to the climate change and mitigating disasters,
Creating an environmental sensitive city,
Generating a new district integrated to a new transport node,
Healthy city, smart city, green city, energy efficient city.

In the second stage, planning and design principles identified for those four cities are investigated. Population, built up area, density, functions, transport modes, building layout, and urban form of planned cities are compared to find similarities and differences. New cities in the last decades are established for social, economic, technological, climatic and environmental reasons. Sustainability, adaptation to climate change, environmental sensitivity, reduction of carbon emissions, use of renewable energy, livability and symbolism, principles and objectives have been adopted in the planning and design of cities. On the other hand, large capital investment is necessary to achieve the planned development, that is if sufficient financial capital is not found, a planned city cannot be built. This fact is the main reason of delay in project implementation for various city projects in the world. It is observed that built up area provides a high quality of living conditions for dwellers and workers for planned new cities. Therefore, quality of space is a significant factor for attracting business investment and white collar workers. Research findings reveal that, new city development, principally motivated around green and smart city concepts, is regarded as an effective strategy in attracting international and domestic direct investments.

Keywords: new cities, sustainable cities, urban planning, urban design, planning principles

'Yedikule Bostans': A Serious Game For Cultural Heritage

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ABSTRACT

Serious games term refers to the use of games for other purposes besides entertainment (De Freitas and Liarokapis, 2011). These games can be used to engage the user in learning a specific topic or developing skills for various professions including landscape architecture and architecture (Örnek and Seçkin, 2016). In the historical landscape topic, The Fort Ross Virtual Warehouse is a serious game that aims to transmit the cultural heritage of the region by immersing the player in a cultural virtual environment to promote the player's consciousness of the providing data (Lercari et al., 2015). A classic example of urban planning discipline is SimCity which allows players to design and develop a settlement by managing the city dynamics in terms of energy, waste, and economy (Poplin, 2011).

According to UNESCO (2020), preserving cultural landscape which refers to the output of the interaction between human beings and the natural environment is prominent due to the ability of it in terms of maintaining the biological diversity of that region and the enhancement of its natural value. The cultural landscape approach also demonstrates the sustainable methods which should be used in a particular district according to its specifications (UNESCO, 2020). By considering the educational potentials of the serious games, this study proposes an educational game about the cultural heritage, the importance and ways of its maintenance. The case study of this article is the İstanbul's market gardens named as '*Bostan*' in Turkish (Turan, 2015), existing plenty of them in İstanbul remained since ancient times surviving despite the difficulties of urbanization. This research is focusing on the *Yedikule Bostanları* associated with the *Kara Surları* which are registered in the list of historic areas of İstanbul in UNESCO and referred to as Theodosian Walls. According to Turan (2015), these gardens with their 1500 year history, which were nine in the *Yedikule* area with 52 farmers working on it, are currently in the danger of perishing. Due to their tangled relation with the *Kara Surları*, the culture of gardening continuing there, and their place in the people's memory, these gardens that are integrated with the everyday life of citizens for centuries can be referred to as İstanbul's Cultural Landscape and worth being protected and paid attention to.

This research presents a serious game, which is designed with an immersive text-based narrative to increase public awareness and inform the users in terms of farming culture, inherited from previous generations (Turan, 2015), with a non-linear story letting the player discover the proper methods by frequently playing as its initial outcome. Additionally, it imposes the more holistic attitude of protecting and reviving the surviving urban green infrastructure and urban productive landscape as Kart Aktaş and Yıldız Dönmez (2018) claim they were since the Ottoman Empire. In this research, Twine software (2020) was used to develop the game, which is an open-source platform enabling us to approach our goals throughout a charming storytelling journey without requiring any coding skills.

Keywords: Serious games, Cultural heritage, Yedikule Bostanları.

Digitalization of the Physical During the Pandemic: Physical Model Education in Schools of Architecture and Planning

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ABSTRACT

In addition to the plan, section, elevation, and perspective drawings, three-dimensional physical models that present the spatial qualities of the final product are needed in any design-oriented project proposal. The sketches and technical drawings may be insufficient to submit creative ideas about the project. It is also necessary to provide an idea of what the final product will look like before it is implemented. The reality of the designed project can be understood by making a scale model of how it will look when it is built. By making a physical model, information about the materials used in the design, color, size, and form of the project or product is presented visually and in the third dimension. The physical model courses in the departments of school of architecture and planning aim to introduce model making tools and materials, and to provide the students with the ability to use the model as a design tool and turn design ideas and projects into models by thinking in three dimensions. For this reason, every student at the departments of architecture and planning should experience making models. A physical model can be picked up, rotated around, and practiced over and over. The students should improve the model making techniques at different scales and arrange the hand-brain coordination by touching and forming the material, creating solid-void models, and experiencing design challenges on space. It is remarkable to play with models, model making materials and tools, and to arrange apertures and proportions in creative design education. The aim of this study, rather than emphasizing the teaching of how to make a physical model, is to investigate why physical model making is still needed in the digitized models' world and how it can be carried out remotely with students during a pandemic process. The research inquiries about why the physical model training is necessary besides how it is explained and taught in a digital environment. It also questions the digitalized demonstration of the physical model-making techniques in practice. The methodology is formulated on the evaluation of the author's own experience from offering digitalized courses on physical model making in the departments of school of architecture and planning during the pandemic. It also aims to review the literature on the digitalization and remote learning of physical model-making education. The conclusion argues for a reinterpretation of a face to face physical modeling education in the digital platform. Following the reorganization of when and where the course was taken, one-to-one practice in the modeling workshop and the learning practice in which they experienced from the group work and collaboration with their classmates altered. The instructor guided the students from the screen, displayed the model-making phases and helped them choose proper materials according to the type and purpose of the model. Moreover, their physical environment transformed into a model-making place to attend the class instead of studying in a studio.

Keywords: Physical model making, education in pandemic, digitalization of education, distance education, architecture

Extraterrestrial Urbanism: Vision, Progress, and Future Implications for City Planning and Architecture

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ABSTRACT

The blue sky, space, stars have always been an inquiry of wonder and/or fear in the process and development of human civilization. With the effort to make sense of what people are curious about and cannot know, in time astrology has led to astrophysics and contemporary space engineering and design technologies. On the other hand, cities and other built forms of environments have been witnessed and experienced only on earth surface and limited its development to physical parameters of our world. Parallel to the data processing and technical engineering solutions of the disciplines engaged in habitat planning and design, the satellites that compile visual and physical data following the given tasks in space, and after 2000, autonomous or controlled laboratory robots began to make the unknown known. And humanity is moving from a one-planet civilization to the construction of a multi-planet horizon.

In this context, this paper will examine the fields of extraterrestrial urbanism and space architecture through 4 study topics.

In the first part, the International Space Station, which is the first and only volume adapted to human life in terms of space architecture, will be examined in terms of research technologies and architecture. Second, a general profile of the space missions country in the last century will be examined and prospective developments in terms of geography and space science disciplines will be evaluated. Third, the studies of visions and ideas developed for environments that scripted the design and construction of research bases and cities on the Moon and Mars will be examined. Within the scope of this review, the expansions in terms of planning, architecture and design will be discussed. Fourth, the establishment and development of the Turkish Space Agency, suggestions for the development of satellite observations and data processing for Turkey's space research and technology development will be discussed.

In the conclusion part of the paper, opinions and suggestions on what design academies can do on extraterrestrial urbanism and space architecture, which is fastly emerging as a new generation of inquiry for spatial design disciplines will be speculated.

Keywords: Extraterrestrial Urbanization, Space Architecture, Mars Missions, Turkish Space Agency

Gamification As a Motivation For Park Usage

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ABSTRACT

Game is a very old phenomenon and one of the factors that shape society and culture. In his book *Homo Ludens*, Johan Huizinga (1949) states that the game is actually older than the culture and games are indispensable for societies. According to Comenius (1592-1671), “*the game is a very important learning tool in the development of the child*” (Koçyiğit, Tuğluk & Kök, 2007). In fact, terms such as gaming have been in our lives for a long time but Nick Pelling was defined “gamification” as a term in 2002. Gamification refers to adding game elements into non-game environments to engage and increase motivation for people to achieve their goals. This approach is a huge trend in various areas globally such as education, marketing, tourism and etc. The rising trend of gamification lays on increasing interaction levels by using game dynamics for non-game cases. For that reason, gamification is used when creating a new product or marketing a product such as corporations using for engagement and participation (Kavaliova et al., 2016). Gamification is also a form of learning; it is only slightly different from classical forms of learning. According to Ibáñez et al. (2014), employing gamification into learning activities dramatically improve the performance of test scores and the learning outcomes for undergraduate computer science students.

This research suggests using gamification to increase park visits and improve the experience of park users during their visits by employing the analog and digital methods. For that purpose, this research reviews the literature for case studies and applications on using gamification for engagement purposes in landscape architecture and related disciplines in terms of narration, role-playing, treasure hunting or geo-caching, immersion, loyalty, and awarding systems. As, this research aims to present a gamification concept by employing social media, which takes a critical role on engagement of public.

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Keywords: Gamification, urban parks, user engagement.