

# FORUM A+P

INTERDISCIPLINARY JOURNAL OF ARCHITECTURE AND BUILT ENVIRONMENT  
Health and Wellbeing in the Post-Pandemic City VOLUME 24/JANUARY 2022





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**Printed by:** Pegi

**ISSN: 2227-7994**

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*Forum A+P: Interdisciplinary Journal of Architecture and Built Environment*, published by POLIS University since 2010, is the only scientific and cultural journal in the Albanian-speaking countries in the fields of architecture and urban planning. This journal is recognized by the Ministry of Education and Science, the Academic Degrees Evaluation Committee and has an ISSN international registration code.

**Vol.24/January 2022**

## HEALTH AND WELLBEING IN THE POST PANDEMIC CITY

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# Introduction from the Editors

## Reflection on Health & Wellbeing in the Post-Pandemic / Post-Crisis City

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The 24<sup>th</sup> Issue of *Forum A+P* aims at exploring the relationship between the urban environment and the recent COVID-19 pandemic under different perspectives and approaches. Considering the breadth of the discourse on health and well-being for a post-Pandemic city, and an effort to understand the relevance of those issues to the design process through both a theoretical or practice-based approach, we could not exempt ourselves, also in regard to the reader, from framing our exploration from a precisely theoretical point of view and manifesting our critical position within this vast field of interest. It is not news any longer that during the year 2020-22, millions of people around the world had to quarantine, self-isolate, and apply physical and social distancing<sup>1</sup>. Our lives, our family and work have drastically shifted into what many are increasingly calling the “new normal”<sup>2</sup>. People work, study, shop and even get health advice remotely. Yet not everyone enjoys suitable spaces for conducting virtual lives. While much of the public attention has been given to medical experts and government guidelines; *de facto*, it is clear that the way we have designed and planned our homes and cities so far has been shaping how we were facing the pandemic at an individual and social level.

The web reports and scholar articles on the role of architecture and urban design and planning on the post-pandemic life and city are thriving daily. Indeed, there are so many fundamental questions to raise on the societal response in the post-pandemic city: some relate to the nature of (post-) pandemic/crisis city transformations, while some others rely more on policies and top-down action that should be undertaken – locally and globally – to lead the design process and circulate meaningful information. Nevertheless, architects, planners and city experts seem excluded by the pool of experts outlining solutions for the current global crisis<sup>3</sup>. Yet, this is an historical moment where their contribution in proposing a new agenda for the future condition of our urban environments is much needed. Furthermore, whether we refer to the macro or the micro-scale, architects have been trying to collect and give meaning to the magmatic amount of data in which we have been constantly

submerged during the last two years, making them not less important in the international debate than other kind of experts.

Indeed, what this new issue wants to explore are the boundaries of the discipline that are always shifting in relation to the changing relationships with the external environmental conditions and the questions that arise in new circumstances.

Such questions become even more relevant when the society is imposed with measures of physical distancing that will eventually impose long-standing social distance; when new perceptions on sanitation and hygiene are emerging; when uncertainty over the strength of the public health system is just increasing; and the welfare of the society seems so depended on vaccination. In short, while citizens adjust to government guidelines claimed as short-term and of questionable ethics, we – as professionals – can only imagine long-term effects for travel and urban mobility, urban safety, environment, leisure and sports, and social interaction. There is no place for speculation as this pandemic evolves into a common routine of human life or remains an isolated event that calls to our collective consciousness for making cities sustainable. Whatever the case, the city needs rethinking and the urban space needs reinvention, using contemporary elements that be used as proper design material at different scales to address heterogeneous issues, with the capacity to lead the design process and circulate meaningful information in the urban environment.

At the same time, it is needed to be taken into account that, in the last few months, we have been hearing of the “new normal”<sup>4</sup>, which could become the “actual normal”. Obviously, people are concerned of the consequences that are hard to predict but possible to shape. Indeed the “new or actual normal” has been spoken of well ahead. Visionaries and scientists, artists and city makers have regularly theorized on the transformative shifts of the society, change of ideologies, or systems. *David Harvey* has long challenged the weaknesses of the “market economy”. Scholars of the ‘urban commons’ as an ideology, also criticize “neoliberalism” and privatization reforms. While authors of polycentric governance, from

Ostroms<sup>5</sup> to Sheila Foster and Christian Iaione, have also proposed and continue investigating cases of a new mode of governance, which can mitigate inefficiencies of the public and private. In this quest for the new normal, do we have to go straight towards what we may now perceive as obvious scenarios? Or, as predicted in architecture by Bruno Zevi, following the philosophy of Baudrillard<sup>6</sup> (1976), we should refuse any reassuring solutions and transform crises into “new values”, as elements and the reflection of a new possible world and society (Weber, 1920<sup>7</sup>). On a negative perception, reshaping human interactions we were used to might end up changing the concept of the relationship and of the sense of physicality, such as touch, engagement, etc. Therefore, new forms of engagement at the physical level would define new post-pandemic proximities (Hall, 1966<sup>8</sup>). In a more positive perspective, the current condition could be an invitation to thinking beyond “the stable state” or “the stable normal”. This idea persists since the seventies through many scholars, including Donald Schön. He wrote a book in 1973, “Beyond the Stable State”<sup>9</sup>, where he argues that we live in a time of loss of stability of the state, which encompasses occupations, interactions, religions, organizations, and value systems that have been already eroded. His words remind us now, at this very moment, about the need to learn from the current condition and adapt through learning to a system that is continuously under transformation. It also means we have to become resilient, therefore adapt to face and embrace the future, while being robust to shock (Mäler, 2008; Armitage, 2008; Perrings, 2006)<sup>10</sup>. The concept of resilience beyond the stability applies also to all of us - designers, individuals, organizations, governments, and communities. Indeed, it seems that the pandemic has only accelerated the urge to adopt this vision for resilience, which has long been there in the complex discourse on climate change. However, the organizations and individuals’ mindset to change has been rather slow, mostly resting on some form of dynamic conservatism. The pandemic has quick effects and requires rather quick responses, and, therefore, better capacities and abilities to adapt, appropriate or react quickly to the evolving dynamics. The mind-set of the organizations and institutions must delve into continuous transformation producing change at micro- and macro-scale, and at city level. Obviously, this will require flexibility embedded in everything that designers, architects, planners, and city experts do! Hence, the notion of adaptation – and of “exaptation” (Gould, Vrba, 1982<sup>11</sup>) and the idea of appropriation, is a possible contingent in dynamic situations.

Nevertheless, discussing in regard to this continuous need for changes, what about the poor neighborhoods, slums, informally developed areas, and the excluded ones? Can designers, architects, and city planners play a role in there too, and how does the pandemic affect these communities and settlements, differently than the highly planned environments? According to Robb Butler, equality and equity are two different things: we must remove barriers and talk about pandemic-conscious designs and architectures, and we need more dialogue between public health and health practitioners, social scientists, behav-

ioral scientists, and urban planners and designers. As we might recall, at the start of the pandemic, the focus was not on the informal settlements of Latin America, Africa, Asia, or even Eastern Europe. By late spring 2021, there were more and more reports from Rio, Cairo, Mumbai, (including Tirana in our local context), speaking of informal settlements too. Still, there is lack of information about the spread of virus in these “organically developed” living settlements, and there are no records on the numbers of infected people or loss of life. Poor access to such neighborhoods and the poor access of this portion of

<sup>1</sup>See World Health Organisation ([https://www.who.int/health-topics/coronavirus#tab=tab\\_1](https://www.who.int/health-topics/coronavirus#tab=tab_1)) and the following sites <https://ourworldindata.org/policy-responses-covid> and (2) <https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker> on information and data on the countries policy and social response towards COVID-19 pandemic. The US Cigna survey found that 79 percent of Generation Z and 71 percent of millennials are lonely versus 50 percent of boomers. The data is definitely worrying compared to the average 47 percent of the 2018 and with the fact that the increasing factor was found equally divided among different age groups. (source: “Social Isolation and Health,” Health Affairs Health Policy Brief, June 22, 2020. DOI: 10.1377/hpb20200622.253235)

<sup>2</sup>See: <https://www.who.int/westernpacific/news/commentaries/detail-hq/from-the-new-normal-to-a-new-future-a-sustainable-response-to-covid-19>.

<sup>3</sup>See <https://www.artribune.com/professionisti-e-professionisti/politica-pubblica-amministrazione/2020/04/ricostruzione-task-force-fase-2-coronavirus/>.

<sup>4</sup>Using a literary gimmick, the term was mutated from Robert A. Heinlein’s novel *The Moon Is a Harsh Mistress*, with a character telling lunar colonists: «[...] I hope you will comply willingly; it will speed the day when I can bow out and life can get back to normal — a new normal, free of the Authority, free of guards, free of troops stationed on us, free of passports and searches and arbitrary arrests». Heinlein, R.A. (1966) *The Moon Is a Harsh Mistress*, New York: G. P. Putnam’s Sons.

<sup>5</sup>Vincent Ostrom wrote on polycentric governance in his seminal work Ostrom, V. (1972). *Polycentricity*. [Online] APSA Available at: <http://hdl.handle.net/10535/3763> [Accessed 9 May 2018]. See also: Ostrom, V., Tiebout, C.M. & Warren, R. (1961). *The organization of government in metropolitan areas: Theoretical Inquiry*. *The American Political Science Review*, 55(4), pp.831-42. Elinor Ostrom investigated the concept of polycentricity in her fundamental research of the commons. See also Foster, S. R. and Iaione, C. (2016). *The City as a Commons*. *Yale Law and Policy Review*, 34 (2), pp. 280-349; and Iaione, C. (2016). *The CO-City: Sharing, Collaborating, Cooperating, and Commoning in the City*. *American Journal of Economics and Sociology*, 75 (2), pp. 415-455. DOI: 10.1111/ajes.12145.

<sup>6</sup>Baudrillard, J. (1978), *The Agony of Power*, Cambridge MA: the MIT Press.

<sup>7</sup>Weber, M. (1920), *Gesammelte politische Schriften*

<sup>8</sup>Hall, E.T. (1966), *The Hidden Dimension*, New York: Anchor City

<sup>9</sup>Schön, D. (1973). *Beyond the stable state*; W. W. Norton & Company; 1st Edition 1973; ISBN: 978-0393006858;

<sup>10</sup>Mäler, K.-G. (2008). *Sustainable Development and Resilience in Ecosystems*. *Environmental Resource Economics*, 39, pp.17-24; Armitage, D. (2008). *Governance and the commons in a multi-level world*. *International Journal of the Commons*, 2, pp.7-32; Perrings, C. (2006). *Resilience and Sustainable Development*. *Environment and Development Economics*, 11, pp.417-27.

<sup>11</sup>Gould, S.J., Vrba, E.S. (1982) *Exaptation—a Missing Term in the Science of Form*. *Paleobiology*, 8 (1), pp. 4 – 15. With the term ‘exaptation’, we define the co-option of a specific trait during evolution. A trait, which might serve for another function, can be co-opted by the organism to guarantee better survival sciences for the species and the individual itself. The term has been translated in the architectural discipline by the Italian architect Alessandro Melis focusing the practice more on the ‘genoma’ of architecture and its possibilities



the population to the health system are two of the main causes behind the poor information. Such information and the way the disadvantaged are facing the pandemic, and not the pandemic itself, impose an imperative to introduce new targeted methods and strategies, new services, and new awareness campaigns for such significantly large parts of the urban fabric. This requires for collaboration between scientists, people and policymakers, to establish “new lenses” on the promotion of city-health and livability. These contemporary challenges we are facing should help us produce a new conception of the abused word ‘informality’, picturing it not only as something ‘unexpected’ and of ‘missing legal and social framework’, but on the contrary, as a relational concept at various scales of urbanization, to be tackled holistically (*Di Raimo, Lehmann, Melis, 2020*<sup>15</sup>).

This intertwined relation between health and wellbeing in the city and city-making process is essential to producing livability. Development in the health sector is often regarded as separate from the living environments, much like nutrition that, for a long time, was not seen as medicine – perhaps not necessarily a curing one, but definitely preventive. Similarly, health and wellbeing in the city, though not seen yet as critical factors of urban quality, constitute a stronghold in city making. But, why artists, designers, architects, planners and city scientists are not commonly part of the health and wellbeing conversations, when planning living environments? Is this because of lack of knowledge? Because politics and policy-making processes do not see a priority in such relations? Because periphery and informality are not considered as “planned” environments, the way that urban centers are? Is it because of a lack of access to ‘closed’ or ‘ghetto’ neighborhoods? Or is there something else behind we are not aware yet? On the other hand, there are organizations, volunteers or even passionate planners and architects who engage in collaboration with the disadvantaged to introduce basic services and health facilities, improve schools, reinvent public spaces, or even establish sanitation services. However, these efforts are faced with a scale problem, if official government support is weak or missing. In addition, in many cases governments usually intervene through demolition or other “instruments of force”, not only destroying the trust of the community, but also erasing hope and future. This “improvement-versus-demolition” is a challenge that artists, architects, and city experts need to continue working with. As, *Jean-Paul Sartre* said in his work “Existentialism Is a Humanism” (1946/1948<sup>16</sup>) “... *man is nothing other than his own project ...*”, emphasizing that what matters is not the abstract idea of power but the act itself. Through designing and imagining, we project a vision on the world, which allows us to be and to exist. The need for a transdisciplinary approach to city-making is inherently a transdisciplinary process and so is planning for the city. The transdisciplinary approach is already shaping the basis of design and production in architecture too. We spoke already of transport and mobility, of public space, of health and wellbeing, housing, education, and there is so much more to address in city-making. Another phenomenon – that has transformed while the pandemic is unfolding – is the migration. Seasonal work migration was largely affected, within

regions and even within states in the European Union, in North America, etc. Refugee routes changed and new restrictions were put by governments, but the phenomenon did not stop. Instead, a new form of migration appeared with the pandemic encouraging people to leave the crowded areas within a city<sup>17</sup> and reside for a while in the countryside or abandoned areas. People escaped from high density, towards open landscapes, perceived safer, more hygienic and supportive to the idea of resilience. We have yet to see the results of such migration, which is not clear to what extent is permanent or temporary.

In this broad scenario we are currently dealing with, some of the questions the 24th issue of Forum A+P addresses are:

- What is the nature of (post-) pandemic/crisis city transformations?
- What urban factors and qualities stand at the core of these transformations?
- In what ways do health and wellbeing intertwine with city-making in a post-pandemic context?
- To what extent COVID-19 will/could alter our understanding of urban space and pertaining life dialectics?
- In what ways will the society operate within urban environments in the future?
- What about our houses, leisure activities, public space, mobility, and work environments?
- What lessons will designers, architects, city planners draw on their role for city making?
- What is the impact in policy-making and decision-making facing physical, economic and political crisis?
- What about the education and research for these professions?

Such questions were first explored in various workshops and Conference contributions during *Tirana Design Week 2021 – Health and Well-being in the Post-Pandemic City*. The workshops were led from POLIS University staff and from some young talented designers, architects and city experts that were selected from the Future Architecture Platform network. Those workshops have dealt with the many different dimensions of the current global situation: they challenged the students in being able to intervene in rapidly changing societies, with rapidly changing systems, and a substantial load of inherited problems; in revealing the need for data, knowledge, and forward rather than backward thinking and response. The main aim of these workshops was to put under the spotlight how the young professionals should be capable to grasp and understand problems, sense the future and reconnect people with space, producing socio-ecological synergies that lead to positive impacts on human health and wellbeing. The COVID-19 city is more than ever and in a very short time revealing the need for data, knowledge, and forward rather than backward thinking and response. Meanwhile, the contributions of the invited keynote speakers have explored the relationship between the city and the pandemic under different perspectives, also considering their heterogeneous background and education.

Nick Dunn, Executive Director of ImaginationLancaster

and Chair of Urban Design, discussed the role of the 'New Normal', and focused on how cities are within a world which is increasingly volatile, uncertain, complex, and ambiguous in terms of the challenges that might lie ahead and the impacts that those challenges might have. He highlighted a series of key issues, and further explained the reasons for which they are relevant and present fertile opportunities for the role of design education and design professions, including the broad public, in shaping tomorrow's world.

Greg Lindsay, generalist, urbanist, futurist, and speaker, and chief communications officer at Climate Alpha, suggested the topic of the 'Right to the City', and some interesting attempts in creating a new form of urban infrastructure that will enable fifteen or five or one-minute city to happen, and how we do need to think about interventions that will enable fifteen or five or one-minute city to happen. A new city where citizens could re-appropriate of their urban spaces where the 'right to the city' will not anymore be directed online towards elite classes but will be the chance for a more equal and supportive urban environment.

If the first two invited speakers were coming from the field of architecture and design, Robb Butler, Executive Director of the Regional Director's Office of WHO, conducted an interesting speech from the lateral perspective of a social scientist and public health promotion adviser with over 25 years of international experience working in public health, social protection, and humanitarian assistance. He shared with the audience his vision on how pandemics and health have always shaped cities they will continue to shape cities, and how we do need more dialogue between not just public health and health practitioners, social scientists, behavioral scientists, and urban planners and designers such as yourself, but also on how we need to think about how we listen better to our constituents, suggesting a new needed interest for 'choice architecture': the design of different ways in which choices can be presented to decision makers, and the impact of that presentation on decision-making.

Some related issues are investigated in a more detailed and methodical way in a series of peer reviewed scientific papers. The first essay, "The Post-pandemic, the post-war, the city in transition – Sarajevo case study", written by Nataša Pelja Tabori, explores the pandemic as a special challenge for Sarajevo, the post-war and the city in transition in Europe. In her vision, planning in the Western Balkans will have to change dramatically towards nature preservation and controlled urban development to enable our cities to become healthy, fertile, and functional environments again, otherwise our urban environment will suffer from zero resilience enzymes for future crises and pandemics. "Post-pandemic heritage. Game design tools for an engaging experience" is a choral contribution from Joan Ikononi and Dorina Papa. The work focuses on how technology allows us not only to easily access information on heritage and view 3D models of buildings or artefacts, but also to experience virtually historic sites or historic object, by representing them accurately, either referring to the recreation of existing objects or rebuilding models of objects as they may have appeared in the past. Interactivity is seen as the keyword to engage the audience and propose, in times of pandemic, more

resilient scenario for our historical and cultures sites. Vittoria Mencarini and Lorenzo Tinti, from the University of Ferrara, questions the incidence of human factors in our ecosystems. Their paper, "Processing Nature, beyond the antinomy of ecological pretence in contemporary planning. "A critical understanding Urban ecosystems, the epitome of liveable cities", is an attempt to describe how to provide precise and sophisticated tools capable of synthesizing agents and forces within territorial transformations starting from a global understanding of natural processes. Ecological dynamics must be transformed into project parameters involved within design process. Diego Repetto and Fabrizio Aimar, in their essay "The Fifth Landscape: a transdisciplinary approach to interpreting perceptual 7 landscape transformations?", deepen the concept of 'the Fifth Landscape'. Proposed by Repetto, in 2018, it takes up what was theorized in the Fourth Landscape but broadens its horizons. It aims to relate individuals and places culturally and empathically through the sharing of emotions using real and (above all) virtual works, preferring temporariness, and could become a key to transdisciplinary interpretations of perceptual landscape transformations. The last paper, "Adversities in Diver'city' The dark side of diversity", authored by Saiba Gupta, from the National Institute of Urban Affairs in India, explores the situation of India at the beginning of the COVID-19 Pandemic, and how the aftermath of that should be dealing with addressing these deep-rooted social inequalities, particularly in order to build the resilience of marginalized groups. Indeed, although cities' preparedness and responses to the crisis mainly rely on larger institutional and economic capacities, the local response is also crucial for future resilience and sustainable recovery, starting at the community level.

As in the others issues, the last section of Forum A+P is called Tel Qel, and contains focused and punctual impressions from several experts on the main topic of the journal. In this 24th number, Prof. Besnik Aliaj reflects upon the last political reforms in the Republic of Albania, highlighting how problems such as Representation, Increasing Decentralization, Regional Developmental Inequality, and Investments in territorial and regional development, are some specific knots to be taken into account for further and more effective territorial reforms in the country. The second opinion, from Prof. Skender Luarasi, is a lucid reflection on how architecture could be a conscious act in erasing the memory of places and their meaning. The Pyramid of Tirana, the former mausoleum of the dictator Enver Hoxha, is the exemplary case of an 'infection' – a word used by Luarasi in his essay – injected in the architectural body to annihilate his former values and expression. Indeed, a way through which memory is stripped of its meaning and the image of the city is erased and impoverished...

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<sup>15</sup> Di Raimo, A., Lehmann, S., Melis, A. (2020) (eds) *Informality through Sustainability Urban Informality Now*, London: Routledge. [16] Sartre, J. P. (1946) *L'existentialisme est un humanisme*, Paris: Éditions Nagel.

<sup>16</sup>Sartre, J. P., & Mairat, P. (1960). *Existentialism and humanism* (p. 28). London: Methuen.

<sup>17</sup>According to USPS data, in the US more than 15.9 million people left big cities to move to the countryside or smaller urban settlements. In comparison to 2019, there had been an increment of the 3.92%.

# Post Pandemic Products

**GREGOR ANDONI**

*POLIS University*

**KRISTIANA MEÇO**

*POLIS University*

The Coronavirus pandemic has changed everything. Its impact on global wellness and the economy has forced organizations in every industry — including our own — to flex and evolve, both in real-time and in the long-term. In this workshop we collect the ideas, thoughts, and strategies, we explore how design can play a role in making the world a healthier place.

Before the global pandemic compelled many of us to work from home, designers of the built environment were making positive steps to create spaces that are engaging, inclusive, and universally accessible in response to the changing nature of how we work, live, and play. The purpose of this workshop is to create a product that will help in any way to care for COVID-19. The spread of COVID-19 has led to the enforcement of physical distancing measures. So this paper is to understand the effect of these measures and lifestyle changes on the role and importance of product design in our life.

## General overview of the workshop

This workshop consists of examining the product which are mainly related to the pandemic and its side effects in our daily life including hygiene and factors related to stress and daily life. Students will design a product which will later move to the stage of production by 3d printing the process will focus on different stages of the product to its first form to the use phase and to the post use phase. This workshop will help students understand how the pandemic has changed the way of thinking about design by introducing many important factors for everyone's

health. So, in addition to the aesthetic and functional aspect that every designer already has, they will have to connect the design with the current situation in which we are living. The function of the product is not defined, they will design a product which will be necessary for each of us.

## The outcomes of the course

Design in a Post-Pandemic World will influence anyone interested in how design thinking can transform how we see the world and those looking for new ways to understand what the COVID-19 pandemic means and what opportunities it creates for our environments.

This workshop will familiarize you with the process of designing and implementing a product on a 1 to 1 scale, thus passing the product prototyping and rating stage in terms of quality also to familiarize with the 3d printing process. So design has changed, in this way some of these changes are readily available to do now, others may be a more long-term solution. Putting up sneeze guards and spreading out those who interact with customers may be accomplished without much physical change. One of the changes we see going forward is the specifying of interior antimicrobial coatings that can be placed or added to products such as flooring, door hardware, faucets, paint, hard surfaces, and furniture. You might also see more use of materials that are by nature inherently more antimicrobial.

Understanding what is happening in the world, there is a need to teach design to students in the post-pandemic period,



Workshop Process Image



Workshop Process Image

so this workshop will last one week and besides the fact that they will design the product they also will produce it on scale 1:1, so they will have to think about the materials and the way they will produce it. Each product will have an identifying brand that will include packaging, logo, user manual. This week consists in theoretical lectures on product design and then to start prototyping. The topics will concentrate mainly on ergonomical factors and design process. At the end they will present their products. In the end it will be finalized with a presentation and mini exhibition of the students' products.

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# The Future of Terraces/Balconies as In-Between Space

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Access to private outdoor space is crucial for human well-being. The COVID-19 pandemic pointed out the value of ensuring these kinds of spaces for every dwelling. Aiming to answer the research questions on why it is important to focus on the future transformation of terraces/balconies in response to the pandemic, as a new way of connecting the indoor and outdoor space, the private and the public, the workshop explored a specific case study in the central area of Tirana. The chosen context allows us to follow the development of these spaces from the XX century until today. The first part of the workshop focuses on qualitative methods like observation combined with sketching, mapping, and photography, which resulted in a documented catalog of typologies of space and typologies of use of balconies and terraces. The second part focused on projections for future development/transformation of these spaces by applying the collage as a technique for the research through design. Through this research workshop, new possibilities were explored, and new guidelines for the future of the balconies and terraces as in-between space are provided. The knowledge produced can be further used by researchers in the fields of architecture, urban design, and urban planning.

## **Intorduction of the general topic**

Terraces/balconies are the spaces in-between the private (closed) area and public (open) area. They are visually open to the public, but yet, they are private spaces. This character of in-between space has ensured the terrace/balcony, to be indi-

vidually interpreted. For property developers it is the minimal required area, for façade designers, it is the opportunity to make an interesting facade, for residents it is the opportunity to enclose and get an extra room or space, for some it is the utility, auxiliary, or even garbage space, for some it is the leisure space, summer kitchen area, garden area, smoking area, favorite area, showoff area, suntanning, reading, or planting space. The way this space is perceived and used depends on a vast of factors, such as climate factors of the place, the orientation of the terrace, the view from the terrace, the size and organization of the flat, the number of residents, the character and common sense of the residents, and for sure the regulatory laws of the country. Our perception of the balconies and terraces has shifted in the period of the COVID-19 pandemic. It was a space connected with the provision of well-being. These spaces represented fresh air, nature, plants, concerts, socialization...etc. That is why one should focus on these aspects when we think about their post-pandemic development.

## **Objectives and output of the workshop**

The objective of the workshop was to produce a catalog of existing terraces/balconies in a central area district in Tirana and a catalog of visions on how terraces/balconies in this area should develop in the post-pandemic period. The results will serve architects in their future work in designing the residential buildings and the urban planners on the regulative for future development of this specific area in Tirana. The findings obtained

from the workshop aim to contribute to general knowledge on the semi-private spaces like terraces/balconies in the residential buildings. The research on terraces/balconies as in-between space contributes to architecture, urban design, and urban planning disciplines, by obtaining knowledge that can be further used for similar studies in different contexts, comparative studies, decision making, and design.

This workshop answered the following research questions:

**Primary questions.** What kind of terraces/balconies are specific in the area around the New Bazaar and how are they used? How have the terraces/balconies transformed from the XX century until the present and what are the projections for better future development?

**Secondary questions.** How to deal with the current terraces/balconies to ensure them as a living space of well-being?

Will the pandemic affect how terraces/balconies are used, designed, perceived?

Will this spaces evolve as a space for contact with nature and the outdoor?

### Methodology

The total amount of participants in the workshop was 42, and they were divided into six groups. The students documented the existing condition, did an analysis of it, designed the future projections, and presented their work at the end of the workshop.

Firstly, the students got familiar with the concept and history of terrace and balcony through a presentation of the tutors. Afterward, they started observation of the chosen sites as a case study. The observation was done through site visits in the first three days of the workshop. Secondly, the collage technique was presented as a technique for describing and expressing the future projections. The second part of the workshop as well was done through collaboration among the students within the six groups, where they used collage to imagine the future of terraces/balconies as in-between spaces.

### Selection of case studies

The case study selection aims to cover buildings from various periods in the history of the city of Tirana development. In the area around the New Bazaar, six locations are chosen and divided between six groups of students. The specific locations contain a street and the buildings facing the street. The criteria for choosing specific streets from the neighborhood is to have both street fronts occupied with residential buildings with terraces or balconies. All of the locations are chosen to differ one from the other in the sense of street fronts distance, typology, size and orientation of buildings, vehicle and pedestrian traffic, the period in which the buildings were built, and the distribution of greenery in the area.

The case studies should tell the story of how the neighborhood has site as viewed from a distance while the “topographical system”, a cinematographic method, reorient the viewer through recognisable distances, dimensions and objects. During a film screening, the viewer generates its own mental maps

that localise his/her position in the represented filmic space. This is the case of the single set films that are perceived as entirely shot in a single building, such as *Last Year at Marienbad* (Alain Resnais, 1961) and *High-Rise* (Ben Wheatley, 2015). The former takes place in a baroque hotel, which is, in fact, an imaginary building created by editing scenes shot in several locations, namely three royal palaces in Munich and a film studio in Paris. The latter is situated in a brutalist-styled tower that consists of a monumental garden and a leisure centre in Bangor, a ferry terminal in Belfast and a 3D model for the exterior. In these cases, the filmic space can be considered as a “Frankenstein” location, a mix of different buildings, which appears to the spectator as one. It is a re-composition of various building fragments. When the entire film is located in a single spot, the architecture becomes autonomous from the plot and the camera movements.

### Methodology of the first part of the workshop

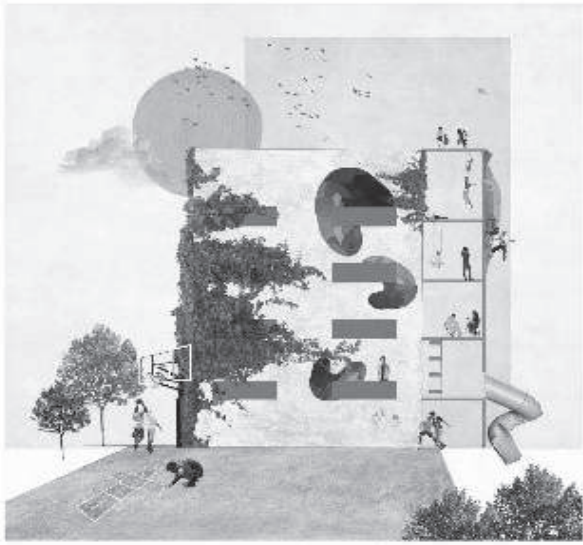
In the first part of the workshop, the focus was on the existing context – the history and current state of usage of the balconies/terraces. The data collection is conducted with qualitative inductive methods to answer the research questions. To collect the spatial typology and the usage typology of terraces and balconies present in the locations of the case studies, the students did a field observation with sketching, photography, and mapping, which resulted in cataloged documentation with photographs and technical drawings.

### Methodology of the second part of the workshop

The second part of the workshop was focused on the projections for the future. By research through design, the workshop aims to discover new possible typologies and to project the future of the terraces and balconies as in-between spaces. The main design technique for achieving these new visions for the future of these spaces is the collage technique. This technique enables freedom of expression, speculation and is open for interpretation.

The second part of the workshop was divided into three separate tasks. The first task was to think of the new balcony typologies through its section. Each of the six groups worked with two street sections and three keywords that guided them through the process. Two keywords were selected from the analysis of how residents use the balconies now, and the third keyword was a prediction of how balconies would be used in the future, inspired by the COVID-19 condition. Two simplified street sections from the previous documentation task were given to the students, and by using the given height of the buildings and the distance between the buildings, they were able to work on the new typology of the balconies that will form a different atmosphere and connection in the neighborhood.

The second task of the second part of the workshop was to focus only on the elevation and to form the new typology of the balconies, also using the collage technique. The keywords given to the students in the previous task were used in this task as well. In this part the students were supposed to forget about



Workshop Process Image



SECURITY



KITCHEN AREA



EXTRA SPACE-STORAGE AREA



PLANTING AREA-MEDITATION AREA



STORAGE AREA



KITCHEN AREA



WORK OUT AREA



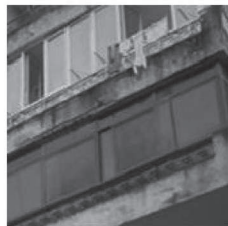
READING AREA



UTILITY / DRYING CLOTHES



LIGHT/PANORAMIC VIEW BALCONY



Workshop Process Image



the sections they worked on the previous task and to propose a new vision represented only through elevations. The last task was concluding a new vision of the typology of a balcony. In this task, the students represented the visions through technical drawings. From the 'sections' and 'elevations' each of the six groups presented a new typology for a balcony answering to specific programmatic needs (the given keywords).

**Obstacles.** With Covid-19 restrictions and threats, it was not possible for the observation to be done from the inside of the apartments. The observation of the terraces and balconies was done from the street.

## Results

Each of the six groups of students documented one street and its fronts. The documentation of the streets resulted in a catalog of existing typologies of balconies in the neighborhood (Figure 2), and a catalog of variations of how the balconies are used (Figure 3). We got a total of 46 typologies of balconies documented in their primary state and a total of 66 variations of how they are used and modified in each neighborhood. In Figure 2 and Figure 3 are shown only the characteristic typologies. The dimensions of the balconies vary from 1.5m<sup>2</sup> to 15m<sup>2</sup>. Their depth is from 0.4m to 2.7m and the length of the balconies varies from 2.4m to 7.3m. The sizes also depend on the time in which the building was built.

**Group 1** had the following keywords: light, laundry, and work-space. **Vision:** The light is foreseen as a necessity that penetrates the building and enables the residents to enjoy it. The sun rays communicate with the public area as well.

**Group 2** had the following keywords: noise protection, privacy, and socializing. **Vision:** With AI reaching its peaks, the human will prevail in the atmosphere. The industries, the work, the daily commute will be situated in the stratosphere, producing the noise in that area.

**Group 3** had the following keywords: summer kitchen, collective space, and productive landscape. **Vision:** Each building should function as a community and should be sufficient. The food should be produced, sold, and cooked by the residents of the building.

**Group 4** had the following keywords: traditional Albanian family, double shading, and sunbathing. **Vision:** The lockdown brought the necessity of having a balcony or a terrace where multiple functions can be done.

**Group 5** had the following keywords: atmospheric protection, leisure, and playground. **Vision:** This future balcony brings natural amorphous shapes into play. From first sight, the dimensions of this balcony look the same as the current ones, until you discover the caved space that companions the standard shape of the balcony.

**Group 6** had the following keywords: dining area, bedroom area, and exercise & well-being. **Vision:** Having in mind the closed balconies by most of the residents, and the need of having an open space to maintain their well-being, this new typology serves as a plug-in module to the existing buildings.

## Conclusions

The area around the new Bazaar in Tirana is full of different typologies of balconies and terraces. If we categorize them by size; there are standard balconies (who dominate the most), fake balconies, step-in balconies, and spacious balconies. If we categorize them by type; there are open balconies, glazed and eliminated, and their combination/variations of being fully open, corner-open or frontal open. If we categorize them by shape; there are rectangular, square, L-shape, irregular shape, and half-circle shape.

We can conclude that the typologies of balconies from the XX century onwards changed and are getting bigger, more open, and vary in shape and size. The current state of the balconies shows that they are mostly transformed by users into a space that can be closed and opened and at the same time used for multiple functions. They are used mostly for a kitchen area, extra space area, storage area, planting area, utility area, barbecue area, sun protection, noise protection, privacy, collective space, leisure, drying clothes, double shading, maximum interior light, apartment extension, and atmospheric protection. In the post-pandemic period, there is a need to envision new spatiality for the balconies having in mind their usage during the COVID-19 crisis. The collage technique allows successfully to envision the future by combining different elements such as keywords and spatial formations. The collages can be interpreted differently and are a good tool for narration. In the final task, the students could easily conclude what is the new 'needed' type of balcony in the post-pandemic period by analyzing their interpretations of the story they told with the collage.

We can conclude that the final visions for new balcony types focus on the visual and spatial connection of the balconies and the possibility of the people to socialize with each other while balancing their private space with the public space. The notion of protection (of privacy, light, noise, and atmospheric influence) was also emphasized in the narratives of the students. The green balcony, as well, was one of the most mentioned visions by the students on the topics of well-being, atmospheric protection, productive landscape, etc. What is more evident and common within all the group of students, is their visions for a balcony with a transformative and multifunction character, that is inspired by the current situation problems and COVID-19 crisis. This may be the next direction toward the future development of these in-between spaces.

*PUZZLE is a collective of young and enthusiastic architects established in 2018. As a team, they have worked on a wide spectrum of projects including exhibitions, interior design, architectural projects, conceptual projects, research, etc. and successfully participated in many competitions. Throughout their work, they try to have a research-oriented approach thus creating more sustainable, outspoken, and creative solutions for all architectural challenges.*

## The Cadavre Exquis Utopia

**STEFANO ROMANO**

*POLIS University*

**REMIJON PRONJA**

*POLIS University*

*"A globe that doesn't include Utopia doesn't even deserve a look"*

Since ancient times, when a group of human beings share a certain number of values and decide to settle permanently in a place, they give life to a town. The size of this inhabited center outlines its linguistic definition, country, town, city and today, metropolis, megalopolis.

All inhabited centers have one thing in common that goes beyond their size, and that is their identity, their own genius loci as the Latins would say. With mass industrialization between the eighteenth and nineteenth centuries, the progressive abandonment of the countryside and the (over) crowding of the cities, which became bigger and bigger, determining the identity of the cities became more and more difficult, to understand what they wanted to be, what they aspired to, what was their dream. Yes, cities do they have a dream, which has to do with their identity and which in other historical moments has been called utopia.

"Utopia" comes from the Greek: οὐ ("not") and τόπος ("place") which translates as "no place" and literally means any non-existent society. Sir Thomas Moore coined the term in 1516 when he used it to describe an island where the structure of society and the balance between man and nature are perfectly balanced. Moore himself divides the meaning of the term according to two possible derivations from the Greek words eutopia which means good place or outopia which means no

place. Human beings need these kinds of places because mythical space is an intellectual construct and helps us define our real space. In the description of the island of Utopia, both definitions find their place; the island is eutopic in the sense that it is a good place, where there is a perfect balance between nature and man, and society is perfectly balanced in itself, but it is also outopic, because it exists only in the author's mind.

Between the late nineteenth and early twentieth centuries, the new meaning that the city acquires through its constant and growing urbanization led to experiments in creating ideal or utopian cities, as they were often defined. In these new cities an attempt was made to reconstruct the dream of the city, a dream that in the pre-existing cities, seemed to have more and more the appearance of a nightmare, because they were transforming themselves in a rapid and chaotic way, fraying and losing, perhaps forever, their own genius loci, their identity, their dream. In contemporary cities, in fact, there is often the feeling of disorientation, as if the places in which we live did not really belong to us, as if we could not own them entirely. We live in an eternal chase, in a continuous need to re-know, in the sense of knowing again, places that change faster than we start building a stable memory of them. The city therefore changes continuously, quickly, fiercely. It turns around its dream in a revolutionary motion that resembles that of our planet around its star, around the Sun. And in this movement of revolution our points of reference change, together with our memories, our percep-



Workshop Best Result



Workshop Exhibition

tion of the full and empty spaces of the places where we live. The city becomes a mobile, uncertain, slippery terrain that can only be strengthened by the relentless search for this original dream. The dream is to be sought in small and large things, in everyday gestures and in the tallest buildings, in the corners that seem blocked in time, and in the great expressways that never stop, such as the constant and continuous revolution of the Earth around the Sun. At the end of 2019 world faced the first global pandemic, the COVID-19 infection, as a result of the long months of lockdowns in all the regions of the world, professionals and thinkers started to highlight the needs to think reality from a new and unforeseen perspective, stating that a possible point of view could be that of Utopia. In the reflecting of the new world post-pandemic scenario, art can contribute by re-thinking the spaces of the city through utopia: exiting the frame imposed by the establishment, entering the infinite resources of imagination. In the reality of Albania, revolutionary political transition and a rapid privatization process that dealt to a chaotic urban development followed the end of the communist regime in 1991. The pandemic unequivocally highlight the need for a change in the vision of our cities and the way they must develop.

The workshop analyzed how the idea of utopia could be seen as a way to find alternative and unexpected solutions to contemporary problematics from social, political, urban point of view. During the workshop, students divided in small groups of work, analyzed contemporary Tirana following different paths and layers. The results of the analyses were translated into visions of utopia through drawings realized using the methodology of the *cadavre exquis* (exquisite corpse). *Cadavre exquis* (exquisite corpse) is a collaborative drawing approach first used by surrealist artists to stress the unconscious path of their methodology. An artist begins a drawing on a sheet of paper, folding it and leaving only a small part of it visible, so that the next artist continues the drawing without being able to understand what the first one drew, and so on until the sheet and the drawing are finished.

### **Objectives**

The objectives of the workshop were to reflect on the perception we have on our city and the possibility to develop new possible ideas, only apparently not realizable, in order to change the way we think about the city itself. Nowadays it is a priority to rethink the way we act, the way we consume, the way we live the urbanized area of the planet, which reached an incredibly high surface of land, affecting also the climate, in creating a high concentration of dioxide carbon as a consequence of our activities in the city. Another objective was to underline how drawing is a medium of analyzes of reality. We can understand reality by drawing it, understanding how volumes and shapes work. This offers the possibility of transforming reality, understanding a form, it means understanding how it works, and therefore how to change it, from a functional and formal point of view.

### **Methodology**

The methodology used for the workshop was that of the analyzes of the phenomena that shape the city from a functional and formal point of view. Students went into the assigned areas, walking and understanding the neighborhood, highlighting real or possible problematics derived from our behaviors. Drawing was meant to be their medium of analyses and of intervention. The functioning of the city was the case study of the all workshop, developing the idea of utopia as a way to find alternative and unexpected solutions to contemporary problematics from social, political, urban point of view. The notion of utopia was chosen for its possibility to go beyond the existing, starting from it and giving unforeseen answers to unsolved problematics. Problematics that eventually came out from architectonics and urbanistic old solutions which were responsible of our behaviors.

The first day of the workshop students followed a lesson about the notion of utopia and how it has been used in architecture and art. After that, students were divided into groups and each group has been assigned to an area of Tirana. Students had to analyze and document that area through photographs, drawings, sketches and notes.

The second day we analyze what they find in their areas, highlighting the problematics of each zone, from different points of view, politic, social, urbanistic, architectonic etc. The students started to reflect and sketches possible utopias solutions for the problematic they want to highlight in their area.

The third and fourth day of the workshop were divided in two moments, in the morning field trip to the city (all the groups in their areas) to understand if the first utopias they developed were “possible”, highlighting this apparent dichotomy of a “possible utopia”. Then in the afternoon, they continue to work on their projects.

The fifth day was dedicated to the finalization of the projects. This is the part of the project when students have to somehow connect together all the areas of the city where they worked, this was the idea of creating a *cadavre exquis* of utopian drawings on Tirana in the attempt of imagining a new idealized development of the city where we live.

The sixth day there was the student’s work presentations.

### **Conclusions**

The students made a very good work, their analyses were acute and the quality of the drawings were able to eventually visualize another possible image of Tirana. They used a variety of way of expressions starting from simple sketches, to collages, to digital elaborations, and digital drawings. We really believe combining the notion of utopia and that of the *cadvre exquis* methodology was a good way to create new narrations in this moment of crisis that the pandemic speeded up somehow, facing the world with the necessity to rethink our cities in a more healthy and less aggressive shape.

Eduardo Galeano, said that utopia is on the horizon. I move two

steps closer; it moves two steps further away. I walk another ten steps and the horizon runs ten steps further away. As much as I may walk, I'll never reach it. So what's the point of utopia? The point is this: to keep walking.

*Stefano Romano, he is a PhD candidate in a double degree program in the University of Ferrara (Italy) and Polis University (Albania). He teaches visual art in the bachelor's degree in Art and Design at Polis University. Romano works in a processual field, through temporary actions, performances, installations, video and photographic works. He realizes ephemeral, diasporic work built according to a rigid grammatical structure capable of always generating unexpected situations, making the artist the first spectator of himself. His work focuses on the contradictions of social reality, always investigated through a light look, capable of creating transitory and unexpected images. From the beginning of 2000's, he conceived several projects as artist as well as curator. His work has been exhibited in national and international exhibitions.*

# Dealing with the Future of the Emergent Settlements in the Absence of Full Property Recognition. The case of Kashar and Astir in Tirana, Albania.

ARTAN KACANI

*POLIS University*

## Abstract

In Tirana more than half of the built environment is informal. The more we go outside the more it would be the absence of property recognition. However, this condition has not stopped the process of substitution. Starting from an orchard land, to a highly densified area, Kashar and Astiri areas are the best examples to represent and show the process of substitution. The comparative methodology used in this paper speaks about partial development of the agricultural land made by 200x200 meters, with a fast process of substitution long the existing pathways and a slower process inside the agricultural land. In this substitution process, three actors are played an important role: the primary inhabitants (single family), the investor with multi-family buildings, and the public administration. The substitution process from the primary inhabitants has happened informally, in common understanding and over a long period. These common forms of understanding and sharing consist of signs (communication), resources (construction materials), and development rules (distances). T

he substitution process by the private investors has happened there where was a higher degree of property recognition. Instead, the public administration has set in a process of eradicating the informal settlements, without understanding the two processes of substitution mentioned above and by interfering in the substitution process. Both inhabitants, the first, and the new struggle for the primary urban rights, such as water, mobility, and energy access.

## Introduction

This article deals with key questions and aspects concerning the development of Tirana in the last 30 years. It does so through the thematic lens of emergent urbanism and the tension between statutory planning activities<sup>1</sup>, informality<sup>2</sup>, and loose property rights<sup>3</sup>. Though its relevance is not limited to the contextual case of Tirana, but it provides insights on the issue of emergent urbanism and possible ways to formally deal with it without hampering its beneficial spontaneous forces.

With the fall of the communist regime in 1992, after almost 50 years, Albania opened the development of its territory to market logic and the recognition of private property rights. This transition gave rise to a rapid urban expansion process and, according to many, a chaotic development that often generated grey legal situations<sup>4</sup>. Such a transition was based on two main reforms. Firstly, the Law n. 7501 (1991), allocated

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<sup>1</sup>The first planning activities after the communist regime in Albania, started in the early 1990, latter in (Ligji Nr:8405 "Për Urbanistikën", 17.9.1998), in (Ligji Nr. 10 119 "Për Planifikimin e Territorit", 23.4.2009), and finally, (Ligji 107 "Për Planifikimin dhe Zhvillimin e Territorit", 2014). Till to 2009 there were no planning activities outside the "yellow line", defined by the urban continuity of the city. Many informal practices took place outside the "yellow line", so in "institutional vacuum".

<sup>2</sup>The first informal practices started in at the beginning of the 1990 – with the fall of the communist regime in Albania.

<sup>3</sup>Property rights issues came up with the fall of the communist regime in the early 1990.

<sup>4</sup>See (Aliaj, Misteri i Gjashtë, 2008).

and distributed national land to farmers for agricultural purposes at a “family scale” (around 2 ha). Secondly, a national program, (2005), for the “legalization, urbanization and integration of the informal settlements”<sup>5</sup>. Since then, a series of planning issues are still largely unresolved, and deeply contrasting development forces are in place. On the one hand, several informal, emergent settlements built in the last decades, still lack formal recognition and are unprotected by the State. On the other, several urban development projects promoted by the municipality are taking place often in substitution for the already existing informal settlements. Such a process of substitution cannot but raise important ethical concerns, and constitutional. Existing households are often displaced but not fully reimbursed, neither physically (with a new apartment) nor financially. Also, some neighbourhoods are going through a process of demolition and reconstruction via large-scale projects which seem not to fit into the longstanding spirit and spontaneously generated character of the place. Under these conditions, important questions arise concerning the future of these settlements:

- How is it possible to govern the process of substitution and densification of these settlements?
- How should planners treat the already existing households despite their loose property regime?

This article proposes an evolutionary approach in the analysis and exploration of two relevant case studies – namely, the Kashar neighbourhood and “Astiri”<sup>6</sup>. The goal is to unfold the complexity of these settlements by investigating their morphology, and the property regime process in substitutions under (spontaneous) rules, architectural types, and main social aspects. The ambition is to critically reflect on this phenomenon and come up with strategies that can effectively deal with existing tension from the substitution process.

### **The problem: informal urbanism and property rights**

Before the XX century, most settlements were “emergent”. While today emergent urbanism is associated with informality, in the past emergent development processes were the normality: within a frame of simple rules (urban codes), small initiatives took place and gave rise to incremental and organic urban tissue<sup>7</sup>. Emergent urbanism, however, must be intended not as an illegal or informal practice per se, but as the development process that happens within a certain statutory framework (such as planning rules and land-use planning, as well as the design of collective spaces) or, in certain cases, in the absence of it.

The role of background conditions in the absence of statutory planning activities is essential in emergent practices. To generate emergent forms of urbanism, (spontaneous) orders, the local community should share certain common rules for the maintenance and construction of their houses, as well as find ways to produce certain collectively relevant spaces and infrastructures (streets, etc.). These rules or procedures are not always agreed upon in concert by the local community. Often, they emerge spontaneously over time from the stratification of local practices. These rules start to take the status of habits, traditions, and norms. Their peculiarity is that although they

are not protected by the state, the local community voluntarily obeys and complies with them. These rules indeed are somehow self-emerging, self-imposed, and self-surveilled by its local community. An important aspect of emergent forms of urbanism is the role played by time. The process corresponds to an incremental juxtaposition of new actions, one after the other, where the first “structures/influences” the second which, in its turn, will structure/influence the third, and so on. In this development process, nobody can anticipate or know the final state of affairs, but like in all trial-and-error processes in society, the outcome will be the unintentional results of the stratification of multiple small actions, altogether generating an order which was not designed by anyone specifically<sup>8</sup>. This type of development has some main advantages: bottom-up approach, human scale of the developments, and the ability to get to any cultural dimension and use of the spaces. But it can also give rise to some problems if the minimal background conditions are not respected: lack of infrastructure and services (streets, sanitation, garbage, etc.), disrespect of other people’s rights (accessibility to houses, views, privacy, etc.) and a loose and vulnerable property rights configuration.

The loss of property rights, or housing tenure, is a process that has happened continuously from early 1990 to now-days with the substitution processes. This process has taken place in the urban peripheries of the cities, where the emergent urbanism occurred, and in the substitution process. In some cases the property right was unclear from the beginning, with the first inhabitants, in other cases, the substitution process created new inhabitants without a property right – those living in the multi-family buildings. As estimated by the national cadastre office, more than 2/3 of 320.000 informal buildings cannot be legalized – and this represents the first layer of inhabitants without a property right. Instead, the substitution process has created new inhabitants without property rights. Many of these inhabitants live in apartments without a property certificate. In most cases, this is attributed due to the nonaccomplishment of the building standards of the municipal planning codes - although single apartments have been sold in the real estate market. The loss of the property right affects more than 1 million inhabitants in Albania. From this national perspective, half of the population is considered secondary citizens, without basic human rights, such as water supply and sanitation, energy, heating, and cooking, or the recognition of the workplace. The loss of property rights affects not only the human rights on the individual scale, listed above but also the ability of the municipalities to keep territorial equity of the wealth distribution, such as education, health, workplaces, and other primary services on the local scale.

The loss of property, has negative effects, i) on the individual human rights, ii) on the institutional level for the delivery of the territorial equity by primary services, and iii) has negative effects on the social and economic term of the substitution process. The loss of the property has negative effects also for capital invested in the territory, iv). Our research will focus on the capital invested in the territory and its effect that has loss

the property right and by trying to find good practices of substitution that has occurred in the neighbourhood of “Kashar” and “Astiri”. In some territorial areas of “Kashar” and “Astiri” the fast substitution process has encouraged the inhabitants toward a continuous, but slow, process of upgrading settlement. Some of the reasons stand on the desire to get into a better bargaining process in case of substitution. Although the new buildings lack standards and consequently a non-recognition of the property, 15 years of emergent transformation shows that the bargaining process between the first informal settlers and the new building has occurred massively in the neighbourhood.

Now, the key question is? Of what nature, and form, are the bargaining process regarding the invested capital in the territory when the substitution happens? “Kashar” and “Astiri” neighbourhood shows that the substitution has occurred by financial means, and by design issues on the landscape. These last forms of communication and bargaining are the focus of our research. Some are made by signs in the territory and on the landscape others are common rules created by the inhabitants.

### **The case study. Main key policies and laws since the transition from a communist regime**

Emergent urbanism took place outside the “yellow line”, in an institutional vacuum of planning practices. The state was the only owner of the land. Although the agricultural reform of property transfer was occurring in early 1990, the process never saw a full recognition process of the property transfer for agricultural issues. Law 7501 will distribute the land at a family scale for the only purpose of agricultural production. This first reform can be considered a first attempt to stimulate the inhabitants in rural areas after the fall of the communist regime. The reform didn’t give the desired purpose, agriculture, and it paved the road of the informal market of land – mainly for urban purposes.

In the second half of 1990, the process of property transfer became the driving force of the new economy that was taking form after a long period of state control over the property. Informal practices of land and building purchases will occur among citizens interested in the new housing solutions on the outskirts of the main cities. Nowadays we can find on agricultural land different owners by documents and different inhabitants, or farmers in reality for the same parcel of land. This is what in Albania is commonly known among inhabitants as “property superposition”. The case of “Kashar” and “Astiri” shows that the transition from agricultural use to urban passed through the Orchard Agricultural Cooperative operating in the area. Figure 1, shows the Regulatory Plan of Tirana in 1990, and the future land use for the area of “Kashar” and “Astiri” - surrounded by dots on the left side of the map. While in some informal areas planning practices will take place with new pilot projects, following participatory and communicative tools<sup>9</sup>, new informal practices will occur outside the informal areas declared by law, getting spread into the consolidated areas and in the city centres as well. Emergent urbanism will spread all around the cities of Albania and will become an economic and housing reality

not only for single families but also for building developers – raising informal high-density buildings and selling apartments out of the regular market. Soon these two informal housing realities, the single-family housing, and the builder of the multi-family dwellings will get into bargaining conditions for the property transfer. Different cases of early 2000 speak out that in some cases single families have received high percentages of reimbursement in apartments for the property transfer from the building developers, respectively at 40% - the highest degree till nowadays.

In 2005, the new right-wing government will open a long institutional process toward a full recognition of the informal settlements, called legalization. In the beginning, it started only with single-family dwellings, and only in 2014, the law included also multifamily dwellings. With this new process of legalization and the opening process for ‘building permission’ beyond the “yellow line”, the housing market will face a shock in real estate value. Dwelling built without ‘building permission’ will be under-evaluated in the real estate market and by housing agencies.

Nowadays the real estate market is made totally of multi-family dwellings with ‘building permissions’, although various forms of informal renting and owner-ships are present. Most of the single-family dwellings build informally nowadays are out of the real estate market – which makes them more vulnerable to future transformations. The “open possibly” for the informal single-family dwelling to get into a financial bargaining process with future urban developers is no anymore possible, since 2014. What remains to do is to see on the territory there where are the problems deriving from the substitution by bringing out the urban practices and common rules, and solutions that reduce the conflict.

### **Overview of Tirana**

1-an overview of the development process of Tirana.

Nowadays the urban area of Tirana has tripled since 1991, and so happened for the number of the population. In mid-grey colour the urban area before 1991, and in light grey what happened after, till to now-days. The division of these two colours signifies not only a historical point toward the private market, but also an administrative limit. Deep is also the division of the territory created from the “Great Western City Ring”<sup>10</sup>, which

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<sup>5</sup>(Ligji 9482, 03.04.2006), (Ligj Nr. 111/2018 "Për kadastrën", 2018). As reported by the National Cadastre Office, in 2019, there are 720.000 buildings in Albania, where 320.000 are declared informal settlements – waiting for a legalization process. For the hindering factors for the legalization process in Albania see (Kacani, 2018).

<sup>6</sup> Located at the city entrance from Durrës, Kashar neighborhood was outside the yellow line of Tirana. “Astiri” area is the well know location of an old factory of flour developed along the city ring from the main entrance from Durrës. In both areas, emergent practices occurred, and now a fast process of substitutions is taking place.

<sup>7</sup>See (Kostof & Castillo, 1992), (Akbar, 1988), (Hakim, 2014), (Bertaud, 2018).

<sup>8</sup>See (Moroni & Cozzolino, 2019).

<sup>9</sup>See (Aliaj, Shutina, & Dharmo, Between energy and the vacuum, 2010) in Bathore area.



is planned and projected with the aim to connect the southern part of Tirana with the exit toward the city of Elbasan. This last area, marked with dark grey, developed in the last 15 years, represents a unique form of housing in the Albanian territory. With a price of up to 1200 euros for a meter square these apartments have additional monthly costs for the maintenance of the collective spaces, such may be gardens, pools, and other forms of amenities. Seen from the big scale there are three patterns; i) the first, historical and administrative role, in the city centre; ii) the second, developed in the northern part of the city as an urban extension from the first pattern in an informal way, and iii) the new pattern developed in the south last years, imposing a modernist grid and architecture. The existence of three big agglomerations in housing stock by different characteristics of the development, mixed with big interventions by the state and municipality, by policies and projects, has increased further the social tension. The difference between these three-housing agglomerations consists in; housing tenure status, affordability degree of the housing costs, materials of construction, accessibility, and different cultural activities of the economic sphere, social and demographic. The first lesson coming from these readings by patterns is that the geographic conflict is not only social, and economic but also spatially distributed in the urban continuity of Tirana. The primary factor of this spatial distribution is not only the political factor, which has passed in various periods in shock conditions – such as the loss of the property right but the factors are rooted in the urban morphology of the city and its historical development. Till 2014, with the introduction of law 107/2014, and government changes, the process of property transition was an ‘open will’ of the stakeholders to bargain the price and the retribution – mainly with apartments. In the middle of 2000, the retribution was 40% of the new development, over the years this percentage dropped to 20%. Nowadays this informal practice, of ‘open will’ among actors to bargain, is impossible due to the intervention of the state with the Inspectorate created to track, stop or demolish where informal settlements have been raised. The construction of the “Great Western City Ring” is one of the examples that show this historical transition of the property transition process. As the two case studies show that in the “Astiri” area process of property transition has occurred with an open will to bargain with the stakeholders of future developments, instead in the urban area of Kashar the urban transition with the intervention of the state and the Municipality of Tirana.

The ongoing macro-urban issues. The change of the bargaining conditions by state rules and interventions has left little possibility for the inhabitants to get into a peaceful substitution. However, there are cases, urban forms, practices and common rules that exist in the territory that contributes toward a softer substitution process, by reducing the conflict and adding communication among the inhabitants. Some rules stand on the exchange of material means, beyond financial, while others stand on common rules and communications. The exchange of material means is often a neglected issue by the institutional planning system but is very evident in the territory. It affects mostly

those material means that are denied to the inhabitants by the state, such as alternative land use, the common wells, common materials of construction, common semi-private roads and squares, common lightening by night, common parking, and many other forms shaped in the territory and that in certain circumstances are even co-managed. In other cases, the bargaining conditions that make softer the urban substitution stand not on material means but rather in communicative practices and urban shapes: such are the bricks thrown in the land lots, showing that there’s an interest expressed in the urban development even before building in, or for example the hidden economic activities showing arrows and other forms communication to the local inhabitants.

### **The two areas: Kashar and “Astiri”**

Presentation with the area. The area of “Kashar” and “Astiri” is one of the last neighbourhoods added to the city administration of Tirana Municipality after the territorial reform of 2014<sup>11</sup>. Our focus in Kashar and “Astiri” is going to that urban area that is continuous and attached to the city, intending to look at the deep territory of the west that brings to the agricultural land. In this perspective, the limits of our territorial focus are the Great Western Ring and the city edges. Our area, in the northern part, is confined to the Lana River, and in the south Rruga e Kavajës. In 2002 the new Mayor of Tirana pushed the building interest of the city outside the administrative borders, to Kashar Commune. From 2002 to 2004, more than half of the empty agricultural land will be filled with big building blocks. Most of these building constructions will be settled on the primary road, following the old agricultural lands, without a regular permit. Slowly new processes of bargaining processes will take place, singular informal family houses will be substituted by multi-family dwellings - big urban blocks. In many cases, these territorial substitutions have configured the land partitions, occupied, fully by those actors, and inhabitants, engaged in a financial agreement. In other cases, the land configuration has happened partially. For a better understanding of the substitution process that has taken place, we should look at different property regimes and not only. In some cases, the substitution process has occurred also in the infrastructural network, in some parts, and in others show two different pictures, each of which focuses on the extreme contradiction of the substitution process. We two different forms of housing typology, in the same neighbourhood, co-existing at the same time and with different land configurations. Also the main boulevard in the Kashar area, where in the middle of the crossroad there is an electricity supply cabin. The substitution process, from a water canal, into a path, and later to a paved and designed process from the top down gives a complex and different result on the territory and land configuration.

**Why these two areas?** Beyond the territorial contradictions, the area of “Kashar” and “Astiri” keeps many forms of common rules that make softer the process of substitution from the top down to those bottom-up initiatives. The focus area is one of the oldest villages not only in the Tirana region but even beyond.

A historical village named Yzberisht has been on the feet of the hill, west part of Kashar, and the downfield with Lana river was used since the middle ages for agricultural purposes. Only after 1990, the area will be affected by the first settlements as a continuity with the city of Tirana. A historical church named “Kroji I Shengjinit”, destroyed during the communist regime, was one of the only buildings in the area in that period. Some of the water canals were following the direct award that building. The area of “Astiri”, brings the name of one of the first shops in 1990 selling colours and varnishes for the new buildings in the neighbourhood. Since that day locals, and not only, calls the southern part of Kashar that name, “Astiri”. Both areas share the same history as many other informal neighbourhoods developed after 1990 in many big cities. The similarity of these neighbourhoods is the primary factor that brings our territorial focus research to Kashar and Astir. The other factor stands on the maturity degree of the area with the informal settlements, which are dated by historical moments of being the first areas to be developed informally.

One of the last reasons that explain our focus area in the Kashar and Astiri neighbourhood stands on external properties of the area, such as the geographic position. The area is limited on the north and the south from two main boulevards that connect the city centre with the interurban network, such as the SH2 highway with its extension, Rruga Durrësit, to the city centre, and the southern SH56 with its extension, Rruga e Kavajës, to the city centre. Being in the middle of these two infrastructural networks put the area of Kashar and Astiri under high mobility pressure. The area shows a high appeal to have various forms of land use and property configuration.

**Research Limits.** The research focus is on a spatial configuration, considering forms and common rules that shape the territory. The research is not going to focus on transaction planning from the substitution process, but rather on communication tools, formal a not formal. As emergent urbanism happens, the substitution process flourishes. The area of “Kashar” and “Astiri” shows that the process of substitution which has occurred between two housing typologies, and less on the infrastructural network, has created various forms of land configuration. Most of these new land configurations are a product of common rules. Our research focuses on these conditions in “Kashar” and “Astiri”, in the section “voice from the field” with various urban forms and architectural dimensions that explains better the situation when common rules shape the substitution process. The methodological limit is the historical developments of each condition, shown in the last section. The substitution process will be described on the neighbourhood scale but without showing the detailed substitution process for each condition in different stages.

### Description/analysis

The first historical building in Kashar and Astiri neighbourhood had a mono-function of land use – that of housing. Even-though mono-function land use the area shows various configurations of property regimes. The area of interest, in 2002, approximate-

ly 160ha. The black marks the buildings, spread following the water canals and the pathways on the side. The water canals had a standard distance of 200x200 meters following Lana River, coming from the city centre, toward the vast agricultural field of west Tirana. Most of these buildings will be settled in the middle of the agricultural land, others right on the crossroad of the pathways along the water canals. Latter these different positions will lead to complex use of the land and the property regime but also the accessibility issues toward the houses build in the depth of the agricultural land. These new complex conditions in most cases are made of common rules among the inhabitants. The land occupied and fenced, signed with dark green in, is a static factor of the property use, but what makes more complex the property configuration more is what remains outside the built and occupied land. Some of these areas speak about partial development of the agricultural land made by 200x200 meters, with a fast process of substitution along the existing pathways and a slower process inside the agricultural land. In another case the process of substitution has changed the property regime of the householders, transforming the area from a complex configuration of property regime made by the single-family houses into rational planning of multifamily dwellings.

For a total of 36 agricultural lots, made of 200x200 meters each, in 2002 there were 10 lots with few or no buildings in them, all the other land lots were filled by single-family houses, see Figura 7. In 2021, see Figure 8, four of these land lots, will be transformed from agricultural areas to multi-family dwellings, respectively lots nr 10, 15, 27, and 31. The other 6 lots will remain till nowadays for agricultural purposes. The rest of the land lots that were built in 2001 were 26. The total substitution process of the housing typology will occur in only 6 of these land lots, and partially in 20 of them. The land lots involved in the substitution process are closer to the Great western city ring and less on the edges of the city. From this perspective, we understand that the multi-family dwelling has been located partially on agricultural land and partially on the existing urban layer of single-family houses.

The substitution process happened there and the legalization process was unclear for the inhabitants. These areas were close to the great western city ring but less in the internal consolidated area on single-family houses – such as lots number 1, 2, 3, 4, 5, 8, 19, and 21 – this last located along the Lana river basin at the north. For a better understanding of the uncertainty that the inhabitants of the informal areas face regarding the tenure right, we should see the size of the land and the dimensions of the building, see (Kacani, 2018). On some land, these configurations and building dimensions are designed and used by various local practices and voluntary actions of the inhabitants shared and accepted commonly. Figures number 6 and 7 show on the map not only the land occupied by the single-family houses but also those land parcels shaped for common use and access.

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<sup>10</sup>The Great Western City Ring of Tirana was planned since the Regulatory Plan of Tirana in 1991. Now-days only the western part is developed.

<sup>11</sup> Territorial and Administrative Reform in Albania

These land parcels cannot be legalized but at the same time are a common resource for the inhabitants living in these lots – respectively 1, 2, 5, 8, 9, 12, 13, 17, 21, and 23. These land lots are also those where the substitution process did not occur. In the next session, voices from the field, we will find out that the common resources and rules have maintained these settlements consolidated for more than 30 years.

### **The ongoing process of substitution**

In this part, the new developments in the substitution of the old urban tissues should be presented analytically. We could also select 2 or 3 relevant examples for each case. Lot numbers 1, 5 and 23 are the most significant areas where the substitution process had occurred partially, but not and the centre of it – where single-family houses are consolidated. These lots are significant because they are a good representation of the spatial substitution process, what we are looking for, and at the same time areas where common resources and rules are shared among inhabitants.

### **Voices from the field**

Starting from the map, and the identification of the lots in substitution, the pictures below show how the cases in which inhabitants have shared common resources and rules. Figure 9 shows how land is used for common purposes, such as a long pathway passing through the land occupied by single-family houses. The two rocks at the beginning of the street signify common rules of reference. The other case shows that land has been preserved for trustworthy newcomers, such as relatives of local inhabitants. The other cases below, from lots 8 and 9 in Figures 6, 7 and 8, show that common resources, such as land and local materials of construction are a reality for future constructions and houses.

The first case shows how soil consolidation happens before new constructions will take place. It is local knowledge based on the common rules and acceptance degree. Happens that when inhabitants do not accept the new practice the bricks are removed. This case shows the beginning of the process of land occupation. The other case shows local materials, saved from the previous constructions for new ones.

The next cases from lot 1 and 5 show that common rules give the possibility to create different economic activities and mobility networks. Sometimes hidden from nonlocal inhabitants these places offer the needed affordable service and the ability to move into the private land occupied. The first cases show a shop covered by the main street but opened if you follow the left entrance. This design issue permits the shop owner to maintain common rules and a certain selection of his clients. The second case shows a corridor 15 meters long created by the inhabitants to pass through the single-family houses to the urban block of multi-family dwellings and later to the western city ring.

### **Discussion: main problems and what should be improved**

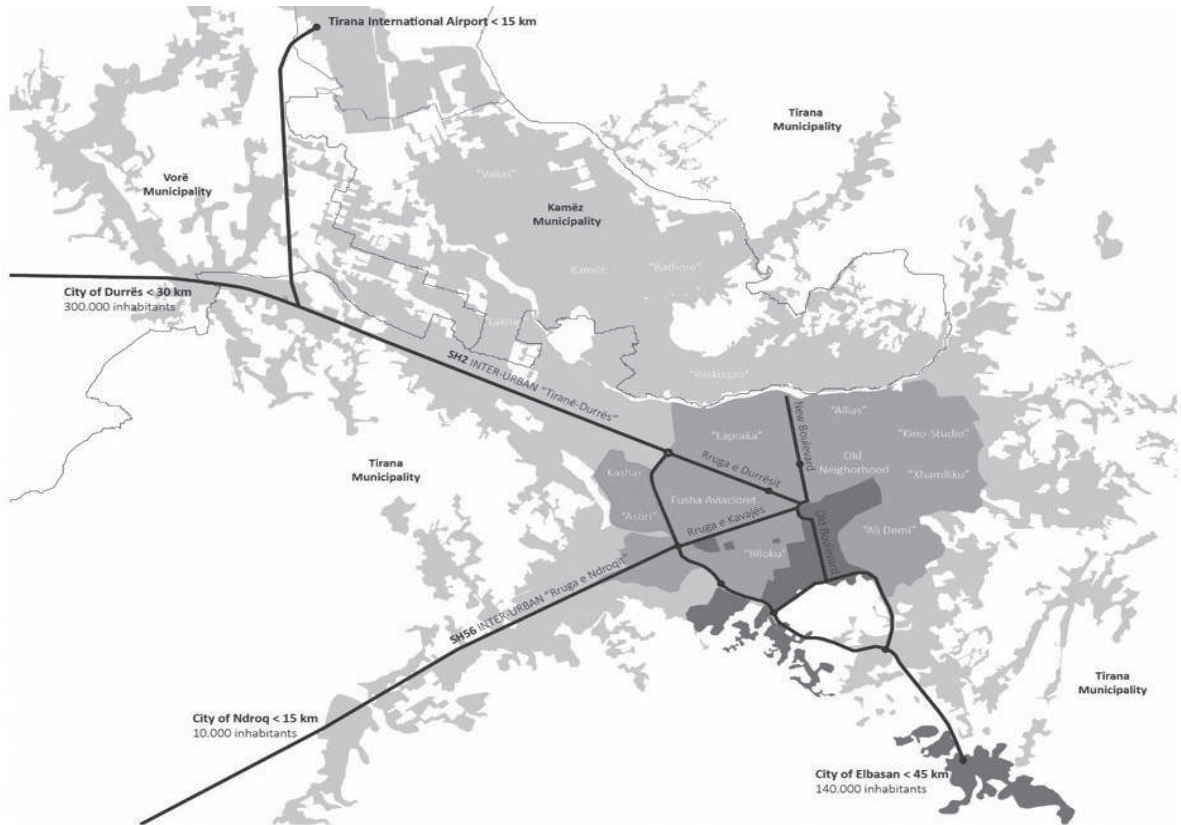
Beyond the existence of alternative common resources for the

inhabitants, more affordable, and more connected to the local solutions and knowledge, the area of Kashar and Astiri misses a broader scale of management of the common spaces. Many are the “urban pockets” where the common land is seen not as a resource – due to accessibility or omniscient design from the top down created by the real estate market of the multifamily dwellings. Missing a larger scale of management means at the same time losing the ability to be recognized institutionally – which might mean getting primary needs and services, such as water sanitation, adequate energy consumption, education, and health. Although some of these needs and services are commonly created and shared among the inhabitants the area remains not integrated with the rest of the city.

What remains to be done is to understand further the complex common rules and resources that have been created in the territory and find out whether they exist or not in the other informal areas and prevent the social tension created by the substitution process.

For more than 20 years the area of Kashar and Astiri has generated financial and spatial substitutions. The financial substitution process has generated a competitive situation to get into better situations of bargaining. Instead, the spatial substitution has generated common rules, resources and territorial signs and identifications for better mobility and more affordable economic activities. However, the informal situation, coming with the new transformations the substitution has created a neighbourhood without primary services and with a low degree of housing adequacy.

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Workshop Results



## A Stage For The City-The Meant-to-Mend Element

MONIKA MARINOVA

*FA Platform*

DORIANA MUSAJ

*POLIS University*

Over the past year and a half, people around the world have had to change their lifestyle, beliefs and priorities within a turbulent race to outrun nature's biological avalanche by means of structured thought. This debate has often put subtle and intangible considerations in the background – are public man and public life injured? – Public life is an essential component in every society, but have the recent conditions created a context, which we can no longer enjoy? These conditions can be redesigned as either creative proposals or a catalyst for such. The design workshop is driven by a search for a simple functional part of a building or the public realm that has the potential to change its presence, be discovered as a versatile object within a space. Students will be encouraged to look for ways in which this part can be multifunctional and perform while being in a changing environment. We will be looking for the new presence an object or a space can have, and how this object or space can carry a symbolic societal function that is visible through its materiality and design. Main questions of the workshop are: How can we design something (a defined object) which can be a valuable addition to the public realm, but also be inspired by the rising debate about Covid and offer a point for contemplation and discussion; How can we find a way to give a material life to a non-material topic, design something concrete inspired by a social condition.

### Objectives

The main objective of the workshop is to build a mindset that

does not take restrictions and safety as templates and margins that frame a design; rather they are a milestone for a creative rethinking of spatial notions. The design component asks for a thoughtful piece of architecture, be it in the shape of a thoughtful proposal for renewed circulation and wayfinding, or something as simple as a doormat, a bench, a door, a coat hanger, paving design, etc. to be considered as an embodiment of a global debate.

### Methodology

The workshop is imagined as a mini real-life project for an urban intervention – including survey, research, proposal, mock-up. This methodology helps to understand the importance of each component within a project of any scale – a month, or a year – but the current project exposes the students to the full process within a week. A successful design process will embody a material representation to this conceptual debate about society impacted by Covid-19, modelled at 1:1 or 1:5. Learning the practical skills of model making and knowledge of materials, their constraints and opportunities, becoming confident in working with specific colours, materials, shapes.

**The content of the course.** The course was held within 7 days, within the university auditorium and outdoor activity. The first day, is a presentation to the site where the students identified a location (within Skanderbeg Square) within the public realm that has been transformed as a result of the new imposed ways of behaving in public – a concrete, physical, but also an



Workshop Process Imagine

ideological change, or a pattern of use can be identified. (New behaving in public, queues, distances, bus stops, lobbies, pavements, entrances, shops, parking spaces) The purpose was to carefully evaluate the pre and post-Covid-19 characteristics of the place, as well as conduct a physical survey: photographs, measurements, a drawing and a piece of text containing the surveys.

The second day was dedicated on relating the found situation, to a theoretical background in order to contextualize and scrutinize the findings and observations. (Theories on place-making, hygiene, psychological effects of social distancing, new cultural life, new social life, new patterns for conducting work, abandoned place such as car parking) . The transformative power of design is seen as a tool to suggest new ways to approach the object studied: through an addition of a carefully designed piece, through redefining a public room, through re-designing a threshold, etc. Make suggestions for improvements through design.

The third and fourth day of the workshop, was a self-directed study. Students developed independent work from the tutors, by creating simultaneously groups of students. By working outside the auditoriums, in the site or common places, this time was preserved to thinking through the ideas and suggestions for new interventions, sketch ideas and think about ways to realize them through a 1:1/1:5 model, by refining the surveys, drawings, photographs, quotes. During these time, students, returned to the auditorium, to consult with the tutors, and define a clear project, to develop a specific proposal model digitally or a 1:1/1:5 mock-up, within three next days. After establishing the model, material and conceptualized the main project-idea, the sixth day was dedicated to the preparation of the presentation and the composition of an exhibition panel A1 size, which includes a title, subtitle, paragraph with your idea, survey, photograph, drawings/photographs/images of the proposal. As a last product, the students had to create a design for a postcard and use this period to practice with each other how to present the proposal in front of the group of the class within 5-10 minute period.

The last day of the workshop was the presentation of the work held. By organizing a lively event where participants comment and critique each others advancements, propose speculative scenarios and suggest what the future of their projects could be, a discussion period after the presentation was held. Other university members and class students also visited the exhibition with the projects and models.

## Conclusions

Each of the ongoing tasks are seen as individual short assignments, where, it is required to produce a succinct piece of information related to each – a simple but evocative drawing or a photograph of the chosen object, a diagram showing the broken working of the particular setting, a succinct quote from a studied reference, a drawing or a model of the proposition – presented in a simple expressive way – a clay marking, an expressive charcoal sketch, a performance etc. Working in groups

was a successful experience as the students, connected and exchanged their knowledge, but also learned new skills from each other such as: photography, text, drawing, low-tech printing, modelmaking with clay, wood, plaster, metal, cardboard, paint.

The final outcome was a short presentation on a single A1 sheet (digital) containing the outcomes of the individual design tasks executed: a quote, a survey, a diagram, a motivation text. The final one was a photograph of a specific designed and fabricated element which has been installed in a real place in Tirana - a thoughtful urban design provocation. The workshop was imagined as a mini real-life project for an urban intervention – including survey, research, proposal, mock-up. This methodology helped the students to understand the importance of each component within a project of any scale – a month, or a year – but the current project exposes the students to the full process within a week. They could approach the project within their personal experience during the pandemic lock-down or either from other perspectives. The reflections on the new approach to the post-pandemic city, generated several new aspects on the way they think of the space, the green and the community engagement to the common spaces.

*Monika is a young architect who graduated from London Metropolitan University. Her ethically-driven project won the Young Talent Architecture Award, part of the European Union's Mies van der Rohe Award. Previously, Monika worked with Hawkins/Brown and Takero Shimazaki Architects on education and public projects requiring a sensitive approach to design. Continuing to explore the intersection between social value and design, she is currently part of interdisciplinary studio Think Forward.*

## Data Processing for Risk-Based Design

**ILDA RUSI**

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**ENDRI DURO**

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Facing natural hazards and reducing their impact has always been one of the most challenging tasks for many professionals including civil engineers. Since natural hazards are characterized by many uncertainties, their prediction and the consequences on society are difficult and the results are tightly dependent on the available data. For years now there has been a shift in the way disasters are faced, going from post-disaster emergencies and recovery to a risk-based pre-disaster measure. Achieving this requires a full understanding of the concept of risk, which is composed of three elements: hazard (H), vulnerability (V) and exposure (E). How each of the elements is characterized is depended on many factors including mainly the data availability. The models used to analyze a built environment or single buildings vary from advanced probabilistic quantitative analysis to simplified qualitative analysis. There is no “correct” model to be used, the selection of the appropriate model is based on many factors including; the group of stakeholders, the scale of the problem and data availability. If an event has a non-human nature the consequences of such events are due to human interventions therefore it is of greater importance to properly analyze the built environment to define the level of vulnerability, which gives roughly the level at which certain buildings or areas are susceptible to being affected by a possible future event (seismic, flood, landslide etc.) causing, therefore, a disaster.

### **Objectives**

Reliable quantitative and also qualitative analysis requires a good level of data no matter their nature. Thus, the aim of the workshop, taking into consideration the fact that Albania is prone to many natural hazards mainly earthquakes and flooding, is that of collecting appropriate data in a qualitative and/or semi-quantitative way through several questionnaires and forms which can then be used to characterize the risk, which on the other hand can be a handful for several decision-making purposes for authorities and specialist, or even communities in a local territorial scale. The workshop will focus on one of the major cities of Albania, Durrës which recently was affected by a strong earthquake.

**Specific objectives of the workshop:** Elaboration of the data collected by the questionnaires, forms or other means (measurements, photos, visual interpretation etc.)

Using the data to define the levels of risk and to determine which levels are acceptable and which are not.

Based on engineering judgement the determination of proper measures to reduce the levels of risk through the proposal of several mitigation measures.

### **Methodology**

The workshop was divided into two parts: a theoretical part and a practical part.

In the theoretical part during the first day of the workshop, an extended lesson was introduced to the students participating in



the workshop. In the presentation, several basic concepts were introduced regarding the topic, the importance of such analysis and the impact on future developments, the role in sustainability and resilience and a brief introduction of how such analysis can be performed. The practical part consisted of a site visit for 1 (one) day for the students to collect appropriate information through several elaborated questionnaires' by the tutors of the workshop. The class was organized into 4 (four) groups, each one covering a specific area within the selected case study zone. Site visits combined with google maps were fundamental to collecting appropriate and complete. The remaining days of the workshop consisted of the elaboration of the collected information in the form of thematic maps, each one giving a piece of specific information for the buildings located in the studied area. Some of the elaborated information; is the number of stories of each building, building age, structural system, road accessibility, state of conservation, function, utilization, proximity to open spaces, building density and building irregularities in plan and elevation. The questionnaires and forms were elaborated specifically for a seismic event since the selected variables have a direct or indirect contribution to the level of vulnerability and therefore the level of risk. Other similar questionnaires can be elaborated to evaluate the physical vulnerability of a built environment for those natural hazardous events.

On the final day of the workshop, each group presented their findings using the elaborated maps and also a PowerPoint presentation, briefly explaining the procedure, setbacks and recommendations for the areas they were studying.

## Conclusions

Following the work done by the students during the week of the workshop and their presentations some of the main conclusion points are as follows:

The studied area has a similarity of buildings in terms of building typology and building age. Mainly new buildings not older than 20 years are present and the most used structural typology is the frame reinforced concrete with cases of masonry buildings

Most of the zone is developed along the road axis, therefore, making them accessible to the infrastructure lowland ring the risk since the access during the emergency phase is immediate. There are some areas though due to hilly characteristics that have slightly lower accessibility

Most of the buildings were flooding resisting floor or multi-floor, and very few critical infrastructures including hospitals and schools were located.

It is important that besides the information on a building scale there is the need for a combination of such information with additional data characterizing the surrounding built environment (infrastructure and open space) to take into account the complex nature of urban and non-urban systems. Such connection is very important during the emergency phase, but also during a long-term post-disaster situation. Mapping the information is one of the easiest and clearest ways of representing the data. Such information can be easily interpreted and understood by

various stakeholders, from municipality experts, engineers and planners to the simple community, which is the main stakeholder since it is directly affected by these possible disaster scenarios. To prevent losses and prepare for future events, information, perception and education are fundamental.

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Teachers and students together during the workshop



# Recycling Junkspace

XIAOYANG FANG & YUANPEI ZHUANG

*FA Platform / UN-Office(Uncertainty Network Office)*

MIGEL SHEHU

*POLIS University*

The Covid-19 pandemic has turned or at least revealed the world into a literally junkspace: government disorder, construction shutdown, garbage rampage, mass unemployment, and so on. Human beings are confronted with the most pervasive stagnation and chaos after the Cold War. Inspired by the "Junkspace" concept by Rem Koolhaas and a series of shelter prototypes in the 1960s and 1970s such as Drop City, Environmental Bubble, Manila's "self-help" squatter settlements, and so on, "Recycling Junkspace" intends to seek new shelters or prescriptions of the junkspace to drive human beings into a sustainable relationship between human, environment, and technology. Rather than additive re-creation upon junkspace, we aim to transform junkspace into creative agencies. We hope to recycle junkspace and fabricate residue to re-examine the "surplus production" brought by industrialized modernization. We propose to challenge the students to create new prototypes of "Shelter" (installations or devices) with recycled construction trash (plastic sheets, plywood formworks, etc.) or by-products of industrial or everyday production (bottle caps, wasted cement, abandoned clothes, etc.) to produce new materials, new tectonics, and new forms to rebuild and reactivate the junkspace in the city: unfinished constructions, abandoned assets, decaying public spaces, shanty slums, and so on. Inspired by Levi-Strauss's "bricolage", we intend to provide environmental debug codes of urgent humanitarianism and survival formulas for homeless squatters. "Recycling Junkspace" tries to provide a repair mechanism and visual reference to solve the

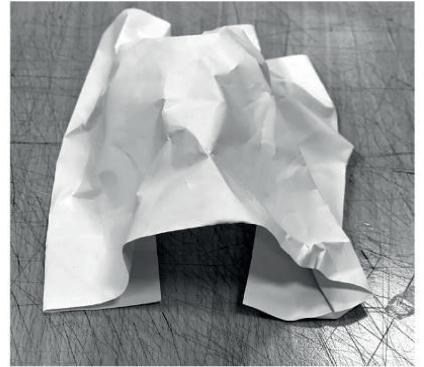
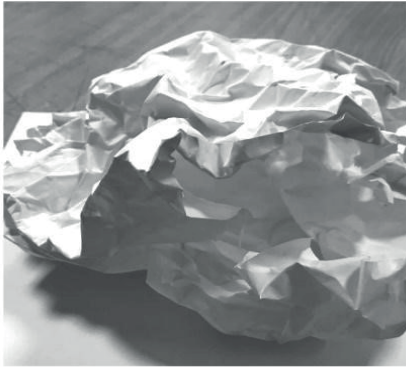
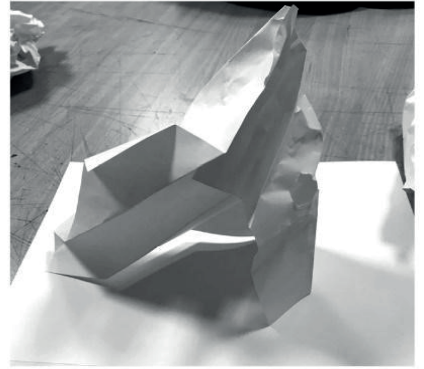
problems of overpopulation, over-construction, over-consumption, and so on.

## Objectives

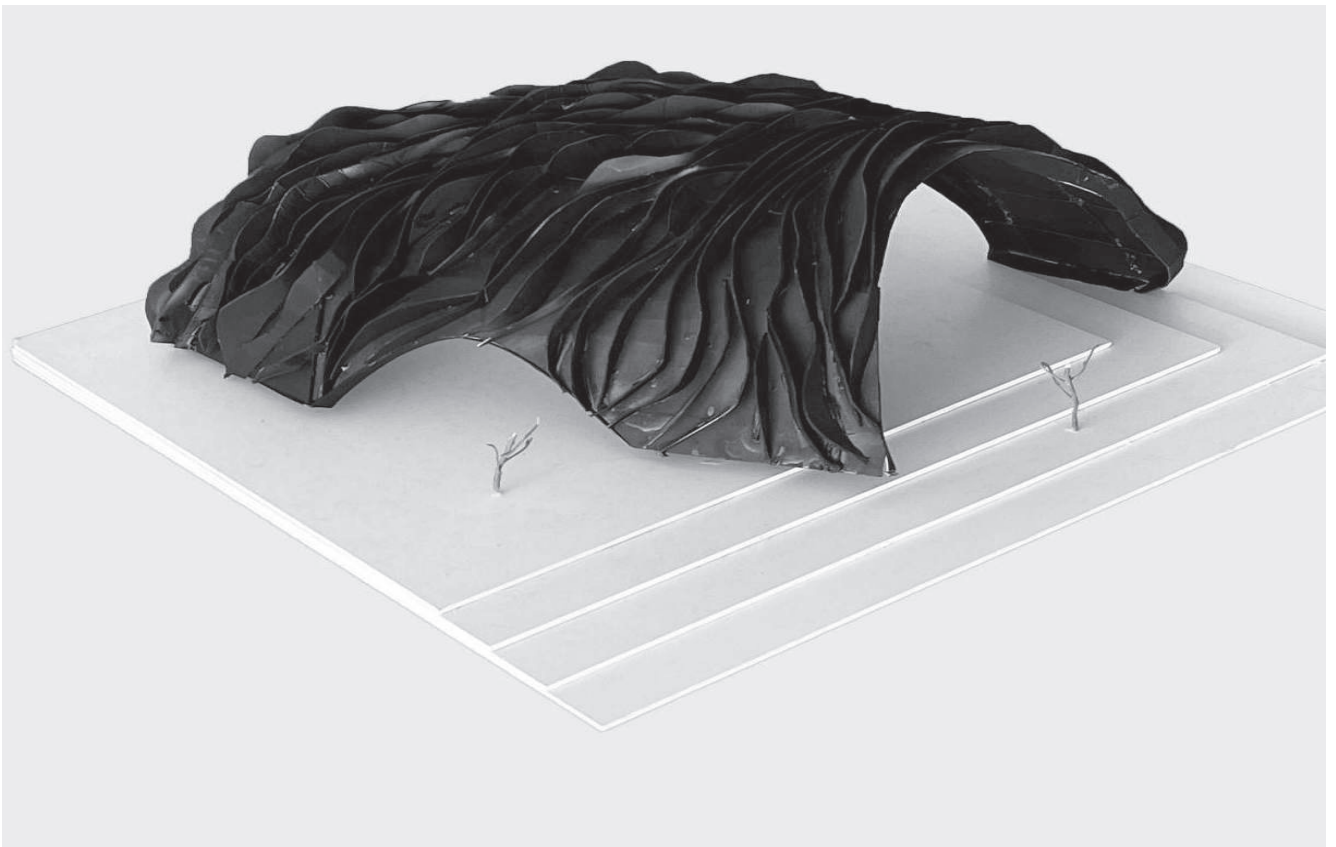
Shelter design, model making, social aspects of architecture (reactivation of urban junkspace, new post-pandemic urban "shelter", Informal architecture& urbanism, etc.), materials in architecture (informal/"formless" construction, construction trash recycling, new tectonic and form by recycling material).

## Methodology

In the workshop, students developed a strategy of RECYCLING for both architecture and city-making. Students worked with a sustainable approach to healing the city during and after pandemics. By recycling junk material, students expanded their understanding of the material, tectonic and construction. Informal material with informal tectonics produced informal but brand new and creative informal architecture and city-making strategies. Students made eccentric, weird and slumpy models which provided us new perspectives into architectural forms. Recycling surplus material and urban space can create sustainable, reciprocal and negotiative tactics into urbanism. Teaching was delivered in multiple formats. From thematic 'handstorming' -improvising model making, site visits, material study, etc. Work at all times was iterative and playful, testing multiple visualizations and model design strategies. This way of working is critical, as it allows you to gain better control of the design



Workshop models



Workshop models

and performative strategies, to test and then refine them. And it also allowed you to demonstrate, more broadly, that adaptive projects could respond in multiple ways to multiple possible conditions; while no single outcome was certain or fixed.

### **Conclusions**

During the workshop, the students collaborated to study the junkspace in Tirana and the "junk" as new material to construct. Each group of 4-6 student selected one junkspace to reactivate and series of junk to reproduce. By the end of the workshop, each group produced a shelter design with junk as construction material and plug it into the junkspace to empower them with a fresh form of life and possibility. We are not providing shelters for artists, but artistic shelters; we are not creating a utopia, but a realistic bricolage in pragmatic templates." Recycling Junkspace" aims not to normalize or romanticize junkspace, but to fill the useless junkspace with "formless" creation to utilize the surplus space into a new form of creativity, which endow human being with more humanity, empower the society with more democracy.

*Uncertainty Network Office ("UN-Office") is an unofficial, unlicensed and unprofitable group of architects, urban designers & artists. UN-Office was founded by Xiaoyang Fang in 2017. We call ourselves an office while it's more like a community. "An" and "Un-" is not only a pun but also conveys our focus on duality, contradiction, complication and ambiguity in architecture, art, urban and humanity.*

## Tirana Guide of Post-Pandemic Public Devices

**EDUARDO CORALES**

*MOB Projects*

**KRISTIANA MECO**

*POLIS University*

MASË its an exercise about the possibilities of some devices to improve the public condition where they operate. The work will be focused in the common condition of some Tirana places trying to stablish a itinerary of micro-architectures (or mi cro-uthopias) The abstract condition cre ate a mass of possibilities and new strategies to give to the city the necessary elements for a post-pan demic era. There's some thoughts about it.

**Parku Rinia.** The site chosen for this project was 'Parku Rinia', wich is one of the main parks of Tirana. The reason behind this desition is that as in most parks, this is a place with many trees and plants with a large green area and swings for children. A place where people go to relax, a place for enjoyment where children and people can go to walk, run, play or sit. It has walking paths and benches for people and it is located in the heart of Tirana. We've chosen to work on a bench. The design of which is a simple one. Considering this is a place for relax the chosen shape of hexagon is a shape that is often used in religious space designs to exude peace and clamness. The hexagon is a pattern with natural motifs that for example is found in the 6-sided cell of a honeycomb, the skin of a snake and even the segments on pineapple skin are also essentially hexagonal in shape. Like a hexagonal prism this bench is unique, modern and comfortable. It is practical to make with little waste of mate rial. The designed bench blends in with the overall design of the park, giving it a more contemporary look.

**TID Tower.** What we thought was that this TID Tower area could be turned into a vertical garden.

The two forms supported on the wall represent vertical gar dens while the other form is intended as a bench, also filled with plants.

**Skanderbeg Square.** The Skanderbeg Square is the main plaza in the centre of Tirana, Albania. The square is named after the Albanian national hero Gjergj Kastrioti Skënderbeu. The total area is about 40.000 square metres. The Skanderbeg Monument dominates the square. As we can see this square goes way back in history and this is one of the reasons why we chose this place, we want to give it something new for the eye public. We chose this de sign to put in the middle of the square because it is not only something new and unique but it is also environmental healthy. This way we mix old with new. The base of the de sign is made of steel and the circles where the plants stay are made of strong glass, this way we can see everything from beneath. This kind of design is something that we don't usually get to see that's why we think is going to do good in the post-pan demic time in this Square. This are possible solution for pub lic space in different urban context. It would make people curious to see, which would increase hang-outs and bring life back to normal.

**New Boulevard.** For this area it is planned to place some large benches with a space determined by each other. The benches will be of different shapes and all made of plastic in order to be more 'friendly' for the children who will play in that area, and they will be less at risk of having injuries. This choice was made because this area has a very large and unused space which could very well be a space dedicated to some extent for

children. These are benches that are not only commonly used, as they will not only be used to sit but because of their unevenness they will be used by children to play, slide and have fun. Some of them will be high enough to sit an adult and some of them will be too low and will be used only by children. So their different sizes will determine their use at first sight. But the characteristic of these benches will be the unevenness they will have. So these benches would be the most efficient choice for that area so that the area becomes more attractive and not only, but also usable by people.

*MOB is an international design incubator that develops furniture projects designed by artists and architects. Based in Lisboa and Santiago de Chile, MOB aims to invite young creators from different parts of the world to present proposals that confront their points of view around a piece of furniture. Through exercises based on their own local realities, these pieces are located in a global scene and then finally return to the intimate context of their daily use.*



Workshop process



## TIRANA STUDY CASES



- 1 \_ THE NEW BOULEVARD (2021) - various
- 2 \_ PIRAMIDA (1988) - Pirro Vaso
- 3 \_ PARKU RINIA (1950) - various
- 4 \_ TID TOWER (2016) . 51N4E
- 5 \_ SKANDERBEG SQUARE (2017) . 51N4E



Workshop material



## Reflections On The Right To The City

GREG LINDSAY

*Chief communications officer at Climate Alpha (CAN)*

The notion of the right to the city comes from the French Marcel Franois Lefebvre but, if I wanted a one sentence quote, I would prefer David Harvey's, which states that the 'right to the city is the right to remake, to transform the city and be transformed in it by ourselves'. In return of that how do we make the city and how does the city remake us? In my opening keynote I want to talk about some of the responses to the pandemic but also about some of the threats that loom on the horizon in the post-pandemic city. Doing so will hopefully set the stage for conversations about possible interventions, and where do we choose our points of leverage in which to remake the city.

I was in New York just last week for the first time since the pandemic. I emigrated to Montreal in 2019 after living in New York for 20 years, where I stayed in Times Square. That place was one of the familiar images from across the globe, particularly in March 2020, where saw shutdowns and stay-at-home orders. There was an entire discourse whether cities were over as we knew it. Even though being an American, at the moment staying in Canada, my data sets and points of reference come from there and of course this was one of the challenges of the pandemic: we were all isolated. We anticipated dense migration from cities will accelerate, and the people will we all flee to the countryside and use zoom. It is in fact fascinating that we had the tools on the ground and were able to pick up and leverage from here, but, of course, this whole discourse of doom and gloom that cities would be over has failed; COVID didn't kill cities. This is one of the interesting conversations we've had in North America. I have talked to Richard Florida regarding the rise of the creative class; he surmised that Americans hate cit-

ies and every time there's a crisis, they'll start blaming the city.

However, we have seen the return of cities, and this creates its own problems for the other side of the pandemic. The inequalities that existed in superstar cities around the globe that were capturing most of the growth have only widened. But we also saw a glimpse of hope in terms of how we could remake the world as well, and this is a paper that was published in Nature last spring and showed that during those first few months of lockdown global carbon emissions declined by 17% almost literally overnight. This, of course, was at the cost of 40% of the GDP which I thought was really interesting.

So even if you shut down nearly half of a global economy you still barely make a dent in the global carbon emissions. Even if we decide to not leave our homes for long periods of time the carbon processes are still in place. This really underscores how much work is to be done if we are to achieve decarbonization. It has also showed where the points of intervention actually lie, and where we can make the biggest difference. The vice director mentioned aviation; of course, aviation is consistently vilified as one of the main sources of carbon emissions. It's true, jet fuel is very hard to replace, and the world has been going in the exact opposite direction prior to the pandemic. This is a stab that I can never ever get over because simply the transition from sedans and light cars to SUVs and light trucks, which, I believe, it constitutes 70% of global auto sales, were the second largest source of carbon emissions over the preceding decade, more than aviation and more than heavy industry. So these are the kinds of trends that we need to try to arrest, which, again, have not ceased during the pandemic. Global auto sales are up

across the board as people become afraid of public transportation and shift to personal vehicles. How can we change these behaviors? I'm going to discuss about a series of wide-ranging topics, but I want to begin, as the director pointed out, with the notion of a 20-minute or 30-minute city. Paris it's a 15-minute city, there's a 20-minute one, there's a 30-minute one in Bogota, there's the five-minute city in the Kingdom of Saudi Arabia, and there's the one-minute city in Sweden which we'll talk about. When Milton Friedman was talking about the financial crisis of the 1970s, one of those ideas that was lying there on the ground waiting to be put into use was the notion of the 15-minute city devised by Carlos Sereno at the Sorbonne in Paris. This was the idea of how to remake Paris's centre; how, in a city of neighborhoods, to reorient everyday life to a 15-minute walk or bicycle ride from the center to the periphery. The 15-20-minute or even the 30-minute one is quite interesting because, if you study transportation, you might be aware of Marchetti's constant, which this is a *de facto* human law. Cesare Marchetti, an Italian physicist, noted in 1994 that if you trace the data and look at the urban expansion of cities, the time that humans invariably spend traveling on a day-to-day basis from the center of their lives to the periphery is 30 minutes or so, and the evolution from Athens's agora to modern Berlin was one of his examples that evince the evolution of the city's toward a condition of mobility made possible by the combustion engine vehicles. Under the condition of a growing periphery, what made Cerino's idea so radical in its own way was basically to collapse that radius down to 15 minutes and start from there.

Of course, there are problems with this concept as well, one of them being the fact that most cities are not like central Paris, which even central Parisians are not big fans of. There's also a concern of where should the investment go, because I think some of the discussions around the 15-minute city have been adopted in Milan, Madrid and elsewhere. One of the biggest adopters is Bogota, but it is being adopted as a way to disinvest in public transportation. Lopez Hernandez in Bogota has talked about how she wants to transition to 50 trips in her city by the end of the decade and has invented a very elaborate scheme there to basically reconfigure the streets to accompany this transition. One thing that gets less discussion in that case, however, is the fact that in Bogota, the trans millennial - the famous bus rapid transit network - is in a state of disrepair, and the city never really set out to build a metro in time. Therefore, the infrastructure that would carry people across the city and at the same time allow them to live in neighborhoods is something that is under danger. One of my fears, as cities embrace austerity budgets due to the pandemic hits and their tax revenues, is that we might see the 15-minute as a stop gap or measure, as a sort of band-aid or a bandage on the wound, and we should not allow that to happen. We also need to think about how we want to repurpose urban realm, in a sustainable and equal manner. When I was in New York, the city is full of parklets and pop-ups; you may have seen examples from around the world of how the streets have been repurposed. Well, in New York, it

is the fancy restaurants like Balthazar that are extended into the streets effectively, by borrowing or stealing from public space to extend their commercial activities. It is wonderful having breakfast there on a lovely summer morning, but how do we repurpose that space for others? How do we guarantee a right to the city for all and not simply for brunchers?

One of the most ambitious examples of how this is being done and one that offers a great set of guidelines, is what's happening in Sweden. Dan Hill, who's the head of INOVA, has embarked on an ambitious program to systematically think about how to create a one-minute city, the one-minute referring to the patch of asphalt or street immediately outside your home. He turned to Brian Eno, the legendary composer electronic music pioneer and author of oblique strategies, to think about principles about what do we want from our post-pandemic cities. In Stockholm and Gothenburg, and ideally everywhere in Sweden, they're inventing new types of infrastructure and programmable kits that they can plug-in the city, such as the wooden street furniture. What I think is particularly important about what Dan and his team are doing is that they are trying to create a complete kit of parts, or as he describes it: an operating system that borrows from computing in order to rethink what public space can be. They have an entire framework here for thinking about not just ad hoc interventions but about how to design an entire open-source framework by borrowing from software of wooden components that can be deployed, redeployed, re-tasked, and removed around as needed to address local needs where participants can choose and participate in the deployment of what's going outside their homes.

It is a very interesting attempt to try to marry federal top-down guidelines and programs with bottom-up individual uses to create a new dynamic language through which the streets get repurposed. They are fabricating and deploying benches and bicycle parking in the streets, creating new forms of urban infrastructure that will enable fifteen or five or one-minute city to happen, and I think we've barely begun to scratch the surface on this. If, in fact, we are going to intervene in the streets and start to think how to repurpose more public space for these interventions, we're going to need new types of public post pandemic infrastructure. Such infrastructure might look like markets deployed to neighborhoods or health care facilities. Do we bring the city closer to people do we to bring people into the urban cores and build more housing? One of the problems with the 15-minute city, as I mentioned earlier, is that if you are a person who lives in the periphery of the city and completely cut off from any services except from the car, then this is a completely unworkable vision. We need to think about how to deploy more infrastructure that reaches the people or bring the people to the infrastructure. Another side of this argument is to think about going back again to globalization and air and the global tourism industry which is the hallmark of cities like Paris. Ultimately the city was repurposed for global itinerant travelers like me. The business improvement district tasked my friend Felipe Umbreda with rethinking a design of the entire boulevard ahead of the 2024 summer Olympics during the pan-

demic. I was part of Felipe's team to think about the mobility solutions. I urged them to close the entire street to all automobile traffic so that we should repurpose it completely as a pedestrianized boulevard with infrastructure. Lately they found that a little too bold, but you can sort of see some of the visions that Felipe has now been tasked with to deploy. About 400 million euros is the budget to drastically increase the tree cover, extend the boulevard out, add more uses along the sidewalks there, and drastically reduce traffic. This will lead to rethinking what vehicle typologies will be allowed on the street. What is really interesting in this endeavor is that it was not prompted by a need to create public space during Covid. It was prompted by the fact that Parisians hate the Champs-Élysées, they hate it, because the people there are not from Paris, not from the neighborhoods. Like Times Square in New York, this was a street that had been completely repurposed for globalization, and for global travelers who are no longer coming now. So how can you repurpose it for the needs of actual residents, at least temporarily, or even for the long term?

It will be interesting to think about whatever shape tourism takes in the near future, and how to create cities that belong more to their residents than tourists. It is important to remember that those of us who are privileged to do remote work - at least in the United States - are of course the wealthiest and most educated. It is very much an elitist privilege to be allowed to work from one's home, and one of the things I worry about particularly, based on the research by Benjamin Page and others in the United States, is that elites shape public policy with regards to what the wealthiest and most privileged members of society want. Therefore, the narrative that we should disperse to the countryside, and we should give up on offices, will be adopted only for a sliver of a wealthy elite, as we're starting to see more and more functions absorbed into the home. There is a bit of an in-house joke, my wife being the former editor-in-chief of *House Beautiful*, America's oldest home magazine: *House Beautiful* used the pandemic early on to write about how American homes in particular had been so stylized and so idealized about that they were actually fit for the pandemic, and that we had to absorb all of the functions of the city into our homes if we were lucky enough. In reality, all our activities - our work, shopping, commerce, and child care, among others, showed the deficiency of housing as it exists in the United States and elsewhere, and how the existing single-family homes were not really fit for purpose.

It alarms me to see, both in a US context and elsewhere, how absorbing the functions of the city into homes is might push the people further away from the city. In the floor plans of America's largest home builders there are more and more home offices absorbed into our homes. How these configurations will happen in our post-pandemic times will define us going forward, and they will also depend on the current political polarization, especially that in the United States. If you are a liberal or center leftist, you believe in dense walkable cities and if you are a center rightist, particularly if you are part of the trump majority, you've been led to demonize the city and you

want to have the biggest possible home far away from the city, which leads in turn to a 60-minute city rather than a 15-minute one. So what is at stake today more than ever, is precisely the city and the right to the city as this political polarization widens. Rather than having traffic peak at the beginning and end of the day, people are now driving throughout the day and this endangers public transportation as well, in the United States and elsewhere. We need to think about new funding models for public transportation, if we're going to create a right to the city for all and not just for the elites who own their own cars and homes. We need to think very quickly about how can we redeploy these public transportation models for a 15-minute city so that people can move effectively through it. In the meantime the tech companies are deploying their own models of 15-minute city. We're seeing how Amazon and some very large players in Europe and elsewhere are responding to the opportunities presented by the pandemic for them. Matt Newberg, who publishes a great newsletter called *Hungry*, he went undercover as a driver for Amazon in the Summer of 2020, as Amazon was launching its new grocery delivery business called Amazon fresh. There he spent two days driving undercover for all the customers who were being served from an unopened grocery store, a dark store as they call it. He realized that in two days of making dozens of deliveries he never traveled more than a mile from his home. While we were all focused on building beautiful 15-minute cities, Amazon was building a 15-minute city of its own acquiring real estate building, new stores and luxury apartment buildings and creating new micro fulfillment centers in the middle of cities, so that it could deliver goods to you. Amazon was effectively creating his own data set to allow itself to understand where the demand lies. Its competitors here in Europe are all building their own versions of 15-minute cities as they attempt to monopolize delivery in 15 minutes or less thus changing the shopping patterns. US data shows, that the entire generation 25 years of e-commerce has devoured more and more of the street-level retail that once existed, such as bookstores and newsstands. Prior to the pandemic there were still personal services for young people going to restaurants, pet salons, nail salons, and all the activities that the pandemic briefly made impossible and forced us to change our behavior. Actual street fronts disappear as if - to quote from Marx - retail is melting into air. As I was walking in New York along the 14th street - one of the major thoroughfares - the storefronts that previously held retail had now become dark stores and ghost kitchens. One no longer shops on the high street, but instead orders everything from them on demand. It is this idea of trying to capture all behavior and passing it algorithmically 'under' their app's interface, that is, of trying to capture more and more of the urban fabric, that starts to alarm me.

Two possibilities present themselves: one is the dark store, basically stripped down to the raw shelves with inside; the other one is Israeli's elaborate warehousing systems fitted into storefronts. Companies like Doordash from the west coast are now acquiring their own infrastructure removing these dark stores and ghost kitchens away from the urban fabric. The high street

is dematerializing out of our site and re-materializing elsewhere; this is one of the major trends today. Anthony Townsend, the author of the book *Ghost Road* imagines urban scenarios under automation, one of them imagining housing built atop these delivery centers. Homes will be effectively built above warehouses because people will find this convenient; in a way it's like a hybrid of a shopping mall and Le Corbusier's 'Radiant City'. Here, instead of towers in a park, you have towers built above a warehouse or the mall, and ultimately, this is all about bringing services to people. We're seeing private players try to do just that by using a combination of data and flexible infrastructure in the US. Reef technology has acquired 4 500 parking lots across the States, and it's also got almost two billion dollars in Softbank money via the kingdom of Saudi Arabia. One of their pieces of infrastructure is effectively labeled as a shipping container or other sort of device, but it really is a disassembled building. That is how their design is being approached; like many tech companies, they are attempting to basically arbitrate regulation to create their profits. They have disassembled the building into a minimum viable structure which allows them to get around building codes and then deploy them to parking lots. In doing so, they can use data of where people are going, and where their services are and rapidly deploy these forms of infrastructure. The city effectively appears and disappears as needed rather than according to the classic law of real estate location. They are going where people are or where they have been by deploying increasingly minimal forms of infrastructure - this is what we should think about when thinking about the post-pandemic city.

This idea of massive convenience serving people at the edges is a wonderful service that should be thought in conjunction with the imperative of the and how it can be automated. Of course, automation drastically adopted during the pandemic seems to favor social distance. Seven years ago, I was at the Google Plex, hosting a conference there about the sort of futures of autonomy. At the time, Astro-teller was Google's - or still is - in charge of their most advanced programs including the self-driving cars. I thought that we might need self-driving buildings as well as self-driving cars, and it was like a lightning bolt went off inside me because I realized that when we think about a self-driving car it's like talking about a horseless carriage. Its autonomy and automation consist of a set of technological capabilities like lidar radar which is now in your phone and can be deployed into other things including potentially self-driving buildings. China is the fastest adopter of all this automation. I had interviewed the CEO of Needlex, and this is their sort of self-driving unit, a self-driving car spraying antiseptic delivering meals for KFC during the pandemic. China seems to take this extension to its logical core using data sets to basically deploy its vehicles to where it thinks traffic is going and where people are. This creates all sorts of possibilities for algorithmic redlining, for basically leaving large populations outside of the right to the city, by only selling this to wealthier neighborhoods or areas where it sees potential profit. The automation of micro mobility as well, such as that of self-driving

scooters, also works, if you have a smartphone and thus are part of that service. But one should think about what happens when these things run wild in the urban environment. With regards to right to the city a lot of these services are not actually autonomous, but they're being teleoperated by operators from the global south in Mexico in Colombia, in China or the Philippines. One of the things that automation does to the cities is literally filling them with ghosts. Alex Rivera who just won a MacArthur genius grant made a seminal film called 'Sleep Dealer' in 2008, where he imagined a world not unlike the one that we've just lived through. A world of permanently hardened barriers of global borders with internet and telepresence where even the lowliest day laborer can sell his/her labor to the global north through the tele operation of robots. They're permanently barred from opportunities in the global north countries like the US while being trapped in Mexico but are able to sell their labor, and this strikes me as some of the nightmare scenarios where technology is used to disintermediate humans from the cities all together and freeze them out from our environments. Some cities have started to fight back against this by thinking how to regulate these ghosts moving through our cities. Los Angeles department of transportation - as far as I know - was the first city to write its own software standards. It created the mobility data specification to keep track of scooters which are forced to indicate where they are, whether they're available, how charged are they, how fast are they going, but it also allows the city to send instructions to tell them where they can and cannot go and sort of regulate the city through the use of a code. The code is the new concrete says Selena Reynolds who runs LADOT, and this will be interesting because cities are going to have to start thinking about this and adopt this to deal with the technological forces at play. This makes us, in turn, to think about what value is the public realm or how it might be used. A good friend of mine has a startup called CLEARROAD, where they're using onboard GPS installed on cars to basically tell them wherever they may go in the world.

How do we enforce this, instead, in a congested zone like central London? How do we basically tax cars in real time depending on where they travel to generate the kind of funds that we need to remake the public realm? How can we also use it to basically striate the public realm? We might imagine that cyclists and pedestrians move for free, and private vehicles might be charged the most, while autonomous shared shuttles for would pay in between. We're going to have incredible technological flexibility as well to think about how we divvy up these resources capability for the world. Regarding work, we filled the cores of our cities with buildings that are mostly empty even in the best of times. I always remember that, according to Frank Duffy, the classic office pioneer, the office buildings were only ever 40% full at any given moment even at the peak of the workday; people are always going in and out running errands and doing things. The technologist Benedict Evans notes that every technology achieves its platonic ideal at the moment of its obsolescence. I have in my bag the beautiful Macbook, carved out of perfect aluminum whose appearance has not changed in

almost nearly a decade because we've all transitioned to phones and other kinds of computing. So, I look at this and I think that the world's most perfect office building might open nearly at the moment of its own obsolescence. I am not a big fan of remote work as it exists because I think we are mistaking it as an alternative to the office and the soft control of offices and workplaces. It's not an alternative to agency; what we really want is control of our own lives, the ability to do work by choosing and making choices for us and organizations. Once organizations realize they no longer need their offices, they're going to realize they no longer need their employees as well. Then we are going to see them turn to platforms like Upwork and others to basically create gig work for knowledge and delivery workers and all human labor that makes these technology platforms possible. That's what they're going to do to the wealthier, more educated class, just as they did to basically working day laborers. Of course, they're going to use automation and artificial intelligence to help automate this process.

My friend Devin Fiddler at the Institute for the Future nearly a decade ago was labeled as an artificially intelligent executive. What he really did was automate tasks using dozens of batteries of human labor to do his work under the API (Application Programming Interface) and present it as having done the work itself. We're starting to see companies already building automated platforms that will allow us all to basically push all of us out, to do work in our homes. We overstate the benefits of remote work, and we underestimate the efficacy and efficiency of face-to-face work, of having human connections in human networks. One of the tasks well before the pandemic was how do we not send the office into our homes, but how do we bring work out into the street. How do we create new platforms for work and sociability and conviviality that go beyond simply that? And this goes back to my work: *serendipity*. This is something I was particularly focused on a few years ago and it is all about why cities exist at all and how do we actually increase the vitality of cities. So, what is a city and how does the city function?

Patrick Geddes talked about cities as organisms. Luis Bettencourt who wrote a series of seminal papers with Jeff West about cities and how they grow, compared cities to stars. Bettencourt got his doctoral dissertation on the big bang and high-energy particle physics and argued that what cities do best is bringing together and compressing social networks of people in space and time. In doing so, they create a sort of fusion, and the output of that fusion is not heat or light like a star would do but all of the positive externalities we have: the GDP per capita, the new ideas, the innovations, all these things. Before the pandemic, the best functioning cities were the ones that had high-speed public transportation networks, and housing close to the centers that could compress people very close together in space and time for face-to-face encounters. Of course, Silicon Valley would like you to think that we can replace this with video and other technologies, but again I'm not so sure about this. This is what Louis Bettencourt and Jeff West shows: that cities get better as they get bigger. They estimated that every time a city

doubled in size, it would show a 50% increase in output; this is why we have superstar cities. These huge urban agglomerations perform better than smaller cities, and they also found that, unlike the living organisms, there was really no limit on how big cities could get if they continued to function this way, as in the case of Tokyo, for example, with almost 30 million people and high-speed rail cores. Cities are also immortal: unlike human organisms that are born and die, cities could in theory continue forever, and even Damascus and cities scarred heavily by civil war have persisted for over 5 000 years.

A few years ago, I toured the City of London – a 2000 years old city and center of commerce - with Peter Reece who was the master planner for the city of London and who approved the Gherkin, the Cheese Grater, the Walkie-Talkie, and many other iconic skyscrapers there. Both then and when I spoke to Peter during the pandemic, he emphasized that those iconic skyscrapers were beside the point: what the city is all about is not the iconic skyscrapers but the interstitial spaces, the people moving through it, the parklets where people could meet and talk and the alleyways where bankers would meet and have a drink at 11 a.m. This explained to me why we had a financial crisis in 2007-2008. For him cities are places where people gossip, and gossip makes people money. Gossip is - as Paul Romer, who won the Nobel prize for economics, stated - information spillover. It's all about the tacit knowledge and how we learn from each other, how we trade ideas and tips, and how we forge new ideas together. Jane Jacobs wrote about this in the in the *The Economy of Cities*, which argues that cities are places where people have ideas, come together, form new firms, and create economic growth. When we think about the post-pandemic right to the city, is this a process that can be replicated over Zoom?

Perhaps it can be to some extent. I don't think it can fully and I think organizations have not yet embraced it. I highly disagree that there is no right to the city over Zoom. That is a completely privileged privatized space and organizations are starting to realize this. In a massive study that came out in *Nature* based on a survey of 61,000 Microsoft employees in the early months of the pandemic, shows that all of those weak ties and connections that people would forge in the city through gossip was completely missing. And while they found themselves working very productively through the pandemic, all that peripheral information of their social network was effectively dormant or dying. In a paper I wrote a while ago about how can we create mechanisms in the city to create a 'stronger star' I propose a team of facilitators that worked with the World Economic Forum in Davos to think about how we can facilitate tighter networks. That was the end of a three-year process of using artificial intelligence, machine learning, social network analysis, and facilitation, to bring them together. But how do we do this in a city? How can we bring people together through a combination of design and facilitation to do this?

This points to the rise of a tactical urbanism to create more bike lanes and create infrastructure that's missing. My friend Mike Lydon invented this, and there's some work in painting bike lanes in Vermont by creating lightweight public infrastruc-

ture that enables a 15-minute city. In San Francisco, in 2015, I did a project called the 'market street prototyping festival'. It was basically an effort on how we could rethink the public realm along San Francisco's largest thoroughfare and how create new kinds of infrastructure that will facilitate interaction and weak ties among people. Gale Architects, founded by Yan Gale out of Copenhagen, mapped out pedestrian traffic and Instagram posts. I'm not sure if the latter is a real scientifically provable medium, but I just love the evidence of an increase of lingering activities with as much as 700%. During the festival they created places for people to sit and interact and that's exactly what people did. This is one of the things I think about the post-pandemic city, now that people are out and hungry to be with each other again. How can we design our cities? How can we design new infrastructure that will bring them together? Like Dan Hill said, how can we observe, iterate, redesign, and deploy these new processes? This can be done both in public and private space. We've seen cities around the world adapt empty storefronts flexibly, which is essential in reviving dark stores. In Newcastle (Australia), where I went in 2015, there is this incredible program called 'Renew Newcastle', where an arts festival organizer named Marcus Westberry borrowed empty storefronts from developers and landlords to use them as art spaces or places for entrepreneurship. He created more than 200 projects in the first three years that ultimately revitalized the dead downtown of a former industrial city in Australia 75 kilometers from Sydney. He could do that because he was a very well connected person. How can we institutionalize such connectivity? We need to see a new hosting and connecting role for organizations and people in the city. A similar attempt was made in New York's Lower East Side by my friend Eric Hose, which is about working with property owners to basically take these spaces, even if one can't sign leases, and create neighborhood programs that activate people. The Institute for X and Aarhus in Denmark is a great example of a community space maker that makes spaces where people can work with tool equipment to design their own businesses and launch their own activities.

When the pandemic happened, of course, we had to shut down all these physical activities, and we had to move our lives completely online and Zoom. Yet there are other ways of creating new forms of digital networks that can connect us. Trisha Wong, an ethnographer and digital scientist who had been doing work in Wuhan and when the pandemic started, was studying how the Chinese residents of large apartment blocks almost overnight created Weibo groups to basically coordinate their daily lives. In the United States and across the world we saw in those first few days in March 2020 the rise of mutual aid network right of neighbors coming together in hyperlocal spaces that organized purely digitally to assist their communities. Past examples of hyper local groups and mutual aid in the US were the Black Panthers in the 1960s, who organized one of the largest school breakfast campaigns or Occupy Sandy in New York after the hurricane in 2012. Rebecca Solnit, the sociologist, in her book 'A Paradise Built in Hell', has pointed out that after

disasters there were these incredible, almost euphoric moments of possibility of people coming together. These are chances to forge new social relations. How do we create new hybrid physical and digital collectives that can enable third-party networks in the post-pandemic city?

With my team we're working on a project for the Venice Architecture Biennale called 'Open Collectives', where we talk about a few of the examples that I have presented thus far. One is a project being developed in the United States called 'Care House' by my collaborators Rafi Siegel and Marissa Mourinho. It's a new form of intergenerational housing where caregivers will live with the recipients of care and then become recipients of care themselves. It's effectively creating intergenerational living with low-cost housing. One move there when one is in the 50s or late middle age to care for someone older, and in time you earn a right to the housing and receive care from someone who will also live there and take care of you as well. We've also followed an example from Colombia called 'Kipu', where the marketeers create their hyper local currency and then in turn also create a physical marketplace that enables new local economies and forms of collaboration. Next week I'm meeting with one of the founders of what's called 'Discos' - distributed cooperatives - which appears in the world of crypto currencies and blockchain. There's the notion of a distributed decentralized autonomous organization: the DAO. DAO's idea consist of a software organization on the blockchain that pays out tokens forever, a sort of blind watchmaker of sorts that follows libertarian economics and repurposes it to create new forms of commons and cooperatives by rewarding each other in different currencies and monitoring. Mondragon - the famous Basque cooperatives - aim to automate some of the cooperatives there they're working with. A group in United States called 'Cooperation Jackson', which is a bottom-up community-led effort in one of the poorest cities in US, use software to extend the activities and support people in a way they're not supported currently; these are the new software solutions that we urgently need.

What borders mean and what it means to be a citizen of places is changing. During of course the pandemic Estonia launched the digital nomad visa, based on the idea that if we are going to have a world of remote workers, then they can come to Tallin and work from there. If we move past notions of citizenship, what does it mean to live in a place and be a stakeholder there, even temporarily, or how might we start to see various places compete for global talent and for particularly privileged workers to move there. While Miami and Dubai get all the press, Helsinki is one of those high functioning cities that have a strong right to the city and have been able to advertise themselves as such. As an American, I love the fact that Helsinki is a city where everything simply works and enables the city to compete for talent in a world, where instead of racing for the lowest amount of taxes one competes on the strength of public schools and infrastructure. The cities that succeed in building this new public infrastructure will be able to leverage people accordingly.

Now to the dark portion of the talk. The science fiction author Bruce Sterling has a one-sentence prediction for the future: “old people in cities frightened of the sky.” This captures the three 21st century megatrends, which are urbanization, demographic aging, and climate change. How might the infrastructure that we have built or failed to build affect us when it comes to the right to the city? In February, a massive ice storm polar vortex came down over Texas, froze much of the energy infrastructure of the state, and massive blackouts rolling across of it. It caused a massive spike in power prices, up to thousands of dollars (for those able to pay such bills), while the empty office buildings in downtown Houston were brightly lit during blackouts. But the poor neighborhoods, particularly the black population were lying-in darkness. This is what the future of climate emergencies currently looks like right now, in a global scale: unequal and uneven.

Parag Khanna has a book coming out called *Move* – for which we worked a bit together – that shows a correlation between issues concerning demography, global population, and climate change. We're going to have new forms of isolated and individualistic migrations. It's interesting to pinder how we're experiencing climate change not as a collective event but as something that scrolls through our social media feeds as something terrible, that is going to happen to us sooner or later, and that the only option is to run toward rather than away from them. In the United States, for example, the zones most exposed to are the flood zones where most people have moved and built bigger homes. Everything we could have done wrong in the United States and Global North we have already done, and we are going to see the state step in a very heavy-handed way and markets step in a heavy-handed way. While the Trump administration was planning to condemn mass neighborhoods along the coast and start to relocate people whether they liked it or not, the flood insurance in Florida was about to raise the home insurance against hurricanes or rising sea levels with approximately one thousand percent. In Florida, and as well in California, insurance companies have struggled to drop coverage all together, so both the government and the markets are now pushing back very hard on people living in these areas.

We need to start thinking about what are the climate zones, where we can build, and how do we build more of them. Ironically, it is the coastal temperate zones of the bay area in Los Angeles where housing has not been built that need to be urgently built, not the wildfire zones of the central valley. We need to think quickly about how this will work before we have another global financial crisis. My friend Jesse Keen at Tulane University was part of a task force at the Commodities Future Trading Commission in the US that deals with the global systemic risk of financing, from climate and to real estate. However, design can also play a role in mitigating potential climate or financial disasters. A project I worked on with my friend Rafi Siegel a few years ago was about imagining the coastlines of New York and New Jersey in 2067 in a world of sea level rise, and how we can create zones that might flood. We might build quasi-amphibious homes for people who want to stay near the coast and

reinforce some infrastructure like JFK Airport, but also think about new amphibious parks and new forms of housing that could survive these floods. We can use design to think about where to build new neighborhoods and new cities and reinforce the ones we have. While designing futuristically, we also used design to convince people that this was not just a speculative future but one that has already happened or is currently happening, one that inevitably makes us think about what the future residents of these cities will be like, and what are their hopes and their dreams. We scripted entire stories and wrote out and mapped entire videos.

The emerging threats to cities and the right to the city cannot be created through Zoom. Right now, we're seeing the tech companies trying to create their own world, their own cities in the rise of the metaverse. Facebook has unveiled a technology using virtual reality where all work in their perfect world and move into a virtual reality environment overlaid on top of what you already have. It may seem like hell zooming for 8 hours and then strapping a massive headset on top of that to shift to Facebook's proprietary space, but this is also happening in terms of augmented reality. Apple is working on its own Facebook and has a pair of sunglasses with video cameras mounted in it. Creating proprietary overlaps is arguably the next direction of the internet. I talk about these conditions with real estate groups: what happens when someone does this to your building or does this to your street; what happens when we have multiple competing technology companies striving to overlay information on top of the city in which they can erase things. In China there is a building with LED lights where there's information everywhere - at least everyone can see this, but this information is temporary as well; this is, again, the lidar. If you have the iPhone 12, there is a proprietary app where you can basically record temporarily. A musician did this so that he could play with himself in real time. Using recording lidar we're going to be able to map information on people temporally, on top of the real world. But the best example of what this might look like is Keichi Matsuda's conceptual film 'Hyper Reality', where he imagines a day in the life of Medellin, Colombia. We could have overlays on the street so you don't step into it when traffic is coming through; you can also have giant cats talking to you back there as well, but, again, this is the final dystopia. What happens if we live in a world that is full of dangers and full of things that we can't see. You probably remember Pokemon Go from five years ago. Some professors at Purdue University, in Indiana, mapped out all of the traffic incidents and fatalities that happened in their county and then extrapolated across the entire United States byto discover that Pokemon Go killed 250 people who wandered into traffic or hit by drivers. We're about to create a very unsafe world as well. I'm working to get a project started with the Los Angeles DOT (Department of Transportation) to think about how might cities regulate the metaverse; how do we ensure that if we are going to create these overlays there is a shared public realm on top of it, and how cities can enforce it. If they do not do this, then the ultimate risk is an someone that uses machine learning erasing things from the

streetscape. In this case they wanted to see what a street looked like without parked cars, but we can also imagine that virtual reality and augmented reality could also erase things from the cityscape. The right to the city, to even see the city, could be ultimately denied to us in many ways. This is the next wave of what we're going to have to continually fight to retain this right to the city and retain our access to it on the far side of the pandemic and what follows. So with that, we have plenty of time for discussion.



## Relevance Of Behavioural And Cultural Insights In Times Of Pandemic

**ROBB BUTLER**

*Executive Director of the Regional Director's Office of WHO*

In the last years, I have been working at the WHO office in Copenhagen which covers 53 countries across the European region. I'm a sociologist and not a health expert, neither I am an urban planner nor a designer. Indeed, I am not anybody truly working in your field of expertise but, as a sociologist, I have a lot to say about the value of the social sciences and the humanities to the work that you all do and to your studies.

I'm going to start by going back in time to look into the early 1800s, and precisely 1831, when cholera - the water-borne disease that is mostly spread by water - was a ripping through London.

The English Capital, at that time, was the largest city in the world so a court for king cholera. The waste, the disposal, the garbage, was all being thrown out onto the streets and the river Thames. The river that still runs through London was one big sewer, or more precisely, was an open sewer: everything, all the garbage or the sewage or the defecation was all put into the Thames, on the left Parliament down further on the right.

In 1858 parliament had to stop that phenomenon, because the smell of the river was so bad putting an end both to cholera and to that dreadful smell across the city. It was completely to reimagine how the embankment of the Thames would be developed. In the end, it was made in a way so that the sewage and all of the rubbish would run out of it into the estuary and then out into the north to the sea. So, the Thames would become a cleaner place but primarily cholera would be stopped in its tracks. What the developed was embankment which those of you that have been to London today will know much about. You might have walked down it, and it is a beautiful sight today. In a few words, all of this was due to a health issue; this

design of this urban planning was due to a fundamental health problem that the largest city in the world at that time faced.

If we roll forward 60-70 years, to the next public health crisis that hit the United Kingdom, we saw a quarter of a million deaths and globally we saw 50 million deaths from the Spanish Flu which you'll hear many people speak about particularly now given that we are facing a pandemic.

Through the 1800s, the early 90s, and the early 20th-century living conditions particularly in London, Birmingham, and Manchester, were characterized by very poor urban slums. I'm focusing on the UK because I'm a UK citizen but also because there's a lot to be taken on what health and disease have shown us in terms of urban planning there. So respiratory illnesses respiratory such as the pandemic that we're facing at the moment and, the reason why many of you are wearing masks today, has always been a major problem. We saw the development of these garden cities which ultimately failed in many places in the United Kingdom and Europe but are existing still like in the case of Brisbane where, nevertheless, we have a very good example of a healthy city. These cities were developed to take the urban settings out of the city and recreate business factory environments and living conditions outside of the central areas.

The idea behind those was to get people out and about outside of the terrible conditions within which these respiratory illnesses such as the Spanish Flu were affecting societies and it's true that Le Corbusier stated in 1928 that hygiene and oral health depend on the layout of cities. Without hygiene and moral health, the social cell becomes atrophied, minimized or reduced so this linkage between hygiene, health, and mental health, and the cir-

cumstances in which we live and the environments - in which as well we live - is a long-standing relationship. The modernist period saw us then try and take people out of cities up into high-rise apartments with balconies, and small living spaces but with balconies, forcing people outside, so that again respiratory illnesses would be minimized so that we would see people move out of these blocks and down into the communal parks and green areas of our cities. Of course, in the 1960s when this was devised as a method for healthier living it was a good idea but what happened of course in the 80s, 90s, and 2000s, was that social media and the internet came along and people were stuck to their desks. They were stuck to the computer, they weren't using the parkways, they sat in these kinds of buildings throughout central London and other cities all over Europe. For Covid-19 that was a proper playground, the virus ripped through these settings where the ventilation may not have been maintained for decades where people sat in very tight environments with these communities inside the cells of these blocks. So, whilst it seemed like a good idea at the time in the 60s, by 2020 and 2021 those spaces had become a breeding ground for a virus.

As you can see, pandemics have always shaped our cities but these changes have been uneven. As I've shown you, some of these changes have been positive whilst some of these changes have been negative, but it's absolutely clear that the one thing that we know that any urban planner designer needs to do today is listening to the people that you're designing or creating or developing your cities and urban settings for. As I anticipated you, I am a behavioural scientist, and my background is in social anthropology communications, social sciences in the humanities, and I've been working with WHO now for the past 10-15 years. I am not a health expert, neither do I have no formal health or medical qualifications such as doctors who could speak long about things that I wouldn't even understand. However, in terms of social sciences, we've come to understand that the social sciences have an inherent value for public health because public health today is all about listening and being people-centred in our approach. Think about this pandemic, what are we doing to prevent this pandemic from taking hold, what are we doing to stop the transmission of coronavirus? Sure, we're vaccinating and there are some drugs available that minimize the impact of the pandemic, everything else we're doing is social it's not medical, it's not biomedical it's bio-social. All of the measures, you're wearing masks you're living your physical distancing, you're quarantining your isolation, this is all social this is not health this is a social measure. So, we have our public health measures and we have our social measures but in public health, we have not used the social sciences well enough to guide us as to how we should prevent pandemics.

That's why I specialized in something called 'behavioural and cultural insights' which is all about gauging what healthy behavioural practices are looking at; what the barriers and the drivers are so a barrier to changing your behaviour. For example, people who don't want to stop smoking because it's addictive or doesn't want to stop doing it because all of their friends are smokers: even this last thing would be a barrier

to smoking cessation. And, I look at drivers, so the enablers the things that promote and motivate people to change their behaviour, and this knowledge that we collect we call behavioural and cultural insights and it has an interest and should have an application every one of you. Often the things we design are not the things that necessarily people choose the path of; often there is a tension between our urban design and our direction, and the behaviour that people choose. As Shakespeare said the 'earth has music for those who listen'.

While walking around Tirana just these last few days and many of the murals in the city have spoken to me. I don't mean that philosophically but they do tell a story of a city, and I've just been talking to Peter (Nientied<sup>1</sup>) that met just four minutes ago regarding the history of our societies and the importance of values of our societies and how the development of an urban setting or architecture or development and design needs to take account of that history. We cannot erase it for the sake of modernization, it has an inherent value. So, gathering insights segmenting our populations from the way you design things, what not one size will fit all not one design will meet everybody's needs testing and modelling. I could speak all day about this: how you do test your designs, how you do pre-test them, how you do post-test, how you do use that methodology to shape what you design, and how your design is as critical to public health, as it is to you as designers or urban planners, and how you engage other disciplines. Ebola for us was a major public health issue in the world. You're all aware of Ebola, you're all aware of what happened with that but, for us, this was a game changer because the first people that we sent to West Africa from WHO were not laboratory technicians, they weren't the epidemiologists. Field epidemiologists were amongst the first wave but alongside these people we sent anthropologists, and we sent social scientists because we needed to understand the culture in which Ebola was being transmitted. We needed to understand the cultural values, and the norms, so that we could respond appropriately. And that's not much different from the work that all of you do with design and urban planning. When I was preparing to deliver this talk, I started thinking about what pandemic-conscious architecture would be, and I started thinking about how we need to design buildings and urban settings to allow people to live their lives while reducing their risk. We can never eliminate risk. When you leave this building or you walk down the stairs there is a risk; it's the same I hear from people who talk about vaccines not wanting to be vaccinated because of the risks of vaccination. The risks of vaccination are 1.000 times smaller than walking across the road outside you get into your car every day, that's much more dangerous than taking a vaccine. It's the same with architecture and with design: the risks that people want to live their lives there will always be a certain element of risk. Just to make an example,

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420 people in the US die every year from falling out of bed does that mean beds are dangerous far more people die of falling out of bed than die of taking a vaccine, so your risk assessment is always something that designers have to think about when you design a building when you design a staircase, etc.

Risk can never be eliminated, there is an element of risk in everything. The other thing we've learned from this pandemic is that we cannot suggest that there is zero risk and we can we have to acknowledge uncertainty when we're not sure about something we should communicate it. The countries that have done best in this entire pandemic have been those that have been completely transparent. The Norwegian Minister of Health, one month into this pandemic sat in front of a press conference and spoke to all of the youth in Norway and said: 'we don't know anything about this pandemic we don't know enough about this pandemic. I'm going to have to ask you all to stay at home and to not come to school tomorrow. I know you don't want to; nobody wants to be away from their friends, I feel very sorry for you my thoughts are with you with your families'.

It was very sympathetic and said to the youth that we all have to work together it. He was very honest about how little they knew about the pandemic at this point and it is no surprise that in Norway the rate of vaccination and mass use is the highest in the world because of an open trustworthy leader. So, trust has so much to do with our behaviours it has so much to do with our behaviours and it has so much to do of course with your life designs and so on. The other thing we need we've learned through this pandemic is that equity is very important.

Equality and equity are two different things: so, equality, everybody has to isolate if they've contracted COVID, everybody has to quarantine. That's equality but by quarantining we disadvantage some people more than others. If I have to quarantine it's not a problem, I sit on my computer at home, I have a big house, and my family have rooms that they can move around in. It doesn't affect me quarantining but if you're a family of seven in a two-bedroom apartment quarantining is dreadfully marginalizing for you, it puts you at further risk. That's equity so we found that equity is a very important goal in everything we do. I know Sonia (Jojic<sup>2</sup>) was pointing out yesterday the fact that we've all been disabled to some respect by this pandemic. I think this is an excellent point, you've been disabled whether you've had coveted or not many of you have not been to school, been to university, I mean that's not easy you've been the most affected of all of the groups the youth have been the most effective. It's taken the most away from you in terms of your socializing and it's affected you severely in terms of mental health and well-being. We have to remove barriers you understand, these signers and planners better than anybody how you remove a barrier to make something easy for somebody to perform a behaviour in a broader meaning. I'm going to give you an example of this. I was in Bulgaria in 2010 and there was a huge measles outbreak there in a place called Svilengrad. It's a Roma population that lives about an hour and a half outside Sophia. 22 000 measles cases and dozens upon dozens of deaths of measles. There was a vaccine-preventable disease, a very good very ef-

fective vaccine very soft faxing but the Roma mothers and the grandmothers were not using local health centres. So, I, as a sociologist, was invited to go to Bulgaria and try and find out why Roma parents and predominantly the grandmothers – because the grandmothers are the caregivers in Roma society - why they were not taking the children to be vaccinated. I went around these health centres and this is a maternity ward of course, but it could be any ward in a local health centre, and I walked around those for a short while and then I went to talk to the help of an interpreter the mothers, and I found out within two hours what the problem was so the Bulgarian ministry had decided 250.000 euros would be put on poster campaigns and we would educate these mothers and say measles is dangerous. You need to go and vaccinate but after 20 minutes of me speaking to the mothers, I realized they knew more about vaccination measles than I did. They were so smart, so they had so much information but they weren't using these, so for you designers, you urban architects, urban planners, the clue is in the picture and it has nothing to do with the women that are lying down and nothing to do with the equipment. It's not it's particularly not inviting because of the colour of the paint, because there is no Roma mother or caregiver that will walk into a setting like that with medical green colour on there with a healthy child. Because that colour for the mother is childbirth and invasive surgery, it is not somewhere she's going to take her precious two-year-old child who is perfectly healthy to be vaccinated for a disease he or she might catch in 10 years. So, what did we do we painted the walls of all of the Roma mothers in the health centres. We just painted a different colour wall, now no medical doctor is ever going to see that because they do not ask the right question of the mother. They say oh what do you not know about measles and why haven't you vaccinated your child, measles is so dangerous, but they're not asking the right question. Whereas you would ask maybe a better question but a sociologist would immediately look at the environment and so what they did in Bulgaria and Svilengrad, they did several things but one of the things they did was they repainted the colour of the wards so that mothers would feel more comfortable taking their children there. So, this listening to populations is critical.

We talk about pandemic-conscious designs and architecture, and I think it's obvious where architecture will hopefully move. I live in Denmark and it's already moving. This way we're seeing the adjustment of building codes in terms of the spacing that you're allowing for individuals, we're seeing voice-activated lifts so that people don't need to put their fingers on the lifts anymore, we're seeing the hygiene stops so in many of the larger buildings you've got this hygiene stops all around where you can squeeze and clean wash your hands. They won't go anywhere, they will stay. I hope they will stay because good hygiene, of course, is preventing all sorts of different diseases and it's important of course that we look to future generations because, quite honestly, listening to more politicians and listening to more leaders talking about building back better without giving voice to the youth is a tragedy. It just shouldn't be happening. I would like to use another word but I will be

very polite and say it's just not correct that that is taking place without the engagement of the youth and there's a huge movement underway at WHO in my office at the moment to engage youth. I'm visiting your mayor of Tirana after this lecture, I'm then going on to the Minister of Health, Ogerta Manastirliu, to talk about how we're going to engage the youth better not tokenism not just talk but bring youth in into helping us design better health systems and better health services in the future.

Now architecture is something that has a very interesting meaning for me because architecture has a major place in behaviour. Because we need an architecture for our behavioural planning because we are all trying to take in so much information every day that we're constantly trying to battle a decision or a choice. Today's society is a crazy busy society, so we have these shortcuts in our heads these cognitive what we call biases to help us to make sense of so much information sometimes they make us make good decisions, and sometimes they trick us into making poor decisions. Cognitive biases are with us all the time, you have so many choices to make and this is where architecture is interesting for me as a behavioural scientist. Choice architecture is fascinating and if none of you has ever read anything or any of you have ever read anything about choice architecture, I think you would find it fascinating to understand further. There is an inherent value of behavioural understanding to urban planners and designers in the same way that there's an inherent value from urban planners and designers to behavioural scientists. Let's have a look at other things that you're falling a victim to, you fall victim to marketers all the time.

When you go to the cinema to watch the new James Bond movie you will have a choice of two coca-colas, one Coca-Cola is 50 like. The small Coca-Cola is 50 leke, the large Coca-Cola is 100 leke. And most of you say 'ah but I only need the small coca-cola, I take the 50 leke' but then what coca-cola say is: 'no, no, we introduce a medium and we'll introduce the medium at 80 leke'. And, for 20 leke, of you will then change your choice from the small to the large. The middle one is a decoy, nobody buys the middle one, because why would you buy it for 80? I can get a big one for a hundred.

Every choice you make in marketing is influenced by decoys. If you look at the prices of three flights on Google, the prices of three flights one will be a decoy. Find the decoy, and I guarantee you'll find it! When you put a subscription in for a newspaper, the newspaper will say 500 leke like if you want to in just by email, a thousand like if you want the print version, and a thousand leke if you want both. The only reason that they say that is so that you spend a thousand leke. It's a decoy one of those, is a decoy and this is the same with choice architecture. There are decoys throughout our lives, I use them in public health, I know that men in Denmark are very unlikely to go and get checked for cancer of the colon because it needs a colonoscopy which is a very unpleasant test. It's not very pleasant so most men don't want it; most men will not go for a check for colon cancer.

The letter that is written from the public health authorities to those men says you can go any time of day or night to the main hospital and you can go and get a test for colon cancer only 18% of men go and test. From the authorities, it's so convenient: we give everything and, at any time, you can go and get and have this test for colon cancer which is a killer. Now, we get the

letter and we change the letter, and I say that I want to add a paragraph, so we still say you can go anytime any day or night any day any time of the night 24 hours you can go and get tested or you can drive out three hours and get tested on a Wednesday afternoon or Thursday afternoon between two o'clock and five o'clock at a health centre three hours away. And that's true, they can do that if they please and we see in experiments that 15 to 20 more men are likely to go to the local hospital because you provided a less attractive option you've provided a decoy and we can talk about the ethics of this, but it gets more men tested for colon cancers. Do you understand what I mean? So, I don't know what that application would be for urban planners and designers but you've often got to think about bringing behavioural scientists and sociologists in to help you design products that you want to be very easy for people to use.

Which burger do you eat for example? They're the same burger right okay it's the same but you're much more likely to eat that burger if I sell that burger to you and say the burger is 75fat-free, but as a public health society I should be communicating to you the burger contains 25% of fat. Those two messages make a big difference to whether you'll eat that burger.

It's the same with public health, with vaccines, which vaccine do you take. Now, healthcare workers in many settings are still talking about this vaccination as a 0.1 side effect when they should be saying this vaccine is 99.9% safe, that is as safe as walking to your car 99.9% safe. So how you frame something is extremely important and the users of your products or the users of your urban settings also need to keep this in mind for them as they look for pathways for me. If your design is not intuitive, if your design requires an instruction manual, for me it's a bad design. It's exactly the same with public health. If I have to explain something too long to somebody, then clearly that product or that service is not clear enough for them it's not good enough for them. I mean, if you have to write push on the handle of the door then I don't think your desk door is very well-designed. Sociologists, anthropologists, and people working with the humanities should be on your shoulder whenever you design something. They should be one of your test groups because they inherently understand cultures and societies often better than we do. I make another example, I'm still really upset that with my iPhone, I'm still looking for things to put in that tiny little hole to get the sim card out. It is a beautifully designed product but for me but that is so annoying. I think there's a design flaw. So, in summary, it's clear that pandemics and health have always shaped cities they will continue to shape cities, and I think we need more dialogue between not just public health and health practitioners, social scientists, behavioural scientists, and urban planners and designers such as yourself, but we need to think about how we listen better to our constituents. It's critical that we do it, it's not just a pilot focus group discussion, we need to continuously listen otherwise we'll find our designs go out of date or they become non-usable while we could walk down the road of choice architecture.

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## Welcome To The New Normal! Emerging Patterns And Trends To Rethink What Cities Are

NICK DUNN

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Hello everyone, and thanks to Polis University for the introduction and to the conference organizers for the invitation to talk to you today. It is a genuine pleasure to be able to do so as the pandemic has profoundly changed the ways we relate to one another, and it has also transformed how and why we interact with places.

A renewed interest in how the pre-pandemic places we live, work, and play in our cities could be good for us and support our health and well-being, was gaining significant momentum during the pandemic. However, the pandemic has revealed existing health and social inequalities in many contexts, and the need to assess our health and well-being in relation to our environment. Now we must ask: what is the future for cities? My talk is split into two parts.

In part one I am going to look at some of the emerging patterns and trends that appear to change what we know about cities, in order to identify a number of opportunities for rethinking what cities are. Then I will ask *how* and *why* - in part two. I will discuss how we might approach designing in post-pandemic cities for health and well-being, and, in particular, how we can we think about who will be really impacted in such processes.

Let's move on now to part one: Welcome to the new normal! We've probably all heard this phrase a lot - the 'new normal' - over the last 2 years. In addition, there's been a lot of attention given to the idea of the 'great reset', namely, what things could be and how we can fundamentally transform our cities and societies. When they are back full, how they will operate, and maybe how they will move towards a more stable situation.

Yet cities are within a world which is increasingly volatile, uncertain, complex, and ambiguous in terms of the challeng-

es that might lie ahead and the impacts that those challenges might have. So unsurprisingly, there has been a lot of dramatic headlines and press devoted largely to opinions rather than facts, about what might happen to cities. I'm going to look at what I believe are a number of key issues, and further explain the reasons for which I think they are relevant and present fertile opportunities for the role of design education and design professions, including the broad public, in shaping tomorrow's world.

To be clear, when I refer to design, I mean it in the widest sense, including architecture, planning, spatial and urban design, as well as other fields related to the design of environments. In my opinion it is clear we need new visionary designs and delivery mechanisms for collective life in the cities. The first two decades of the 21st century have been all about cities, but since the publication of a United Nations report in 2007 in particular, we have been frequently reminded that the majority of us (the global population) will be an urban one and a more recent UN report from 2018 projected by 2050 there will be about 68% of us living in urban areas.

However, the pandemic has destabilized some of these long-held ideas we have had about what a city is and who it is for. Time has shown that when pressed from urgent needs we can radically rethink how we organize ourselves and enact behavior that responds and adapts critically at different levels. The same holds at the city and urban level, at both a national or global level, when we need to face the potential impacts of climate change. It is surprising, however, and maybe even disappointing for some of us, to see how quickly some of our habits have bounced back to 'normal' despite the en-

vironmental and health emergent issues. The cities of today are still struggling in many contexts with the initial fears of the urban density contributing to the spread of COVID-19, which has led some cities to empty out their office buildings.

However, cities are resilient and if we look at history, we can see they have bounced back from recessions, pandemics and wars. You all know a couple of examples. You know in the 1850s London was on the brink of disaster due to the cholera epidemic, but once the problem was solved its population doubled. Following the Spanish flu pandemic a century ago, cities became vibrant once again in the roaring twenties. But I do think that, emerging from the pandemic, cities will be definitely different. I don't believe we are going to see the end of cities, but I think that, from now on, the problems will be really connected to social inequality and affordance, rather than density.

We have seen that expensive cities like London and New York have experienced to a certain degree a hollowing out as their residents have generally started to live in smaller spaces and have greater reliance on restaurant parks and other urban amenities to manage their daily life. Also, homeworking and homeschooling, as well as the closure of retail and civic venues, meant that these kinds of big cities have been really ill-equipped for the pandemic. Those that can afford to leave do it whether temporarily or permanently. But this doesn't mean a downward spiral for all cities. Of course, those people go somewhere else, so there are population gains elsewhere either in the suburbs or in smaller and cheaper cities. Such picture has increasingly appeared in different cities around the world.

There has been a real shortage of decent affordable housing in many cities before the pandemic, and the housing prices have significantly increased while rents have drastically dropped especially in those large expensive cities I was talking about a few moments ago. So, people that could afford large homes have been buying them, and they can work from home, but this has happened in parallel with long-standing trends of low housing production. In a lot of countries, this has led to steep increases in housing prices because of the pressure on the market. This is hugely problematic since many of the people left behind in cities are those that may have been struggling to afford being in the cities in the first place. They often have low-paid and even precarious forms of labor, but many of these people have been identified as essential or key workers, who actually keep the cities and countries moving and livable by providing vital services including health care, transport utilities maintenance repair, and other really important services.

So, something has to change as this current situation is simply unsustainable, and this strange real estate market might present the key to urban revival by reactivating communities and enticing new generations. Indeed, old residents back into urban neighborhoods and a renewed emphasis on 15-minute city and other similar urban models we have heard, seems to make a lot of sense in this new emerging world of urban centers, that during the pandemic have become ghost towns at least temporarily, although they are slowly coming back into life.

At the same time, even before the pandemic there was a

long-term trend of people living downtown close to city centers, because they naturally wanted to be surrounded by the urban buzz. It was a lifestyle choice, but the decline in office demand is likely to accelerate the trend of converting older office buildings to residential use. With the increasing demand, we are likely to see more people in the cities. Actually, I think this is probably the most important issue: the diversification of the activities in formally heavy business districts and offices. At the same time, the nature of work is changing dramatically, and this will alter how urban centers and business districts function. This is a real opportunity for us today, as some of the long-standing functions within cities will evolve, while architecture, planning and urban design need to respond to this condition by going beyond the tourism mentality. The food and beverage industry and associated entertainment industries have been hit very hard by the pandemic. We've seen these weird geodesic domes, - and I am sure Mr. Fuller would be very proud of them, - appearing outside restaurants. As you can see, many places have found it challenging to survive with takeout and outdoor dining and limited seating, but people are keen to be together. So, retail and leisure offered in cities will develop to accommodate this obstacle, by bringing back much needed civic life and vibrancy to cities. We are nothing if not creative!

Pre-pandemic retail had been in decline anyway, as more and more stores were closing their bricks and mortar and moving online. Perhaps just leaving a few flagship experience locations of Covid-19 just accelerated this and I don't think it will reverse. A lot of space will continue to appear in cities and of course outside them as evinced by regional shopping centers and malls. I think it is going to take us a while to work out how we fill in these empty spaces, but in a way that also makes them ideal for temporary intervention forms of urban acupuncture and prototyping urban design and policy, in order to see what works, how it works, and why the narrative for public transport during the pandemic is one that really illustrated and exacerbated the inequalities in our cities. Indeed, the future of public transport is quite uncertain. Nothing defines a livable and sustainable urban life more than the ability to travel without a car, whether it happens by walking, cycling, or public transport. But during the pandemic nobody had a choice to really get on a bus or train, and this emptied out public transport passenger levels in many cities. At the same time, there is of course a subset of passengers who continued working through the pandemic, and for them public transport has become more important than ever. Many key workers are in low-income brackets and can't afford a car for commuting, and yet some services have been cut down with restricted timetables and some re-routing to priority areas. The impact of such decisions is that these key workers who remain poorly paid, but are more apparently significant and valued by society than ever now, have had to navigate increasingly hostile public transportation systems and services in order to be able to do their important work.

We are going to need more agile alternative public transport to respond to this shrinkage and perhaps through ride share initiatives and being integral to 15-minute city visions. We really

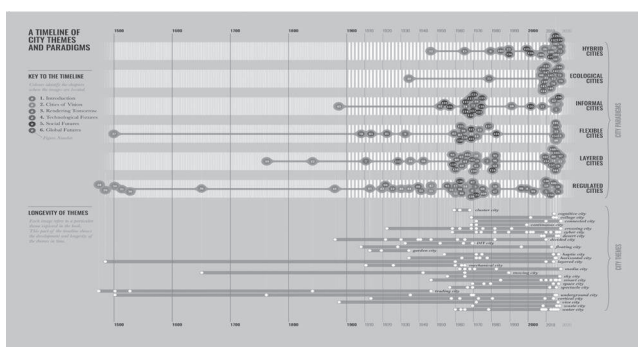
need to rethink where we travel, why and when, in an inclusive and equitable manner. In the meantime, I think that furnishing urban amenities might be the most important lesson from the pandemic in terms of urban design, because as many people are released from their commutes, they are looking for more than just bigger homes and gardens. Wherever they go, they are still looking for those place amenities, such as parks, restaurants, and walkability social effervescence that they found in cities. So, to be clear, the city isn't dead due to the pandemic: it's going to re-emerge in some form and I would hope, perhaps with a more robust provision for all its people. It will be different, not as densely concentrated as before, probably more diverse and likely to become more balanced too. The urban amenities that have shaped big cities today are likely to reappear, probably, in smaller cities and suburbs. They will provide a significant opportunity for us to think about how we design our environment with amenities. This is like the connective tissue for urban resilience in an equitable way, and it will range from domestic routines, changing dynamics of work and workplace, and leisure and retail outdoor spaces, including green and blue with greater emphasis on the weak social ties that give us a community identity. These are some of the biggest changes that have occurred since the pandemic. I would also like to discuss here the following points: What do we mean by well-being? How do we design for millions of individuals/people? How do we design important places that perform like important services and products, and then how do we share some ideas about post-pandemic cities by design? What do we mean by well-being? Does doing well refer to a certain material standard of living and or economic prosperity? Feeling good involves personal subjective perceptions of levels of satisfaction with our lives. Doing good relates to a more collective shared understanding of how the world is and should be? Feeling well stresses the significance of health to well-being. In some of the work we've been doing in Lancaster UK, we tend to use White's definition because we find it quite helpful, because it includes both the subjective and the objective dimensions alongside personal and collective notions of well-being. It also incorporates the idea of effective functioning connected to health, thus it is not just some abstract idea about well-being. Well-being is not static! It is a dynamic concept that allows people to assess and compare how they are doing both in the present and the past. This sounds all right, but what about future well-being? How can we assess our well-being at a later point in life? Understanding the subtleties of well-being is going to be key if future cities are to be designed to support people in urban areas and make them flourish. Using well-being as a lens, we can critique and interrogate what we currently know about cities. Further we can apply this knowledge in the design of future cities. Well-being measured across a wide range of variables and considering the underlying systems of governance tax are key in long-term approach. The evidence suggests, however, that while a few leading cities are trying to take a long-term approach, we are still designing our cities to cope with demand, and that we're not really actively and consciously improving well-being and the quality of life

for people. It is not that straightforward to identify those cities which are exemplars and can be easily compared as case studies for the benefit of other cities. Action must be taken on the way in which we live to save both humanity and the planet and, of course, the other species we share our world with. This means that when we think of ourselves, we must also think about our neighbors locally and globally and we need to consider the wider world in which we live, particularly the legacy of our cities that will support and enable the lives of subsequent generations to flourish. Designing places that are prosperous, sustainable, resilient, livable and healthy over the long term is a massive challenge. Let's not forget that cities are collectives of individuals with different aspirations and values, and those aspirations and values may be even competing with one another and this I think raises two key challenges:

First of all, it is important to understand what we mean by a future city, even if the term 'post-pandemic' sounds straightforward enough, especially in terms of the post-pandemic parks after the pandemic! The diversity of the urban environments around the world and their tendencies toward the future suggest that the current manner in which terminology is applied to describe future places does not really account for the differences in those places. Being able to better understand the granularity of the future cities is crucial.

The second challenge concerns our ability to explore futures, especially radical ones, that may appear very different from the existing path dependencies most people are not comfortable with. In order to develop more holistic and appropriate solutions, the design of places must address the future through multiple lenses. To a certain extent, I think professional designers are trained to do so. However, we all know that, when creating places, we all have the potential to shape urban life. How a city looks and functions is often brought together by accident, rather than by purpose, through the collective action of political leaders, government officials, local people involved in business, public issues, cultural and leisure services, and of course local residents of all ages and social status. It is this collective dimension that must be at work in designing our cities for future well-being. In the previous talk, Dan Dubowitz from Manchester UK, explained some of the collective actions in activating communities. These are some very useful lessons about the methods we might apply. What you can see here is a little bit of the work that I have done with colleagues where we have been really looking and conducting this pre-pandemic research. We were looking at how we have thought about the future of cities over about the last 500-600 years, when cities are seen and investigated as a phenomenon related to the future, rather than simply in terms of the history of civilization. We looked at over 2,000 examples from all different forms of media, which evinced how different ideas about an ideal society really started to emerge. So here you have got cities that were built, you know from 1,500s onwards. You have got cities that are imaginary, so they are works of fiction that could have been shown in films or existing literature or graphic design. You have speculative cities that were designed by architects and urban designers but

they are never actually built. They remained unrealized. And then you have actual places that existed in the world and in some cases still do. What we are trying to do here is really think through and better understand how we have thought about the future of cities. I think it was *Marshall McLuhan* who said that (I am sort of paraphrasing him) you can always understand the future by looking at the past, through a rear-view mirror. Therefore, we started to look at different categories for cities and understand the values and ideologies that they were trying to express, and there is a government report that is freely downloadable. We are trying to open up the conversation about cities because it is very limited. Dan also spoke very eloquently earlier about the need for methods, he said it is all about methods, and I think methods are critical, but I am also sure it is about thinking the future literacy not only of students but also of designers, professionals, the public and policymakers and many other actors that shape and have agency in shaping the city. We need a better understanding of the alternatives for the future, and this is true of design education as we learn about design, and as we create our pluri-verses. We are great at creating multiple universes, and design education is typically very good at exploring futures. The professions that deal with the built environment are reasonably good at understanding futures but, of course, such expertise is often resisted and compromised with delivery and budget issues, not the least of which is the limited knowledge or information provided by business-as-usual scenarios or maybe catastrophic worst-case situations, which are less informed about the future. There is a lot of background noise and misinformation about the issues we have discussed so far, namely, about the city and its futures, and in my own work I have been really trying to open up the debate on urban futures by offering different ways in which we might view ideas and visions for future cities. In our recent book, myself and *Paul Cureton* proposed three thematic types of futures: social, global, and technological. The point here is not to ignore technology but to remind ourselves of some pre-industrial ideas about what the city could be. It is by emphasizing complementary types of future that we can explore different ideas, including those which are deterministic and path dependent. Our findings illustrated that when visions for places are viewed through different critical lenses, the respective themes and features, and the ideologies the values, come to the forefront in different ways (figure 1).



**Figure 1.** Timeline of City Themes & Paradigms from *Future Cities*, Nick Dunn, Paul Cureton & Serena Pollastri, 2020.

By actively identifying visions that represent social and global futures, in parallel with technological ones, it becomes possible to have a broader conversation about what is preferable, for who, and how this is framed. I think a post-pandemic city will have elements of the global, the social, and the technological mixed together. It is not about this, being a divisive way and only having one. Regarding health and well-being, at its heart a city needs people to interact with one another build connections ease separations to help create a sense of society, a sense of belonging, and ways of acting that generate well-being. Therefore, the first principle to adopt in designing future cities is to recognize the human dimension of city living.

This might sound very obvious to you all today but it is often forgotten that this is central to designing for people, and this understanding is dynamic. There is an ongoing need to keep building and connecting evidence many of which are currently siloed. We have to examine how aspirations connected to a natural sense of community and safety can be translated into design principles, and we must also recognize different aspirations that are unique to places or cultures, and are not necessarily transferable. The design perspective must be one of designing for the entire life. Of course, a lot of cities are not that great for raising families or for older residents, and we really have to think about the city from antenatal all the way through to end of life: What is a city for? How can it support its citizens?

However, a lot of the evidence based at the moment focuses on research in middle and high-income countries as opposed to developing countries, and that means you cannot take that information and make neat conclusions that you can apply everywhere. We have to understand design with regard to behavior change, both in terms of its intentional but unintentional consequences, as well as its interdependences, which lead us to the issue of designing for the future. By rigorously understanding the interdependencies of people in a complex system behavior change, and the impact of technological, social, environmental and economic change demand a major step change, we push for a huge shift in the way we approach the design of cities.

There is no shortage of guidance on how to design places. Every country, and many cities have examples of it, and this is obviously the comfort zone of a lot of professional designers, but in terms of well-being it is really important to focus on people and in their relationship. Cities are places to enhance social and psychological well-being and this is often engendered by the aesthetic quality of place, both its buildings and spaces. We know that the incorporation of green spaces in urban environments enhances well-being, but this has to go beyond urban form and needs to be repositioned in policy and in practice.

The scope for interventions aimed at ending homelessness and reducing housing instability is far wider than what residential urban design and planning approaches enable at the present. Some of those things I argued above in relation to the post-pandemic city provide clues on how to redesign housing policy in relation to the built form in a new city formation that is changing. This means that we can support well-being for everyone in post-pandemic cities especially in terms of city's social spaces.



They are spaces of collective effervescence; before and during the pandemic much of this occurred on the street, but also in other spaces which were distinct from home or work, like cafes, restaurants, bars, etc.

Active sidewalks where people socialize outside of both the home and work can nurture a sense of social connectedness and trust between people in the city and the role of weak ties in supporting positive social connection. The geographic scale of their significance varies from city to city, so different cultural ideas different values. So, we do require suitable analyses that identify those design factors and simulate urban interaction. Understanding the nature of interpersonal interaction is key and needs a lot more attention, since it has implications beyond the technological aspects of the smart city approaches. The latter dominate a lot of the current research but do not account for urban emergencies as a result of human complex social inter-relationships. It is just worth noting that in the early days of the pandemic there were ideas that density was sort of responsible for increased infection rates and certainly urban space was something to be feared.

What we are generally seeing, however, is that people do want to be back together. It is important to think about what the new work-schedules might be, which require new urban models. The social responsibilities and interactions are a real keystone for us to achieve and sustain our health and well-being in the post-pandemic city. Services and products are not less important. The design of services and products is interdependent with the design of the urban environment and infrastructure, but in the sphere of design there is a need to raise awareness of urban issues and their impacts on health and well-being. Research and practice in this field should be a double nexus of interdependency between home design energy consumption and health improvement on the one hand, and education attainment and independence in an old age on the other. This raises awareness of where decisions are made: central or local government, private sector, third sector. Residents can influence how we design products and services to achieve the desired increase in well-being. Essential to this process is a better understanding of the impacts of urban life that do not necessarily manifest themselves in the immediate context of the city but in remote areas where the labor and materials needed to provide the services and products to people living in cities are extracted. Several years ago, this project was very common. But I think we need to go beyond and think about what we really want the city to be, because these trends and innovations implicate artificial intelligence, internet of things, smart cities, wearable technologies, intelligent products, which might deeply affect our experience and expectations in and from future cities. It is plausible that these technologies will allow for greater levels of customized adaptability and interactivity with the environment. These technologies might generate positive well-being outcomes, but they may also produce unexpected negative ones, as well as cause greater inequalities. There are really important issues about accessibility ethics, privacy trust, and security, which are going to drive the comparative adoption of these technologies and their

application. It is important, however, to reflect and be aware who is able to utilize these technologies and who is excluded, and why will be central to designing ways to support wider inclusion of future post pandemic cities, as a shared and equitable resource for all.

The hyper-reality film by *Keiichi Matsuda* shows the overall effect of a digital city, a post-pandemic city, and how such technologies implicate the boundaries of infrastructure and its longevity as products and services change rapidly and behavior change can take moments or decades depending on the context and the issue on how do we take this into account? How do we establish the need for a vision of the future in which millions of individual needs are catered for, in design terms? This means radically rethinking the boundaries of the design disciplines. And this is where we all have a collective responsibility by considering places as organisms that support humanity and other species, conceptualizing cities as containers for services and provisions of life support throughout the course of our life. Such rethinking is going to be tricky, not least for designers who are going to need to draw on additional expertise from a diverse range of disciplines and professions, including the life sciences and public health. Fundamental to this change is designing the system for transparency and for the integration of places, products and services. This means including all resident stakeholders in the design process. Then radical alternatives are only going to emerge through a shift away from path dependencies and a careful balancing of urgent needs and contemporary priorities with long-term goals. It is also worth raising the idea - something we have been thinking about over the last couple of years, that human-centered design seems increasingly ridiculous, given the anthropogenic impacts we are having on the planet. This impact leads to environmental destruction of ecosystems and habitats, and various forms of pollution. It puts animal lives at risk and of course it continues to contribute to climate change. The coronavirus pandemic has brought even greater attention to the role of green and blue spaces and infrastructures for humans to flourish. Many new agendas that promote health and well-being in cities are nearly always accompanied by visions of clean green and daily urban environments. The images in pictures might look beautiful, but they say little about the complexity and the inter-dependencies of our relationship to other species. Instead, they tend to give us a very manicured and sanitized view of nature. We need to rethink health and well-being agendas that are more than human in their ambitions and objectives. The work that I have been doing recently explores what human cities mean, and how we might change deeply rooted existing practices to radically improve urban resilience against climate change. Rather than prioritizing human needs over all of the species' we really need to recognize our position within the wider ecological systems and processes of the planet, and this is important, because it will enable us to establish design values very different from the ones we have at the present, in terms of how we consider the lives that co-produce the city towards a multi-species urbanism.

Perhaps now more than ever it is useful to turn our attention

to those elements that are often under-represented or even excluded from design. The idea of spatial justice is really useful, and there are four points to consider: where we are now, where we want to be, how we will get there, and what are the options. First, we need to establish a baseline of where we are by understanding what is going on in a place and its levels of well-being. This needs greater evidence to challenge assumptions about well-being. For example, examining the links between deprivation-built environment and well-being will enable us to refine a lot of correlational evidence in terms of the socio-spatial characteristics of the urban environment, and how these impact upon the well-being of residents.

Second, where do we want to be? We have to understand the values, needs, and aspirations of people, and Dan also spoke just before about things being done to people or for them, rather than with them. Doing things with them is really important to articulate the perspectives of a city which is designed for the well-being of those people. Our processes for integrating these must enable the expression of competing values, needs and aspirations. Suitable ways of negotiating towards shared fundamental principles form the basis of such an agreement for collective well-being. Clearly the hope in such processes is social inclusion, which has a direct relationship to who is able to thrive in our cities.

Third, leadership and governance are essential in bringing together and implementing future cities through the strength of professional designers. We have to look holistically at situations. We are good with wicked problems, and we can diagnose and identify alternatives and opportunities. and then visualize them and bring them into us, in a process of becoming that changes places. Design is a process by which we conceptualize and visualize futures both near and far, especially through design speculation, design scenarios, world building or narrative creation. The value of these methods has been established in some academic and professional communities, but I feel there is still a need to bring them into the mainstream by educating designers in conjunction with other stakeholders, so that everyone can speculate and explore what those scenarios are. There are tools to aid us in this process, which set out frameworks and the quality of place and well-being, sustainable development, and respective methods for addressing complex interdependences.

Fourth, the designers and design decision-makers, which are members of communities - professional, elected officials, residential, or other - should determine and undertake specific and contextually related inquiry such as the studies of aspirations, energy mobility, and food consumption in relation to well-being and public health factors. However, in order to implement any plans, a process of leadership and articulation needs to be in place whereby alternative voices are addressed, and we do not always agree on everything. We often have competing and contesting ideas and difficult decisions need to be made so that we can establish trust to deliver the preferred outcome that is the best overall. Engaging with the political dynamics of a place is not an easy principle to understand and engage with it, and it can feel quite frightening for designers, but it is essential

for designers and decision-makers to carry out decisions. This means that design informers, design decision shapers, design decision makers, and design decision takers, they all need to come together, something that surely, we have not yet done it yet. We have not moved design beyond the individual place, and it is imperative to do so now, more than ever, and work out a way that we can deliver well-being in post-pandemic cities for everyone. If we are to develop convivial, ethical, sustainable, and resilient post-pandemic cities for the present and future generations, then the role of design education, professions and the public in the dynamic evolution of coming together for this collective right to post-pandemic city is essential.

# Adversities In Diver‘City’ The Dark Side Of Diversity

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## Abstract

*Governments around the world encountered fiscal stress in the wake of the pandemic, with cities facing economic plight. As is the case with most disasters, it is the poor that largely paid the price. A large section of what makes up the Indian economy comprises of the informal sector that cannot ‘work from home’. So when the first lockdown was announced in India back in March 2020, tens of millions of people were pushed into poverty. The harrowing images of migrant workers walking hundreds of miles to get back to their villages could be seen from across the country. With urban areas being so starkly divided, the increasing risk of poverty has become an evident consequence of the pandemic. Dealing with the aftermath of COVID-19 will require addressing these deep-rooted social inequalities, particularly to build the resilience of marginalized groups.*

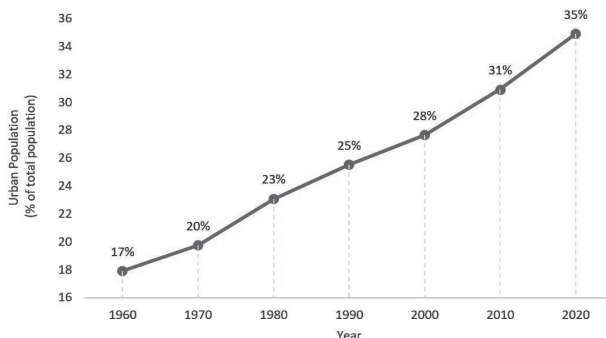
*Although cities’ preparedness and responses to the crisis mainly rely on larger institutional and economic capacities, the local response is also crucial for future resilience and sustainable recovery, starting at the community level. There have been several instances of solidarity witnessed at local levels, with individuals and enterprises coming together in collective action. Hence, urban areas with all their diverse contributing factors, have a ‘decisive, potentially agile role in the battle for a just and green recovery’<sup>1</sup>.*

## Keywords

informal sector, poverty, urban, resilience, local

## The Urban-Urban Divide

The urban-centric nature of the COVID-19 pandemic can be attributed to global urbanization trends, with 68% of the world population projected to live in urban areas by 2050<sup>2</sup>. A large section of this population is concentrated in the megacities and metropolises of the world. With more and more people moving to urban areas in search of better opportunities, comes the challenge of urban poverty. The inequality is most evident in urban areas, where affluent neighborhoods co-exist with, and yet separate from the poor and informal settlements. India is no exception. The country has steadily urbanized over the last decades. According to the World Bank, 35% of India's population is urban as of 2020. The country's economy is mainly concentrated in cities, particularly propelled by large cities, which being breeding grounds for all kinds of diversity inevitably became the epicenters of the pandemic. The phased national and state lockdowns in an attempt to contain the spread of the virus were bound to hit the urban poor in the quickest way possible. Providing targeted emergency assistance in the form of the government's economic package provided some temporary relief to limited beneficiaries. Viewing the crisis from an urban lens entails recognizing and addressing these fundamental inequalities that plague the urban world.



**Figure 1.** Urban Population in India over the decades (shown as % of total population) *Steady increase in urbanization with %age of urban population in 2020 close to double of that in 1960* (Source: The World Bank Data)

## Supporting Informal Livelihoods

Indian cities are host to a large number of migrant workers who form the backbone of the economy and push GDP growth. Almost 81% of all employed persons in India make a living by working within the informal sector<sup>3</sup>. Yet there is the structural exclusion of informal work when framing laws, rules, and policies. The fact that informal work and housing are the majority conditions of urban life in major cities indicates precisely that it is planning and policy provisions that are required to produce urban conditions that can help workers thrive, live, and flourish in the city. Livelihood (or Rozgar in Hindi) continues to be the primary concern of the urban poor amidst the pandemic.

### SDG #8

*Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all*

### SDG #11

*Make cities and human settlements inclusive, safe, resilient and sustainable*

Public space is a developmental asset for the livelihood activities of many urban informal workers, who make important contributions to urban systems through the use of these spaces (streets, squares, sidewalks). Hence, what is required are soft regulation measures that can be adopted in public spaces such as streets, to accommodate multiple uses such as mobility (circulation, transport) and livelihood (vendors, transport workers) within the street form. Informal work uses a very frugal approach where maximum value is derived out of limited resources. Hence, flexible solutions such as providing temporary use permits like time-bound permissions for vending and hawking at certain locations and installing temporary/modular infrastructure (taking a cue from the Government of Delhi's Mohalla Clinics<sup>4</sup>) could be viable options. Street vendors in India constituted 4 per cent of total urban employment in 2011 - 12 (Chen and Raveendran 2014). Women represent a large section of street vendors, but earn less than men on average (ILO, 2002; Chen et al. 2018). Another important measure is the provision of support infrastructure such as crèche/childcare facilities (temporary where required) in public spaces, construction sites, or natural markets, enabling women to earn their livelihoods.

Regulated access to public space is essential for the livelihood activities of other informal workers as well, including waste pickers. They also need access to designated collection routes and sorting sites to process reclaimed waste for recycling. 80% of what gets recycled in Delhi is done by informal waste pickers. Hence, economic infrastructure that supports workers in carrying out their livelihood activities is essential. In addition to the waste infrastructure itself, the recycling sector requires support in recognizing, upgrading, and establishing natural waste and recycling markets; ensuring reservation in urban forms such as Special Economic Zones, integrated housing developments, and industrial areas; as well as ensuring spatial allocations at the neighborhood level and within various housing typologies. In order to move towards Zero Waste Localities, these space allocations for waste management infrastructure ought to be decentralized. This will enable waste picker groups to be able to run these facilities autonomously, without commercial intervention. Any intervention, be it at the policy or planning level, requires knowledge of the population that is the focus of the planning as a starting point. City-level estimates

<sup>1</sup>UN-Habitat (2021) *Cities and Pandemics: Towards a More Just, Green and Healthy Future* [Online]. Available at: [https://unhabitat.org/sites/default/files/2021/03/cities\\_and\\_pandemics-towards\\_a\\_more\\_just\\_green\\_and\\_healthy\\_future\\_un-habitat\\_2021.pdf](https://unhabitat.org/sites/default/files/2021/03/cities_and_pandemics-towards_a_more_just_green_and_healthy_future_un-habitat_2021.pdf) (Accessed: 25 May 2021)

<sup>2</sup>Department of Social and Economic Affairs, "68% of the world population projected to live in urban areas by 2050," United Nations, May 16, 2018 [Online]. Available at: <https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html> (Accessed: 15 June 2021)

<sup>3</sup>"Nearly 81% of the Employed in India are in the Informal Sector: ILO", *The Wire*, May 4, 2018 [Online]. Available at: <https://thewire.in/labour/nearly-81-of-the-employed-in-india-are-in-the-informal-sector-ilo> (Accessed: 25 June 2021)

<sup>4</sup>In 2015 the Government of Delhi introduced the concept of mohalla clinics or neighbourhood health centres, meant to provide affordable primary healthcare at the community level.

for the informal economy are crucial to building an evidence base for inclusive planning measures. While census data (e.g., street vending census) can provide broad overviews important for city-level planning, it is essential to create a data inventory through comprehensive follow-up surveys to ascertain the numbers and extent of informal work. A participatory approach can be adopted to develop a survey model that best fits the area. For example, local authorities and street vendor representatives can together identify information gaps to be addressed and accordingly design the survey. Including stakeholders who are the intended beneficiaries of the initiative/program in the planning process, is more likely to highlight the most relevant issues for action.

**Policy and Practice.** The Government of Odisha launched the Urban Wage Employment Initiative (UWEI) in April 2020; in apprehension of the impacts of the lockdown and other containment measures on the urban poor, due to the outbreak of COVID-19. Implementation of the UWEI would enable the urban poor working in the informal sector to get immediate wages by executing labor-intensive projects<sup>5</sup>. Such a scheme promises substantive employment at the required scale and can be replicated across states.

In December 2006, the city authorities in Bhubaneswar, the capital city of Odisha, and the local vendor organizations together developed a model of dedicated vending zones in the city. As per this model, several fixed kiosks were constructed in the dedicated vending zones and handed over to the vendors working within the area, who in turn are to ensure that the stretch remains encroachment free. As a result of a year-long effort undertaken by the Bhubaneswar Municipal Corporation, there are 46 approved vending zones in the city for about 1700 street vendors<sup>6</sup>. Bhubaneswar was one of the first cities in India to regularize street vendors through a public, private, and community partnership model, thereby acknowledging them as an integral part of the city (Kumar 2012).

**Building Resilience.** *Disasters may be unforeseen, but vulnerabilities pre-exist. They are socially generated.*

Pre-existing inequalities (vulnerabilities) can greatly decrease the resilience of cities. It is almost always those with limited assets who are the most vulnerable to withstanding shocks.

Reduction in deprivation does not just mean employment at an income to ensure livelihoods but also acceptable living conditions. Active investments in ensuring equitable access to infrastructure such as water, sanitation, housing, primary health care and education, are needed to serve a long-term recovery plan. COVID-19 is an opportunity for cities to learn from the lessons during this fight with the pandemic so far, and to 'build forward better' towards an inclusive and resilient model. A good example of a resilient recovery plan in the Asian context is the Rebuild Kerala Development Programme (RKDP), a policy framework developed following the Kerala floods and landslides in 2018. The state of Kerala is also a good example of how lessons from previous outbreaks/disasters can be used to build forward by engaging local government and communities for an inclusive response.

### *What is Resilience?*

*"The capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience."*

*(100 Resilient Cities, 2013)*

### **Build Forward Better and Together**

Between June 1 and August 18, 2018, the Indian state of Kerala experienced the worst ever floods in its history since 1924, triggering numerous landslides and aggravating the flood impact. The state government adopted a highly decentralized approach with district officials, elected local leaders, NGOs, CSOs, cooperatives, and the Kudumbashree<sup>7</sup> playing an integral role in development planning in the state. Inter-Agency Groups were also set up in 14 districts to facilitate NGO participation. This network of volunteers helped support the Government's response to COVID-19, by carrying out social responsibilities such as cleaning and sanitizing public places. Additionally, since the threat of HIV in Kerala in the 1990s, the mainstream media has been co-opted as a partner in public health emergencies. During the COVID-19 outbreak in the state, these measures helped as the community trusted the Government by coming forward to provide needed information, volunteering to provide resources, and following the directions of the government<sup>8</sup>. Cities rely on a complex web of systems to perform essential functions including institutions, infrastructure, and information. The more robust each individual system is, the stronger the city is overall.

### **Way Forward**

The pandemic has further highlighted the importance of the 'local' in urban areas, with local governments playing a critical role as front-line responders in crisis response, recovery, and rebuilding. To democratize the process of planning, it is imperative that local forms of decentralized governance are promoted. Collaboration between civil society and local governments is key, as is the recognition of citizenship rights which is often the main reason for the marginalization of the urban poor, migrants and non-migrants alike<sup>9</sup>. The cases outlined in the previous sections are the result of policy advocacy and collaborations between authorities, social enterprises, and civil society. It is important to involve networks and civil society organizations (CSOs) with the broadest possible representation so that their outreach capacities and knowledge of ground realities can be leveraged to reach all types of stakeholders, especially those who are otherwise un(der)served. The state of Kerala, where the first COVID-19 case in India was reported back in January 2020, has emerged ahead of the curve in terms of crisis response. This can be largely attributed to its decentralized and robust public healthcare system, and a culture of thriving grassroots democracy with power devolving effectively to the village councils. This mainly helped in community outreach, rigorous contact tracing, and mass quarantine<sup>10</sup>.

New agenda in urban governance should make local government a more prominent actor. It occupies the optimum in-

stitutional position to oversee the privatization of local public services, facilitate grassroots and CSO participation, and liaise between multi-scalar actors/stakeholders. But it should also be taken into consideration that big and dynamic urban contexts have a complex governance structure, with multiple authorities and stakeholders working at various levels. This generally leads to a lack of trust between development authorities and citizens. Information and Communication Technology (ICT) is an efficient tool for garnering wider citizen participation in planning. Governments need to invest in digital platforms, where citizens can regularly engage and co-create solutions at the local/community level, thereby leading to better service delivery and collective trust between the citizens and the government.

Economic growth or productivity, urbanization, and the environment are interactive components requiring interactive policy responses. The paper aims to add to the academic discourse and policy discussions on the potential of cities to move towards a just and green recovery. An inclusive, effective, and sustainable policy model involves moving away from conventional approaches (including top-down design or one-off consultation or conflict resolution) in favour of sustained participation and co-creation among all relevant stakeholders, leaving no one behind in urban planning and policymaking processes.

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# The Temporal Cadavre Exquis The Dark Side Of Diversity

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## Abstract

*We will address key questions concerning the development of our cities, in the specific case, Tirana, the capital of Albania, after the new worldwide scenario that come as a consequence of the pandemic. The questions that we will focus connecting with the idea of diversity, addressing it from the symbolic point of view of the relation between art and architecture, and how this relation can affect resilience and vision of the future. This because we have to treat the space the same way we are doing with time, as a flow. Space and time also belong to this class of quantities. Past, present, and future, forms a continuous whole. Space, likewise, is a continuous quantity. With the fall of the communist regime in 1991, Albania has started to favor market logics and the recognition of property rights. Indeed, what followed such revolutionary political transition was a rapid privatization process and, according to many, an apparently chaotic urban development. The 2020 pandemic highlight the need for a change in the vision of our cities and the way they must develop. In the last months, many to underline new possible visions for our cities have used the idea of utopian concepts of the ideal city, or that of resilience cities. "Utopia" comes from Greek: οὐ ("not") and τόπος ("place") which translates as "no-place" and literally means any non-existent society. Sir Thomas Moore coined the term in 1516 when he uses to describe an island where the structure of the society and the equilibrium between men and nature was perfectly balanced. In standard usage, the word's meaning has shifted and now usually describes a non-existent society considerably better than contemporary society. Humans needs these kind of places because mythical space is an intellectual construct and helps us define our real space. We will analyze how the idea of utopia relates to art and how art can be seen as a way to faces contemporary problematics through its close relation to the space of architecture.*

## Keywords

art, architecture, city, utopia, time

## Introduction

In 2019, before Sars-CoV-2 spread in the pandemic form of COVID-19, the world was confronted with the first permanent effects of climate change caused by human activity. This activity is so pervasive and represents such a pressing issue for the planet that, in 2000, atmospheric chemist Paul J. Crutzen coined the term *Anthropocene*<sup>1</sup> to define the new geological era in which we live.

“The *Anthropocene* defines Earth's most recent geologic time period (Anthropocene) as being human-influenced, or anthropogenic, based on overwhelming global evidence that atmospheric, geologic, hydrologic, biospheric and other earth system processes are now altered by humans. The word combines the root *anthropo*, meaning "human" with the root "-cene", the standard suffix for "epoch" in geologic time.” (Ellis, 2013). At the beginning of this geological era, Crutzen placed the Industrial Revolution, when, following an analysis of the polar caps, traces of carbon dioxide were detected in the air trapped in the ice. From the mid-nineteenth century to the present day, human activity has become increasingly present in every corner of the planet, changing its shape and habitat. The continuously accelerated development of the means of communication and transport, as well as the ability to reach every corner of the globe in a matter of hours, has sparked economic globalization and an increasingly dense exchange of goods and products between the world's various countries. This expansion has undoubtedly altered our way of life, of feeding ourselves, our position towards the planet. Forests have disappeared to make way for intensive cattle breeding, which, in turn, satisfies the global demand for meat; the seas are crossed daily by a flurry of cargo ships transporting goods, materials, and products from one part of the world to another. The same happens in the skies, where we can travel from one continent to another in less than 24 hours - an entire human biological cycle - through increasingly faster airplanes. The circulation of machines has saturated the roads of the world's major cities, creating a micro-urban climate that is immediately perceptible upon entering urban areas. Already in the 1980s, media pressure on the potentially catastrophic effects of human activity on the planet compelled world governments to decide on effectuating urgent changes in the way of production and living. In 1992, an international treaty, the Kyoto Protocol, was established, which was signed in 1997 and entered into force in 2005. Under it, the various countries that had signed the agreement would take concrete steps to reduce greenhouse gases and carbon dioxide through the United Nations Framework Convention on Climate Change. The specific aim of the Protocol was as follows:

*“The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to al-*

*low ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.”* (UN, 1992)

From the beginning, it was clear that imposing a change of pace in the reconciliation of the needs of the global economy with those of the planet would not present an easy task. This challenging aim has rendered the Kyoto Protocol nearly ineffective until now, with signatory states continually threatening to leave the protocol, depending on their internal policies. Not even the various environmental movements, which, over the years, have been present almost everywhere in the world, and their constant effort to stir public opinion and awaken individual awareness on what is becoming a pressing exigence, seem to be able to have a real impact on human action on the planet.

In December 2019, unexpectedly for most people – but widely predicted by scientists – a new virus appeared in China, in the city of Wuhan, which gradually pervaded the news all over the world, not least because of the speed with which it spread, infecting the inhabitants of the Chinese city. In January 2020, the virus reached the European continent, catching everyone unprepared and spreading with impressive speed throughout the various European countries. In February, the virus had infiltrated the entire planet, and on March 11, 2020, the WHO officially declared it a pandemic. At this point, security measures were being implemented nearly everywhere to try to decelerate the pandemic, even if rarely in a coordinated fashion. The lockdown appeared to be one of the most effective measures for containing the virus' spread. Depending on the specific impact force of COVID-19, different countries implemented more or less rigid lockdowns, which meant that, for the first time on such a massive scale, millions of people found themselves "forced" to remain locked up at home, obligated to change their lifestyle habits overnight. The virus altered the very concept of everyday routine and approach to life. Initially, it seemed a passing thing, at least in people's perception, because, in reality, doctors and scientists were beginning to discuss the probability of years passing before the pandemic could be eradicated or even considered under control. What happened in tandem, almost unexpectedly, as an unanticipated side effect, was nature immediately reclaiming the spaces left "empty" by humans. Precisely the spaces of cities, those same spaces that until a few months earlier swarmed with human activities, cars, vehicles, and lights that never went off, became, once again, "inhabited" by animals and nature, which, immediately recovered what human beings had declared "theirs". Satellite images show a significant reduction in carbon dioxide in the air in all countries that implemented lockdown measures. And this in just one month after the restrictive measures were put in place. Meanwhile, as the world became embroiled in the sudden and difficult struggle against

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<sup>1</sup> As of May 2021, neither the International Commission on Stratigraphy (ICS), nor the International Union of Geological Sciences (IUGS) has officially approved the term as a recognized subdivision of geologic time.

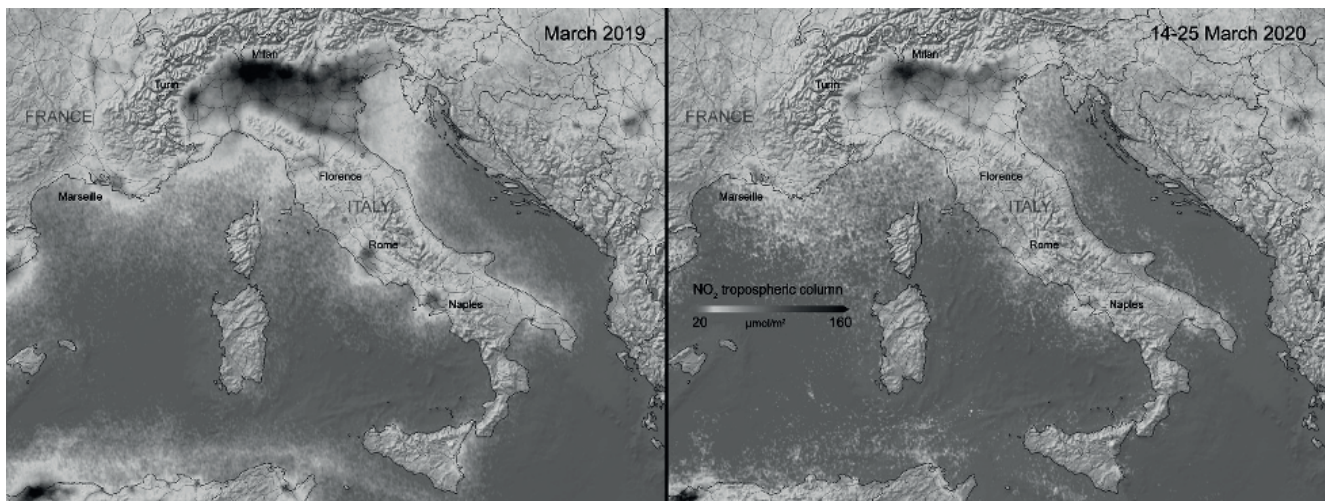


Figure 1. Nitrogen dioxide levels over Italy. ESA, modified Copernicus Sentinel data (2019-20), processed by KNMI/ESA

COVID-19, we all realized that nature was healing itself, that the drastic and sudden decrease in human activities resulted in a directly proportional improvement in the planet's conditions of habitability. These observations brought to the fore discussions on the need to change our way of life in order to strike a balance between the existence of human beings and that of other inhabitants of the planet. During the pandemic, a Climate Clock was activated on the facade of a building in New York's Union Square. The clock symbolically compared two lines, one green and one red: «*The Lifeline and Deadline on the Climate Clock tell us what we need to do, by when. There is still time to avert climate disaster, but only if we take bold, immediate action at the speed and scale necessary – beyond what politicians have deemed politically possible.*» (Anon., 2020)

A sort of public Doom clock<sup>2</sup> that tries to shock and raise awareness through numbers that appear to be a real condemnation, given the challenges and slowness with which the world's various governments move toward solving the climate urgency.

Terms like "resilience," "zero impact" and "clean energy" have become part of our daily vocabulary, and many have pointed to utopia as a possible way of changing our way of life during these difficult months (we have entered the second year of the COVID-19 pandemic). In fact, what all these arguments about the human impact on the planet have in common is the need for change; change in the approach to our way of life, change in our way of consuming, and change in how we manage our consumption waste. Changing entails rethinking the very foundations of our being in the world, and, to do so, we must have a sufficiently large "space for thought" to allow this rethinking. Here, the concept of utopia provides the necessary space for our thinking to move freely, allowing us to see beyond what we are presently accustomed to seeing; to allow us to make that mental leap that creates an unexpected situation in respect to our daily lives. "Utopia" comes from Greek: *οὐ* ("not") and *τόπος* ("place"), which translates as "no-place" and denotes any non-existent society. Sir Thomas Moore coined

the term in 1516 when he used it to describe an island where the structure of the society and the equilibrium between humans and nature existed in perfect balance. In standard usage, the word's meaning has shifted, and, presently, it commonly evokes a non-existent society that is considerably better than contemporary society, even if in Moore's book, there is a precise distinction between *eu-topia*, happy living, and *ou-topia*, the concept of non-place. Humans need these types of places because mythical space is an intellectual construct and helps us define our real space.

*"Two principal kinds of mythical space may be distinguished. In one, mythical space is a fuzzy area of defective knowledge surrounding the empirically known; it frames pragmatic space. In the other, it is the spatial component of a worldview, a conception of localized values within which people carry on their practical activities. (Tuan, 1977)*

Since Plato's time, people have tried to build societies that stand on a solid rational structure, which has meant that the utopian model was discarded as a possible vision for the construction of society. Yet, as we have begun to see, man needs a utopian space, a mythical space, in order to preserve an essential dimension of the human experience. The loss of utopia in social visions has harmed the quality of social planning and the ability to challenge the established order. Various alternative models for urban design, based on utopian thinking, were conceived and proposed, primarily during the nineteenth century. Some of these models have also been tested, mainly in the United States, which, at the time, was still in its full exploration phase. We must look back at the Industrial Revolution to understand how the dramatic changes in the production of goods led to an unprecedented shift from rural to urban areas, necessitating a completely new way of thinking about life and work. These changes prompted the development of urban planning, as it became necessary to rethink urban living and working spaces.

*"The origin of modern town planning must thus be sought at that moment in time when circumstances had crystallized sufficiently to cause not only discomfort but also to provoke the pro-*

<sup>2</sup>For more info: <https://thebulletin.org/doomsday-clock/>

test of the people involved. At this point, historical discussion must broaden beyond issues like pattern settlement to include the social problems of the time, demonstrating how modern town planning should be regarded as an integral part of the general attempt to extend the potential benefits of the Industrial Revolution to members of all classes, and emphasizing the inevitable political implications inherent in what may appear to be a purely technical field." (Benevolo, 1975)

Industrial progress went hand in hand with social poverty, but the utopias proposed as attempts to curb this ever-increasing disparity stood at too great a distance from reality and, thus, remained unattainable, at least in the lifetimes of those who hypothesized them. One hundred and fifty years later, the world crisis we are experiencing has once again placed us at a crossroads, faced with the choice of continuing to live our lives according to the habits we have established, exploiting the planet's resources to the point of no return, or seeking to imagine new ways of existing in harmony with it. In other words, to advance what proved to be utopian ideals during the Industrial Revolution, i.e., ideas too far removed from the reality of the historical moment to be successfully introduced into daily life. To shift these ideals from a level above reality to the level of reality, our everyday world, in order to prevent them from dissolving along with reality itself: «If the task we have is to build genuine utopias instead of modeling our behavior in terms of false utopias such as Coketown, Country House or National State, and all the other partial and inadequate myths we have listened to, we need to review the ideals that can help us rebuild our environment». (Mumford, 2008)

The shift intended by Mumford is toward science and art, as the author considers it essential that both become central expressions of the social structure, to serve as guides for people from a rational and emotional perspective. Science has advanced significantly in the last century, owing primarily to the technological revolution. Very important scientific discoveries have occurred and continue to occur at ever faster rates than just a century ago, and what were utopian prospects only a few years earlier have become certainties from which to begin shifting the scope of our research (and utopias) ever a little further. Art, too, was naturally revolutionized by science, not only in its methodologies but, more significantly, in its certainties and points of departure in terms of thought. The way of thinking of artists has changed, growing more complex following the complexity of the contemporary world, with artists increasingly relying on scientific discoveries for their artistic conjectures and artworks questioning our approach to life and everyday routine, often urging reflection on grand, universal themes. In this historical moment of world crisis, a pandemic-related health crisis that underlines the need for a profound change in our habits; an economic crisis as a direct consequence of preventive measures against the pandemic; an environmental crisis that confronts us with the urgency of a radical change in our way of life on this planet. All crises lead – again – to a single possible solution, the change at various levels in our way of living and understanding

reality. Art has always helped the human being think of change as an inherent aspect of daily life, not fear it, and neither take reality for granted. Artists have used utopias, always and at all levels, as real springboards for visualizing possible and alternative worlds to the one in which we live. The city is frequently the "theater" in which artistic operations are imagined, sometimes through apparently simple operations, but with profound conceptual content. The artificial space of cities, a space conceived and built by man, in which we now move with ease, as if it were our natural environment, is a space fraught with



Figure 2. Joseph Beuys, 7000 Oaks, Kassel, 1982. Image source: Internet

contradictions. Sometimes obvious, sometimes more hidden, in the folds of these contradictions, we can find the necessary push to imagine our alternative future, the escape route from the reality in which we live. Consider the artwork *7000 oaks*, started by the German artist Joseph Beuys in 1982, during that year's edition of Documenta (a contemporary art exhibition that takes place every five years in the city of Kassel, Germany). Beuys's project involved planting 7000 oak trees, each next to a basalt stone about 122cm high, in the city of Kassel; however, the work that required five years to complete has expanded to other cities all over the world. Beuys' work, his legacy to future generations, emphasizes the relationship between man and nature. A relationship that evolves, as evidenced by the German artist's work. Beuys' choice to combine basalt stone with oak reflects the ever-changing relationship between people and nature; when the oak is young, the human being seems to dominate nature. However, over time, this relationship shifts, and the oak - nature - first reaches the height of the stone, establishing an equal relationship and creating a precarious balance between the human being and nature. A precarious balance because, as everything in the universe, it is completely subject to the passage of time; then, it changes again, the balance is broken,



**Figure 3.** Joseph Beuys, 7000 Oaks, New York, 1988. Image source: [www.diaart.org](http://www.diaart.org)

and nature becomes dominant. We can also read this relationship in terms of the different biological cycles of human beings and nature. Human life is shorter than that of an oak (there are specimens of oak that live up to 500 years). This new balance, also precarious but with a longer span, urges us to consider the role of human beings regarding nature and how, in our vision, we think of dominating it, of being able to bend nature to our needs. It is precisely this viewpoint that has led to the environmental crisis in which we currently find ourselves, and which demands urgent and definitive solutions.

*"I think the tree is an element of regeneration, which in itself is a concept of time. The oak is especially so because it is a slow-growing tree with a solid heartwood. Since the Druids, who were named after the oak, it has been a form of sculpture, a symbol for this planet. Druid means oak. They used their Druids to define their holy places. I can see such a use for the future. When we start with the seven thousand oaks, the tree planting enterprise provides a simple but radical option for achieving this goal." (publicdelivery.org, 2021)*

Considering our relationship with nature and our distorted perspective of it, let us examine the work of Finnish artists Pekka Niittyvirta and Timo Aho: Lines 57° 59' N, 7° 16' W 8, completed in 2018 on the island of Lochmaddy, the archipelago of Uist, in the Outer Hebrides off the west coast of Scotland. Along the walls of the village's buildings, the artists installed neon lights connected to sensors that became activated with the rising tide. The lights were placed at the height of what the experts predict will be the sea level in a few years due to the melting of the glaciers and the rise in sea level if we do not immediately change our way of producing, living, and impacting the ecosystem of the planet. The work is a poignant and direct reflection of the catastrophic consequences of our indiscriminate behavior toward the environment, a critique of the contemporary consumption model, which, nevertheless, originates in the Industrial Revolution. At the beginning of this paper, we



**Figure 4.** Pekka Niittyvirta and Timo Aho, Lines 57° 59' N, 7° 16', 2018. Image source: <https://niittyvirta.com/lines-57-59-n-7-16w/>

saw how the proposal for dating the geological period in which we find ourselves - Anthropocene - coincided with the Industrial Revolution as, following analysis in the polar caps, traces of carbon dioxide were detected in the air trapped in the ice. In this case, the work transports us into a dystopia dangerously close to reality, a warning reminiscent of the Macabre Dance iconography from the Middle Ages. That "remember you must die," which must have been therapeutic for people somehow, serves to make us realize that we must take another path from the current one. This realization does not mean that science has not already warned us of the gravity of consequences stemming from our contemporary lifestyle, but, unlike science, the artistic message has the advantage of immediacy. Visual language manages to penetrate in a more precise and synthetic way than scientific language, composed of written theories and verified through mathematical formulas. The rapidity with which the image is able to convey the complete scientific message can guarantee that speed of propagation, necessary today more than ever, to strike the common imagination so that even drastic decisions can be made as soon as possible. The image of the level that the sea will reach in the coming years is more powerful than a thousand words in demonstrating the need for a new vision. The word "vision" stems from the Latin *visio -onis*, derived from *videre* "vedere"; we must be able "to see," "vedere" a new reality, to think abstractly about possibilities that do not yet exist, that is, that we do not yet see. The same idea of conveying a warning can be found in the artwork *Ice Watch*, created by Icelandic artist Olafur Eliasson in 2014. The installation consists of 12 blocks of ice arranged in the shape of a clock and installed in public spaces in various European cities. The ice blocks come directly from glaciers near Iceland. The work aims to provide the viewer with a direct experience of our planet's polar caps melting. The blocks weigh approximately 100 tons at the time of the installation. The artist has been chastised for the considerable financial investment and means required to create a work that literally dissolves within hours. The criticisms may appear reasonable if we believe that the responsibility for the



**Figure 5.** Olafur Eliasson, Ice Watch, Paris, 2015. Image source: the artist's website

dramatic situation we are experiencing lies precisely in our way of consuming the planet's resources, but, as previously stated, scientists have already warned us about the current situation, and, without this, many changes in resource management and our way of life would not have occurred. The sight of the ice melting before our eyes, in the incompatible space of our cities, thousands of kilometers away from the physicality of the problem, may strike the conscience more than the words of experts from around the world. Speaking of the exploitation of our planet's resources, let us now analyze an artwork that focuses precisely on this theme, on the possibility of circumventing the laws on the exploitation of public land in the city of New York. The artwork in question is Swale, an ongoing project started in 2016 by the American artist Mary Mattingly which consists of a barge of about 1500 square meters which houses a vegetable garden and which sails around Manhattan offering food to the inhabitants of the city. The project was born out of a reflection on a law that forbids New Yorkers from planting fruit trees or growing food in public areas of the city. This is to prevent an excess of this practice from becoming harmful to the local ecosystem. The artist has used maritime laws, different from those of the exploitation of public land, to circumvent this situation. In this way Mattingly underlines how the basic goods of our survival (food and water) are subjected to a socio-economic system that cuts them off from our daily landscape. Here we mean the real urban landscape, underlining how every visual element that society decides to include or exclude from the city space, changes its shape and consequently the perception we have of it. Swale is in the artist's words "an intentionally provocative public artwork and a floating edible landscape". In fact, moving in the bay of Manhattan the barge changes the urban landscape making it fluid, like the water on which it navigates, developing a new methodological approach to the production of food in the metropolitan space. In fact, people are free to attend the artwork when it docks, collecting food from the trees, bringing it home or eating it directly on the boat, during the lunches organized by the artist herself. Various fruit, vegetable and vegetable plants



**Figure 6.** Olafur Eliasson, Ice Watch, Paris, 2015. Image source: the artist's website

are grown on the barge. The work brings the idea of a mobile landscape and of access to primary goods for the inhabitants of New York, but broadening the discourse, the artwork is an open reflection on these issues that touches all the cities of the globe. Moreover, it could have a real impact on the landscape of New York, because in parallel with the production of food on the barge, the artist is engaged in a dialogue with the Municipality to change the law on growing food in the city's public spaces. Considering that New York has approximately 30,000 acres of parks, the project could have a powerful impact in changing the "fixed" landscape of the city. Continuing to help build a mobile one in the meantime. The works examined show us exactly the use of utopia in the construction of the image of the city. An image both physical and symbolic, which speaks to us of different temporalities and different endings, dystopian or utopian, thus embracing the two faces of the vision of the future, the pessimistic and the optimistic one. That way of seeing reality by considering it from all possible angles in order to be able to read it as an organic whole that opens up to welcome everything in an anti-hierarchical way. According to the organizational model of the rhizome, elaborated by Gilles Deleuze and Félix Guattari, namely a descriptive model in where the organization of the various elements that compose it does not follow a line of subordination, but where each element can influence or be influenced by another. In our view, this is the only possibility to conceive a different organization of urban space and consequently, the only way to build the image of a multi-faceted city, importing the sociological feeling indicated by Laclau and Mouffe into urban planning according to which: «*The presence of the 'Other' prevents me from being totally myself*». (Laclau & Mouffe, 1985)

The presence of the other is understood here as the possibility of influencing and letting oneself be influenced in turn, to create elements and subjects that have in common a point of view contaminated by contingency and therefore not absolute. On the other hand, even in the origins of urban planning, according to Benevolo's theories, the solution to solve the problems of



**Figure 7.** Mary Mattingly, Swale, 2016 – ongoing. Image source: the artist's website

city organization was found in shared thought, in a democratic society: «*Modern town-planning is not merely an attempt to represent this process in visual terms, by transposing its application to the problem of the use of space, but must also be regarded as a vital factor in the creation of a democratic society*». (Benevolo, 1967)

What Benevolo meant was precisely the possibility of transposing the concept of a shared vision into the construction of the image of the city, a practice that has perhaps been lost over time. Welcoming the "other", not necessarily understood as the practice of welcoming people's opinions, but rather as the ability to welcome the images produced by the active participation of people in the symbolic construction of the city. The last artwork we examine perhaps clarifies this aspect even better. It is *Wheatfield* by the American artist Agnes Denes, created in Milan in 2015 within the Porta Nuova area. The artist had previously created the work in 1982 in Manhattan. In the case of Milan, *Wheatfield* covers an area of 50,000 square meters in which 1.250 kilos of wheat seeds have been sown. The work of ecological land art opens up fundamental themes that the pandemic has forcefully brought to the center of the global debate, such as for example the microclimate of the metropolis, the sharing of food (also underlined by the work by Mattingly which we analyzed previously), the energy production and land conservation. The work is also a strong reminder of the responsibility that each of us has, towards the production of the image of our cities, and to underline this aspect, the work has an interactive structure that fosters the active participation of the inhabitants in the moment of harvest. 5.000 people voluntarily joined in the wheat harvest and each participant received a packet of seeds that they could plant themselves. This methodology establishes a generating chain that brings with it the possibility of changing the image and the shape of an entire city, a utopian revolution realized through a small seed of wheat.

An image, the one that derives from *Wheatfield*, which shows how a delicate and bucolic image like that of a wheat field, can have a disruptive force in the middle of the city skyline, forcefully shifting the perceptive and visual balance of full and empty



**Figure 8.** Mary Mattingly, Swale, 2016 – ongoing. Image source: the artist's website

space that shapes the urban space. Another of the main concepts in all the artworks we have examined is time. The passage of time, the possibility of moving back and forth in time, the idea of eternity: these notions constitute some of the most complicated and central ideas, crucial concepts of philosophy and science throughout human history. One of the main problems with classical utopias was the underestimation of the temporal problem in their proposals. The institutions that people have created to give order to the reality in which we live function according to different times, and it is impossible for all to receive a particular vision at the same time. Furthermore, time is divided according to a structure composed of three moments, past, present, and future, which influence - and not insignificantly - our actions and visions. Aristotle, one of the most influential philosophers of all time, saw time as a single body; past, present, and future were, according to the philosopher, a single flow, and so, he claimed, should space be considered as well: «*Space and time also belong to this class of quantities. Time, past, present, and future, forms a continuous whole. Space, likewise, is a continuous quantity: for the parts of a solid occupy a certain space, and these have a common boundary; it follows that the parts of a space also, which are occupied by the parts of the solid, have the same common boundary as the part of the solid. Thus, not only time, but space also, is a continuous quantity, for its parts have a common boundary*». (Aristotle, 1970)

In the twentieth century, Henri Bergson expanded Aristotle's idea that time was a single flow and that past, present, and future constituted a single entity, merging into our being present here and now. This notion leads us to consider how space is central in the discourse of time because it physically places us in a point (or more points) in reality. In our case, the space of works of art within our cities establishes a relationship with the space of the city that is not only physical but also temporal, transforming it and moving it elsewhere in time and space. It is exactly Bergson's thinking that our vision of the city is based on, shifting the perception of the temporal flow from our internal perception, to the urban space, to how the objects that compose our daily landscape are linked together according to a flow which



**Figure 9.** Agnes Denes, Wheatfield, Porta Nuova Milan sprouts March – July 2015. Photo Agostino Osio

moves us back and forth, building the thickness of our perception. On the other hand, Lynch already underlined how cities are a temporal experience: «*Looking at the cities can give a special pleasure; however commonplace the sight may be. Like a piece of architecture, the city is a construction in space, but one of a vast scale, a thing perceived only in the course of long spans of time.*» (Lynch, 1960)

In the same way, art also has a physical, spatial, but also temporal value, helping to build visions that settle in our heads in its relationship with the spaces of the city where it is installed, helping to build our idea of reality. In its synthesis, art, especially art conceived in urban spaces, has the ability to create that vision necessary to move our thoughts beyond the reality of the moment, back and forth in time (and space) and this is its driving and premonitory strength; art does not anticipate the future, but helps creating it. In the title of this paper, we have used the metaphor of the *cadavre exquis* to better clarify the isolated vision and the overall vision. The *cadavre exquis* is a methodology invented by the artists of the surrealist movement, to create drawings in which one could not be fully aware of the overall result. Technically, it was made through a drawing started by an artist, who left it "open" incomplete by folding the portion of sheet used for drawing, leaving only a few signs of his drawing visible for the next artist. The second artist would continue the drawing starting from the signs left in sight, leaving some signs of his drawing visible following the same methodology. Once the available space had run out the sheet was opened and the entire drawing visible, with the result of a completely unexpected image. If we shift this methodology to urban space, the result is very close to what happens in contemporary cities, where there seem to be many different cities that make up the metropolis, united to each other only by small signs left incomplete, without a common vision. This overall vision has become an urgent need after the pandemic and above all a vision that takes into account the active participation of people in the construction of the new symbolic image of the city, so that this determines a change in its physical image. It is no longer possible, nor sustainable that the city is a fragmented organism as in the vision of the *cadavre*



**Figure 10.** Wheatfield, Porta Nuova, Milan, Public sowing. Photo Agostino Osio © Agnes Denes. Courtesy Fondazione Trussardi Milano e Fondazione Riccardo Catella Milano

*exquis*. The city must include the notion of the *other* as an active participant. This post-phenomenological approach would make it possible to design urban space by moving over time, collecting visions that come from every corner of the urban fabric, thinking of the city as a single organism for which each part sends and receives information from the whole, influencing and being influenced. A space-time continuum that would neutralize the historical problems of implementing the utopian vision, making it feasible.

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# The Post-Pandemic, The Post-War, the City In Transition – Sarajevo Case Study. Future Scenarios For Post-Pandemic City

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## Abstract

*Global pandemic is a special challenge for Sarajevo, the post-war and the city in transition in Europe. Like stranded Noah's ark, the city with still visible war wounds and with no foundations for sustainable spatial planning system yet constructed, will probably have zero resilience for future catastrophes and pandemics. Unsatisfactory outcomes of the spatial planning system analysis for Sarajevo directs us to understand seriousness of our present situation and to think to make a turning point towards re-evaluation of our creation, in order to renew and prepare our city to survive future catastrophes. It should not be only a matter of disaster resilience, but a path towards sustainable European 21 century city. Our symbiosis with other species is one of the future scenarios for a city in transition, because uncontrolled urban sprawl is threatening not only human made systems. Our consciousness of planning in the Western Balkans will have to change dramatically towards nature preservation and controlled urban development to enable our cities to become healthy, fertile, and functional environments again. In absence of spatial planning strategies, land use plans, and bylaws in accordance with TA2030, post-pandemic period might become the critical moment for Sarajevo to begin procedures of creating sustainable spatial planning system.*

## Keywords

post-war city, city in transition, post-pandemic city, spatial planning system, sustainability

## Introduction

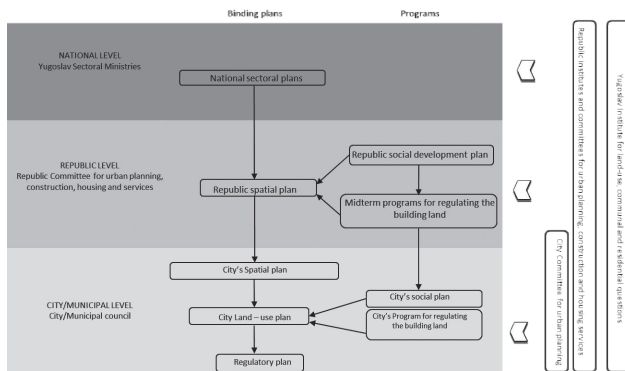
When thinking of Sarajevo during the second year of Coronavirus pandemic, the image of a strained Noah's Arc appears before my eyes. One of the city's most known spatial planners once said: "The towns which can develop themselves in peace are lucky. Sarajevo had a bad luck." (Aganović, 1993; author's translation) This city survived war horrors at the end of the twentieth century, unlike many of its citizens; pairs of all species, including "constituent peoples" are here safe on the Arc, albeit the process of transition from socialist socio-political and economic system to market economy is extremely unsuccessful, especially in spatial and urban planning... I would say we failed.

The global health threat has risen disaster resilience questions again. Will we survive the future catastrophes? Are we able to reconstruct demolished spatial planning system to enhance its sustainability and to prevent future disasters, after all?

## The Doom of the Socialist Spatial planning system, what next?

Sarajevo is living the process of transition, from being the former regional centre of the Socialist Republic Bosnia and Herzegovina, part of the Socialist Federative Republic Yugoslavia from 1945-1992, to becoming the capital city of the newly independent country of Bosnia and Herzegovina and Sarajevo Canton from 1995, from socialist economy ended with the war to post war market economy.

The socialist spatial planning system was based on the Agrarian Reform, Colonization Law, and The Workers Self - Management Law. The concept of state as the main investor and the executor of all construction works functioned from 1945 until



**Figure 1.** Spatial planning documentation in the period of Socialist  
SOURCE: Institute for Canton Planning Archive, Pelja-Tabori own presentation

1990. Clear hierarchy with national/federal, republic and city/municipal level functioned based on top to bottom level. Legislative framework in spatial planning followed governmental hierarchy. Four years after the liberation of the occupied country during the WWII, in 1949 the Basic Decision on general land-use plan was introduced on national level, accompanied by Basic construction law, law on expropriation and other laws (See Table 1). On the republic level BiH adopted Law on land-

use plan of the People's Republic Bosnia and Herzegovina, Rulebook on mandatory elements of the Decision of municipal-ity people's council which replaces Land – Use Plan from 1961 and Law on determining building land areas (Table 1).

Governmental Level	Name and No. of official gazette	Law
Federal binding on the republic level	FPRY Official Gazette no. 78/49	Basic Decision on general land-use plan
	FPRY Official Gazette no. 12/57	Expropriation Law
	SFRY Official Gazette no. 15/65	Law on application of regulations of Basic construction law in financing socio-political communities to funds for residential construction
	SFRY Official Gazette no. 10/65	Basic Law on contribution to utilization of building land
	FPRY Official Gazette no. 52/95A, amended SFRY Official Gazette no. 1/85	Law on nationalization of lease buildings and building land
	SFRY Official Gazette no. 13/65	Basic Water Law
	SFRY Official Gazette no. 8/65	Basic Railway construction Law
	SFRY Official Gazette no. 30/65	Law on air protection from pollution
	SFRY Official Gazette no. 16/65	Flood Protection Law
	SFRY Official Gazette no. 24/65	Law on nature protection
	FPRY Official Gazette no. 45/1961, amended SFRY Official Gazette no. 5/65	Basic Law on construction of investment buildings
	FPRY Official Gazette no. 12/961	General Law on public roads from 1961
	SFRY Official Gazette no. 38/64	Temporary technical regulations for construction in seismic areas
	Republic	PRS Official Gazette no. 27/95B
PRS Official Gazette no. 51/95B		Law on district and municipality areas in PR Serbia from 1959
SRS Official Gazette no. 27/85		The Executive Council of SRS Decision to determine cities and settlements with the urban character for nationalization of building land on the territory of SR Serbia - 1959
PRS Official Gazette no. 7/961, amended SFRY Official Gazette no. 14/65		Law on conditions for residential buildings construction in villages (and suburbs) in SRS
SRS Official Gazette no. 47/961		Law on nature protection in SR Serbia from 1961
PRS Official Gazette no. 51/95B, amended SRS Official Gazette no. 15/65		Law on cultural heritage monuments protection
Republic	LLRS Official Gazette no. 13/956	Land-use Planning and Construction Law in LR Slovenia
	LSRS Official Gazette no. 21/64	Land-use inspection Law
	SRM Official Gazette no. 7/65	Decision on determination of settlements
	SRM Official Gazette no. 7/65	Land-use planning Law in PR Macedonia
	PRBiH Official Gazette no. 41/95B, amended SRBiH Official Gazette no. 4/65	Law on and-use plan of the PR Bosnia-Herzegovina from 1959
	PRBiH Official Gazette no. 41/1961, amended SRBiH Official Gazette no. 35/65	Rulebook on mandatory elements of the Decision of municipality people's council which replaces Land – Use Plan from 1961
	SRBiH Official Gazette no. 41/64	Law on determining building land areas
	People's Gazette no. 21/1960, amended no. 46/64	Land – use and regional spatial planning Law in PR Croatia from 1960
	People's Gazette no. 41/61	Decree on implementation of the Law on land-use and regional spatial planning from 1961
	PRS Official Gazette no. 47/1961, amended SRS Official Gazette no. 30/65	Land – use and regional spatial planning Law in SR Serbia from 1961
PRS Official Gazette no. 51/95B, amended SRS Official Gazette no. 15/65	Law on cultural heritage monuments protection	

**Table 1.** Legislation in Town Planning of the Federative People's Republic Yugoslavia in the period 1945-1965

–The land was nationalized<sup>1</sup>, which was the first precondition to –so-called “socialist planning”. This was the reason for creating republic social development plans, for a five-year period (See Table 2). Social plans were basically programs for spatial and land–use plans which set sectoral programs for housing, regulation of building land, construction of infrastructural systems, transport development, construction of industrial build-

<sup>1</sup> Nationalization - process of taking a private industry or private assets into public ownership by a national government or state

ings, construction of urban equipment, environmental protection and investments and gave guidelines for accomplishing the social development plan. The Republic's social development plans were accompanied by Midterm programs for regulating the building land, which were, also, created for a five-year period (Table 2).

Governmental Level	Name and No. of official gazette	Law	
Republic	SRBIH Official Gazette no. 25/66	Social development plan of RBiH for the period 1966-1970	
	37/66	Law on public roads	
	7/68 and 14/72, amended 10/73	Water Law	
	32/71	Amendments of the Law on determining building land areas	
	36/71	Law on communal taxes	
	23/72	Social development plan of RBiH for the period 1971-1975	
	35/72	Expropriation Law	
	16/73	Law on state survey and cadastre	
	13/74	<b>Spatial Planning Law</b>	
	13/74	Law on residential tenancy	
	13/74	<b>Law on building land in social ownership</b>	
	14/74	Law on re-parcelling (comassation)	
	29/74	Law on amortization of roads	
	29/74	Law on amortization of residential buildings in social ownership	
	30/74	Law on housing cooperatives	
	42/75	Basic policies of the long-term development of SRBIH until 1985	
	36/75	Water Law	
	38/71, amended 40/78	Woods Law	
	2/75	Decision on drafting the Republic BiH Spatial Plan	
	24/76	Social development plan of RBiH for the period 1976-1980	
	37/76	Law on protection from natural disasters	
	19/77	Expropriation Law	
	33/77	Law on Self-contribution	
	3/78	Law on protection and use of cultural and natural heritage	
	6/78	Law on farm-land consolidation (arrondation)	
	6/78	Law on public roads	
	11/78	Woods Law	
	14/78	Law on state survey and cadastre	
	14/78	Law on maritime fisheries	
	16/78	Law on electrical industry	
	Governmental Level	Name and No. of official gazette	Law
	Republic	18/78	Law on social planning system and RBiH social plan
23/79		Law on property rights in commercial buildings and building parts	
35/79		Law on geological surveys	
13/80		Law on mining	
11/81		Social development plan of RBiH for the period 1981-1985	
4/81		Law on census of population, households, and dwellings in 1981	
30/74, amended 28/81, 2/82		Law on fire protection	
18/82		<b>RBiH Spatial Plan for the period 1981-2000</b>	
5/82		Law on revalorization of residential buildings and apartments in social ownership	
14/84		Law on residential tenancy	
38/85		Long-term social development plan of RBiH for the period 1986-2000	
39/85		Social development plan of RBiH for the period 1986-1990	
24/86		Law on re-parcelling (comassation)	
34/86		<b>Law on building land</b>	
34/86		<b>Spatial Planning Law Amendments</b>	
12/87		Expropriation Law	
32/87		Law on freshwater fisheries	
25/88		Law on demarcation of far-land areas and economic policy measures for faster development of agricultural production in mountain region incentives	
26/89		Law on joint property in residential apartments	
26/82, amended 44/89		Law on republic fund for credit financing of faster economic development of poorly developed areas	
15/90		<b>Spatial Planning Law Amendments</b>	

**Table 2.** Legislation in Town Planning of the Socialist Republic Bosnia-Herzegovina in the period 1965-1990. Institute for Canton Planning

Local social plans and programs followed the goals of the republic ones. Midterm local social plans were defining guidelines and measures for achieving social and land use plans and were enacted for the period of five years. (See Table 3) Local programs for the City of Sarajevo were defining activities of the local Construction Institute regarding preparation and equipment with communal buildings and installations, as well as individual installations of the building land. Construction decision, Decision on General Land-use plan of the City of Sarajevo 1965, City of Sarajevo spatial plan for the period 1986 – 2015, and Land Use Plans for the Urban territories of Sarajevo, Hadžići, Ilijaš, Trnovo and Pale for the period 1986-2015 were all enacted on local level.

Two thirds of the total predefined works by the local programs for regulating the building land in Sarajevo were conducted in new residential areas with collective residential buildings (community buildings). One third of the predefined works were executed for the construction of public buildings - schools, kindergartens, hospitals, and for sanation of residential areas (infrastructure works). We can follow the republic social plans from 1959 and the local social plans from 1965 in the Yugoslav spatial planning legislation. They were accompanied by spatial and land use plans. The first Land Use Plan for the City of Sarajevo was the General Land-Use Plan (GUP) adopted in 1965 (Figure 2).



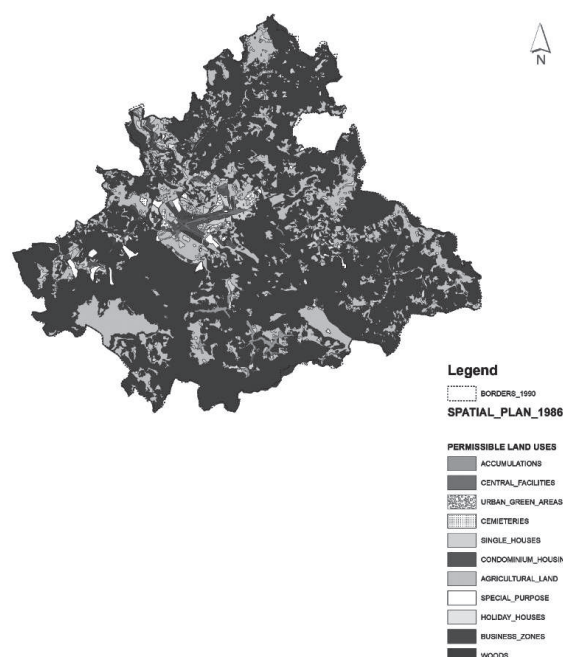
**Figure 2.** Sarajevo General Land-Use Plan (GUP) 1965

"Regulations in Yugoslav republics were coherent with the general guidelines defined by the federal Decision on general land-use plan, from 1949. All republic laws treated land –use in the same manner in relation to the processes of creating land-use plans: land-use program, general land-use plan and detailed land-use plan, as well as regional plans." (Antić et al, 1966; author's translation) The socialist spatial planning system had been established hierarchically well-defined with planning instruments from national to municipal level, and clear measures for mobilizing a building land for new socialist neighbourhoods built for "the workers" by the State. The private investments and private land were not in focus of socialist spatial planning system. In 1969 Sarajevo was given the status of socio – political community, which means that the city had the right and the duty to take care of all the issues related to organization and functioning of economic, urban, and social development

of the urban territory (490 km<sup>2</sup>). The city assembly was established as the highest authority of the city (Bublin, 2008; author's translation). In the 1970s, Sarajevo was experiencing a rather difficult air pollution situation, which was a consequence of rapid urbanization, industrialization, and unfavourable natural conditions (Bublin, 2008; author's translation). Due to the deteriorated environmental conditions, in the 1970s the City of Sarajevo launched the Environmental Protection Program, whose implementation commenced in 1978. In the early 1970s first problems with informal settlements have occurred, shortly after producing the GUP. In the same period, with the development of industry and because of the Agrarian reform, a massive population migrated to the city. Such a great augmentation of employment and migration to the city could not follow up with the appropriate rhythm of housing construction. Faced with the inability to solve their housing problem legally, many migrated inhabitants started to build their family houses informally" (Zavod za planiranje razvoja Grada, 1985; author's translation). The City did not react against construction of the informal settlements, which implied achieving a social peace without offering specific social policies for this problem. The City of Sarajevo Assembly accepted „The recovery program for slope parts of the city “and „The recovery program for plain parts of the City” done by the Institute for the City of Sarajevo Planning in 1974. (Skupština grada Sarajeva, 1974; author's translation) In 1978, Sarajevo won the candidacy for the host of the XIV Winter Olympic Games: 'That was Sarajevo's a new big development project,' which implied fabrication of the new detailed spatial planning documentation - Regulatory plans for sports and recreation areas on mountains Jahorina, Bjelašnica, Igman, Trebević for the Olympic games (adopted in 1977/1980) done by the Institute for the City of Sarajevo Planning. The 1980s brought a series of new development of spatial planning documents such as:

- The Socialist Republic of Bosnia and Herzegovina Spatial Plan (adopted in 1982) done by the Republic Committee for urban planning, construction, housing, and services. Some of the Yugoslav Spatial Plans at the time were done in coordination with UNDP / UNCHS.
- The City of Sarajevo Spatial Plan for the period 1986 – 2015 (adopted in 1986) done by the Institute for the City of Sarajevo Planning (Figure 3).
- The Long-term Social Plan for the City of Sarajevo for the period 1986 -2000 was done in 1982 (adopted in 1985).
- The City of Sarajevo Land-Use Plans for the period 1986 – 2015 (for the Urban territories of Sarajevo, Hadžići, Ilijaš, Trnovo and Pale) (adopted in 1990).

The decomposition of the socialist spatial planning system, which begun in the 1960s with problems such as informal settlements, was deepened in the 1980s: “Merciless usurping the urban space; enormous increase in housing construction prizes; lack of adequate land policy; informal housing; absence



**Figure 3.** The City of Sarajevo Spatial Plan for the period 1986 – 2015 (1986) SOURCE: Institute for Canton Planning

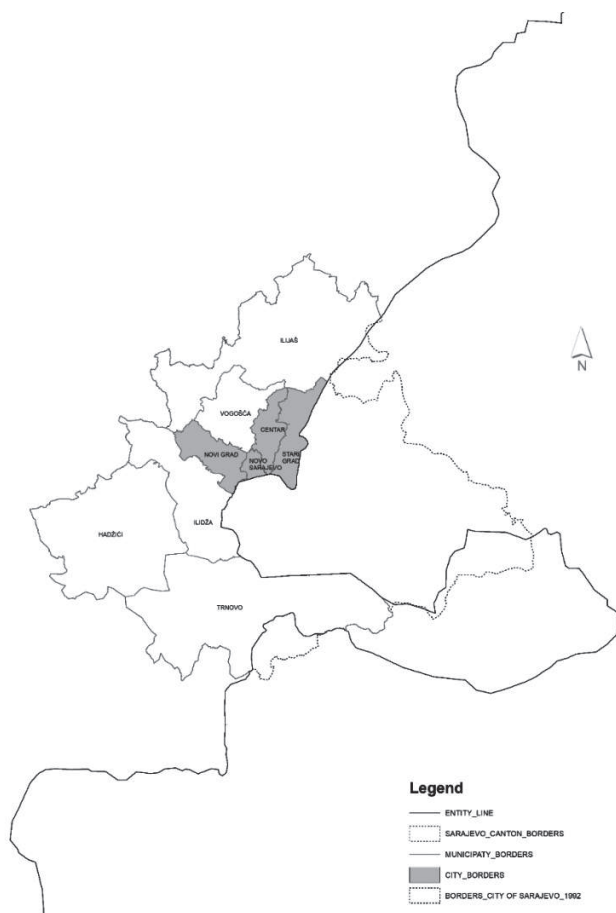
of information transparency; arrogant behaviour of some public service companies; terrible situation with urban sanitation,” (Aganović, 1993; author's translation) were qualifications of the leading experts in the former spatial planning system. Already then it was obvious that it is urgent for Sarajevo to get 'more contemporary and more consistent development strategy", based on "significant changes in socio – economic system...Sarajevo must...direct its attention towards wider region. The town is only one element of a wider development compositional whole.” (Aganović, 1993; author's translation)

According to the 1981 Census, the city had 448,519 inhabitants. The Spatial Plan for the period 1986 – 2015 registered 492,540 inhabitants in 1985 and provided projections for 590,000 inhabitants in the year 2000 and for 681,000 inhabitants in 2015. (Zavod za planiranje razvoja grada Sarajeva, 1985; author's translation) It seemed that the city was mature for the systematic changes in its spatial planning organization in terms of legislation, quality of spatial planning documentation and relevant studies done for the purpose of drafting the zoning plans, but early nineties brought changes, once again to the city with over 500,000 inhabitants: "...according to the 1991 Census the City had 527,049 inhabitants” (Federal Institute for Statistics, 2019). Instead of the positive changes, the war was on the horizon, and it began in 1992.

### The current spatial planning system and Disaster resilience challenges

Eight years after being the host of the XIV Winter Olympic Games and eight years before the Millennium, Sarajevo was bombed and kept in the longest siege in Europe, since WWII, without water, electricity, and food, until the Dayton Peace agreement in autumn 1995: "The siege of Sarajevo lasted for 1,335 days...around 12,000 civilians lost their lives, of whom

1,800 were children...58,000 residents were being wounded. Around 150,000 Sarajevans had to seek refuge abroad, while around 100,000 refugees arrived in the city." (Bublin, 2008) It was the first uricide in Europe after the WWII: "Apart from killing and wounding the civilians, the aggression also systematically destroyed economic, social, housing and infrastructure facilities, while particularly destroyed was the historical heritage." (Bublin, 2008) The tragedy ended when the Dayton Peace Agreement was formalized on November 21, 1995 in Dayton, Ohio and signed in Paris, almost a month later. The Agreement, signed by the presidents of Republic of Bosnia and Herzegovina, Republic of Croatia and Federal Republic of Yugoslavia "brought an end to the tragic conflict in the region" (UN General Assembly Security Council 1995, 2019), by subdividing the Republic of Bosnia and Herzegovina into two Entities: the Federation of Bosnia and Herzegovina (FBiH) and Republika Srpska (RS) and a special unit – the District of Brčko (DB) The Entities are divided with the "inter-entity boundary line." (UN General Assembly Security Council 1995, 2019). (Figure 4)



**Figure 4.** Canton Sarajevo with its nine municipalities, today City of Sarajevo –four out of nine municipalities (red) and area of former City of Sarajevo – today East Sarajevo (outline border – dot line) SOURCE: Institute for Canton Planning, Pelja-Tabori own presentation

The legislative atavisms of the socialist spatial planning system remained at the beginning of transition processes. Instead of questioning the former system, measuring its efficiency, and enhancing it towards contemporary European spatial planning system, adapted to new socio political and economy circumstances, it was defragmented, selectively modified to absurdity, and led to demolition, instead of reconstruction.

According to the Bosnia-Herzegovina Constitution, spatial planning is the responsibility of the Entities, and is not on a national level (ESPON 2020, 2018, p. 63-65). In Annex II of Annex 4, Article 2 of the BiH Constitution - Continuation of Laws it is said that: „All laws, regulations, and judicial rules of procedure in effect within the territory of Bosnia-Herzegovina when the Constitution enters into force shall remain in effect if consistent with the Constitution, until otherwise is determined by a competent governmental body of Bosnia-Herzegovina UN General Assembly Security Council (1995, February 19). This Article enabled some Yugoslav sectoral laws to remain in force even today. According to Federation of BiH Constitution, Federation responsibilities are, among others, Chapter III Article 1 Paragraph d) Defining economic policy, including planning, reconstruction, and land use on a federal level. In Article 2, paragraph c) of the Federal Constitution it is underlined that joint federal and cantonal responsibilities are, among others, 'Environmental protection policy' (Službene novine Federacije BiH, 1994, p.4; author's translation).

Both sub – national (FBiH and RS) and regional (Cantons) governmental levels enact laws and by-laws in the sector of spatial planning. Laws and bylaws (decisions, decrees, rulebooks) on federal level are being adopted by the Federal Parliament; on cantonal level by the Cantonal Government; on the city level, by the City Council and on municipality level by the Municipality Council. In Sectors with shared responsibilities between Federation and Canton laws and bylaws are enacted on both levels and must be harmonized with higher government level (Table 4). At the bottom of the government pyramid in FBiH, RS and BD, there are local governments (cities and municipalities) with their responsibilities in spatial planning process according to the Law on local self – government (Službene novine Kantona Sarajevo, 2000; author's translation), the Spatial Planning Law (Službene novine Kantona Sarajevo, 2017) and the Decree on uniform methodology for producing spatial planning documentation (Službene novine Federacije BiH, 2004).

In today Bosnia-Herzegovina each entity and all ten cantons in FBiH have their own legislation framework, which makes: "rather uncoordinated system, both vertically and horizontally" (ESPON 2020, 2018, p. 17), because there is no national and entity strategy or a concept as a guideline for inter-entity and inter-cantonal cooperation. Spatial Planning Law and Construction law are on the federal level, while cantons practice two models of spatial planning and construction legislation. One is spatial planning and construction law as a single act, and another is spatial planning law and construction law as two separate acts.

Five cantons in FBiH have spatial planning and construction

Governmental Level	Name and No. of official gazette	Law	
Federation of Bosnia-Herzegovina	FBIH Official Gazette no. 02/06, 72/07, 32/08, 4/10, 13/10 and 45/10	Spatial Planning Law and Land Use on FBIH Level	
	no. 55/02	Construction law on FBIH Level	
	no. 33/03, 38/09	Law on Environmental Protection	
	no. 33/03	Law on the Environmental Protection Fund of F BiH	
	no. 33/03 and 72/09	Law on Waste Management	
	no. 66/13	Law on Nature Protection	
	no. 70/06	Law on Waters	
	33/03 and 4/10	Law on Air Protection	
	no. 66/13	Law on Electric Energy	
	no. 70/13, 5/14	Law on Renewable Energy Sources and Efficient Cogeneration	
	no. 63/04, 50/07	Decree on uniform methodology for producing spatial planning documentation	
	no. 101/15 and 1/16	Decree on the Conditions for Discharging Wastewater into the Environment and the Public Sewage System	
	no. 43/07	Decree on Hazardous and Harmful Substances in Waters	
	no. 12/05	Rulebook on Air Quality Monitoring	
	no. 12/05	Rulebook on Limit Values of Emissions of Pollutants in the Air	
	no. 19/04	Rulebook on Plants and Facilities for which Environmental Impact Assessment is Compulsory	
	no. 82/07	Rulebook on Plant and Pollution Register	
	no. 65/06	Rulebook on the Content and Method of Drafting the Management Plan for Protected Areas	
	Governmental Level	Name and No. of official gazette	Law
	Sarajevo Canton	Sarajevo Canton Official Gazette no. 24/17, 1/18	Spatial Planning Law
41/08		Law on Environmental Protection Fund of Sarajevo Canton	
18/10		Law on Waters of CS	
14/16, 43/16, 19/17 and 10/17		Law on Communal/Utility Services	
30/17, 48/17		Law on Traffic Regulations in the Sarajevo Canton	
23/16		Law on Protection against Noise	
6/99, consolidated text 14/00, 4/02		Land-use plans for Sarajevo Urban territory for the period 1986-2015 (Municipalities: Stari Grad, Centar, Novo Sarajevo, Novi Grad, Ilidža and Vogošća); for Hradišće Urban territory for the period 1986-2015; for Ilidža Urban territory for the period 1986-2015; for Trnovo Urban territory for the period 1986-2015; for Pale Urban territory for the period 1986-2015	
37/14		Land-use plan amendments for Sarajevo Urban territory for the period 1986-2015 (Stari Grad, Centar, Novo Sarajevo, Novi Grad, Ilidža and Vogošća)	
9/00, 26/05		Land-use plan for Ilidža Urban territory for the period 1986-2015	
26/05		Sarajevo Canton Spatial Plan for the period 2003 – 2023	
4/11		Phase "A" Sarajevo Canton Spatial Plan Amendments for the period 2003. – 2023.	
22/17		Phase "B" Sarajevo Canton Spatial Plan Amendments for the period 2003. – 2023.	
6/00		Decree on urban and technical conditions, space standards and norms for barrier free environment, accessibility requirements and standards for disabled persons who use technical and orthopaedic aids	
6/06, 18/07, 18/08, 35/12, 51/15		Decision on Legalization of buildings constructed without building permit and temporary buildings	

**Table 3.** Spatial Planning Legislation in Sarajevo Canton. Institute for Canton Planning Archive

law, as a single document, as follows:

- Bosnian-Podrinje Canton Goražde Spatial Planning and Construction Law (2009),
- Tuzla Canton Spatial Planning and Construction Law (2011,2013,2016),
- Una-Sana Canton has Spatial Planning and Construction Law (2013),
- Zenica–Doboj Spatial Planning and Construction Law (2014),
- Posavina Canton has Spatial Planning and Construction Law (2015),

and four cantons in FBiH have construction laws recently adopted, as separate acts from spatial planning law, as follows:

- Herzegovina-Neretva Canton Construction Law (2013),

- West Herzegovina Canton Construction Law (2013)
- Central Bosnia Canton Construction Law (2014),
- Canton 10 Construction Law (2016).

As we may see from the above-mentioned data all these cantonal acts have been enacted recently, in the last nine years. Sarajevo Canton is the only canton that does not have neither construction law as a separate act, nor spatial planning and construction law, as a single act. It has only the Spatial Planning Law (2017). The Spatial Planning Law is official legislative inheritance of the SRBiH and was amended for the first time during the war (Službeni list RBiH, 1994). In 1999, for the first time after the war Sarajevo Canton government adopted the Spatial Planning Law (Službene novine Kantona Sarajevo, 1999). It relied on the former republic spatial planning law (Službeni list SRBiH, 1974), but in a reduced form since it did not include some of the sections from the original law. In 2005 Sarajevo Canton government adopted the new Spatial Planning Law (Službene novine Kantona Sarajevo, 2005) which was basically founded on the Spatial Planning Law from 1999. In 2017 Sarajevo Canton passed the new Spatial Planning Law (Službene novine Kantona Sarajevo, 2017) which basically follows the cantonal Spatial Planning Law from 2005 and modifies it mostly in the matter of greater competencies of the municipalities, eradicates plan corrections, and introduces the location information that along with urban permit is a prerequisite of a building permit procedure. The Spatial Planning Law does not introduce certain essential definitions and departments for market economy such as property rights, protection of public good rights and specificities for construction according to spatial planning documentation – spatial plan, land -use plan and regulatory plans.

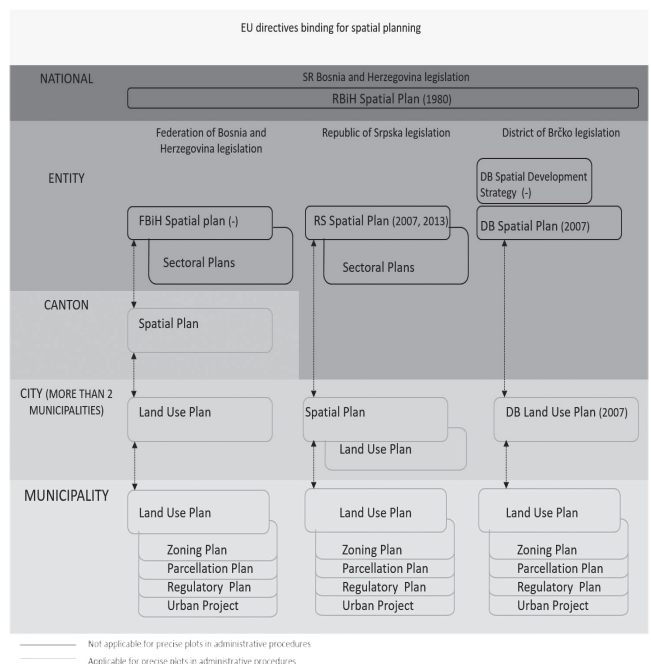
The spatial planning system in Bosnia and Herzegovina (Figure 6) is fragmented, with no coordination between the entities and the district, and no initiatives on the national level for such coordination. That is particularly problematic for divided or in between cities such as Sarajevo. Spatial planning legislation is being passed on entity and cantonal level. The Spatial plan on the national level is still valid, even though adopted in 1980, albeit unimplemented for its obsolescence. The entity Republika Srpska has its Spatial Plan adopted in 2007 and amended in 2013. Land use planning is prepared by municipalities and in bigger cities such as Banja Luka, by the city, which is, by definition, composed of more than two municipalities. The Spatial Plan and the Land Use Plan of the District of Brčko were adopted in 2007. The Spatial Development Strategy of the Brčko District is in the procedure of adoption currently.

The Spatial Plan of the Federation of Bosnia and Herzegovina has not been adopted, even though the procedure of drafting commenced in 2008. Ten cantons in the Federation of Bosnia and Herzegovina have their own laws on spatial planning, and all except Sarajevo Canton have construction laws as well. Land use plans are prepared on cantonal, the district and city/municipal level. In Bosnia and Herzegovina, planning implementation through building permission procedure is based on binding zoning and development plans on different governmen-

tal levels, often not in compliance one with another neither in vertical, nor in horizontal organizational structure.

The existing spatial planning system lacks coordination between the entities in the planning processes between Sarajevo Canton and Istočno Sarajevo and lacks building standards on national level. Rather systematic construction during socialism has been transformed into unarticulated chaos that characterizes the current period of transition.

Spatial planning documentation (zoning and development plans) is the basis for obtaining urban permission. Urban permission is a precondition for building permission and is issued



**Figure 5.** Current Spatial Planning System instruments in Bosnia and Herzegovina Pelja-Tabori own presentation

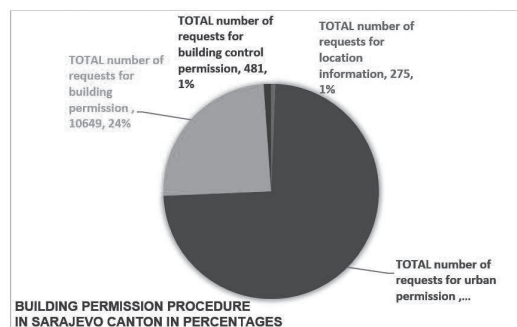
based on urban and technical conditions interpreted by municipality individual and his or her aesthetic criteria and ability to understand spatial planning documents and valid legislation, which makes the whole process challengeable in the matter of objectivity and rationality. There is no rule book, nor planning implementation act which could easily be understood by authorities and citizens in a complex process of spatial and land use planning documentation implementation and what is more important, which will make building permission procedure transparent, objective and based on equal rights for all interested stakeholders.

Moreover, from the early 1990s until today there is an "institution" of the "professional opinion", which can be demanded by a municipality in specific during building permission procedure cases (when there is no valid detailed spatial planning documentation). This document may pose in question the objectivity of the legal procedure, since the professional opinion is written by an individual or a group of professionals organized in boards or committees, upon "not formally defined aesthetic, environmental and any other criteria". In 1991 Aganović commented and qualified professional opinion as "...professional and social alibi for illegal procedures, brought in the municipalities...

which is provided by "special", or "professional boards", in every municipality separately, without uniformed impact of the city on these processes, notwithstanding all passed spatial planning documentation of various government levels and responsible institutions." (Aganović M. , 1991; author's translation)

The absence of clear building order, design and building standards, clear private and public rights and obligations indicate unsustainable spatial planning system. Presuming the fact that we are able to "measure" the present spatial planning system sustainability with indicator in form of quantitative analysis outcomes of a building permit procedure in Sarajevo Canton we may reflect on the data on number of requests for the following: location information, urban permission, building permission, building control permission and professional opinion.

The outcomes of the research show that in the timeframe 2008-2020 there were 275 requests for location information, 31.971 requests for urban permission, 10.649 requests for building permission, 481 requests for building control permission and 18.150 requests for professional opinion (Figure 6). The survey shows that only 1.5% of applicants for urban permission finish the procedure and obtain a building control permission. The research yet to be done is to measure the coverage



**Figure 6.** Building permission procedure in Sarajevo Canton indicators in percentages SOURCE: Institute for Canton Planning, Pelja-Tabori own presentation

of building permission procedure indicators in various land use areas, protected and restricted zones as an indicator of catastrophes resilience. We can rightfully conclude that working on sustainability of the spatial planning system should be directed towards enhancement of the quality of living of the citizens and disaster resilience.

### Future Scenarios – Instead of Conclusion

Presuming further spatial system decay triggered by war and transition, and deepened by coronavirus pandemic we may presuppose future scenario no. 1 for Sarajevo Canton as following:

- Uncontrolled urban sprawl,
- Public space blurred,
- Public interest neglected,
- Regulation in planning and coding questioned,
- Natural catastrophes potentially more harmful,
- Climate changes dominant in years to come,
- Increasing housing demand,

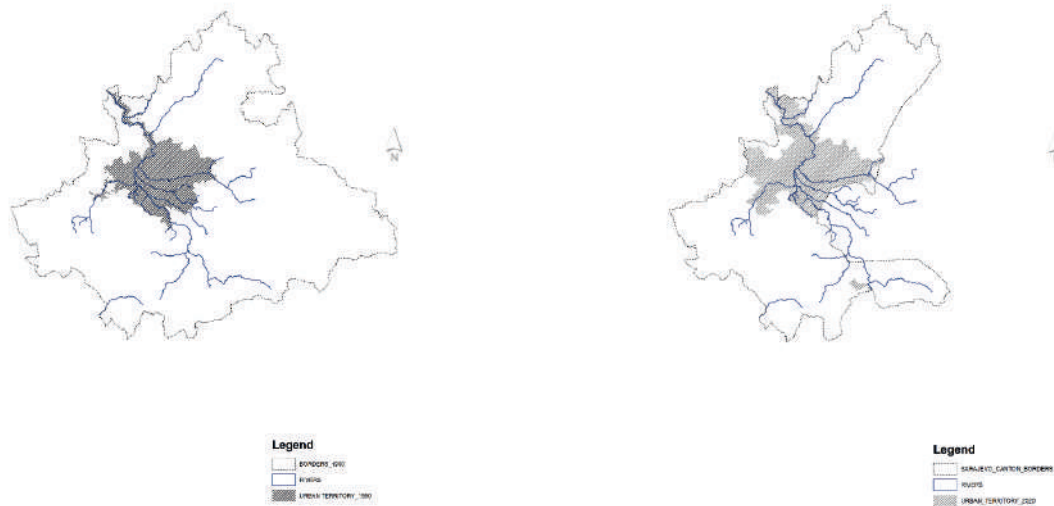


Figure 7. Urban territory and the boundaries of the City of Sarajevo in 1990. SOURCE: Institute for Canton Planning, Pelja-Tabori own presentation

- Business and commercial zones diminishing,
- Social and demographic changes affecting urban tissue and the city of tomorrow.

Sarajevo has increased its urban territory significantly since 2017, as well as the portion of building land (Figure 7). This trend doesn't seem to proceed in a controlled and planned manner, with a serious research processes to be basis for planning. Former City of Sarajevo is divided with the inter-entity line, as mentioned beforehand.

Sarajevo Canton covers the area of 1,277 km<sup>2</sup> or 60.92 % of the former City of Sarajevo's administrative territory (2,096 km<sup>2</sup>) (See Table 5). Sarajevo Canton has its constitution upon which it is consisted of nine municipalities (Ustav Kantona, 1996/2017, p. 2; author's translation). Today's City of Sarajevo administratively is consisted of four central municipalities (Stari Grad, Centar, Novo Sarajevo and Novi Grad) (Ustav Kantona, 1996/2017; author's translation) and it covers 141.5 km<sup>2</sup>

Public space needs to be redefined and regulated, as well as the public interest. Planning and coding culture must be placed in wider regional and macro economy context. Outcomes of building permission procedure indicate that reforming of the spatial planning sector is needed to control and to reduce potential hazards and climate change impacts. Coronavirus underlined already commenced irreversible changes of our living, working, and learning habits, therefore our houses are becoming our offices and classrooms. We shall probably need more housing, and less business, commercial and education zones. Bosnia and Herzegovina already note negative demographic trends. Population is more elderly and young people are emigrating to Europe recently. Those trends are going to affect our cities very soon.

We shall witness rapid urban change in the following decades because of socio-political and economy changes caused by transformation of human living, working and education habits.

Those meaningful changes are affecting and will continue to affect spatial planning system in Bosnia and Herzegovina. It is the question whether the spatial planning system of Bosnia and Herzegovina should be repositioned in Continental European legislative context and enhanced in terms of sustainability. If such scenario as future scenario no. 2 for Sarajevo Canton happens it should imply preconditions as follows:

1. Political commitment to European values, and accession to the EU,
2. Comprehensive reform of the Entity and the Cantonal legislation in the sector of spatial planning according to principles of sustainable development, which implies:
  - a) Introduction of informal planning processes, and non-binding or conceptual planning instruments, regional planning, and technical guidelines and building and design standards,
  - b) Eradication of urban permission and foundation of building permission procedure on building permission proper, and
  - c) Building permission being a function of Building Code, Spatial Planning Law, and zoning and development plan.

European urban acquis is contributing to the founding value of the EU which is stronger Rule of Law. Even though divided in two entities and the district, and practicing spatial planning on entity, cantonal and municipal level currently, Bosnia and Herzegovina should establish mechanisms of coordination between the entities, and decision making or brainstorming on the national level, as informal planning process. The future EU framework would imply implementing EU directives in the sector of spatial planning, guidelines such as ESDP and TA 2030, and guidelines for building and design standardization. Therefore, it would imply establishing bodies such on national level in order to achieve strategic approaches of the regional policy, and cooperation between entities in spatial planning, capable to



produce the joint informal documents. Regional level of planning should be introduced to stimulate cross border/entity cooperation of the local authorities, especially for divided cities such as Sarajevo, where Dayton entity line is 'cutting' the urban territory in two parts, the Federation of Bosnia and Herzegovina and the Republika Srpska part, in order to improve quality of life of citizens on both sides of the 'border'.

The reforming of the sector of spatial planning according to principles of sustainable development (society, economy, and environment), should aim to improve quality of life by respecting the limits on use of natural resources. We remember that in Europe "environmental protection boom has begun in the 1980s and continued through 1990s with the start of sustainability debate which aim was to ensure that environmental aspects deserve the same treatment as social and economic factors." (Gruber et al., 2018) We know that the war in the 1990s unfortunately interrupted the sustainable development of Sarajevo, which began in the 1980s.

Therefore, the new reformed spatial planning system on entity, the district, cantonal, and municipal level should imply introduction of planning implementation instruments, in the domain of economy and society such as private-public partnerships and contracts, subsidies for social housing and cultural heritage protected buildings, building land mobilization and consolidation, etc., to the future building code document, and sectoral legislation. Such concept should enhance procedural and institutional land use implementation, as critical parts of spatial system chain. Disaster resilience and management combined with enhancement of living standards and economic prosperity should be a clear direction for Bosnia and Herzegovina sustainable spatial planning system imminently.



**Figure 9.** Sarajevo, view from mountain Trebević Photo credit by Nataša Pelja Tabori

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# Post-Pandemic Heritage Game Design Tools For An Engaging Experience

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## **Abstract**

*Digitisation of heritage and the creation of open digital archive contribute in a large scale dissemination of history and culture. Today, technology allows us not only to easily access information on heritage and view 3D models of buildings or artefacts, but also to experience virtually historic sites or historic object, by representing them accurately, either referring to the recreation of exiting objects or rebuilding models of objects as they may have appeared in the past (Roussou, 2002). Moreover, digital heritage platforms allow visitors to navigate through virtual spaces and access information data, but still provide a low level of interactivity and immersion (Champion, 2008). By providing simple navigation they offer passive interaction and less engagement, while affords to navigate and have inputs to which to respond offer a more active mental interaction. However, what is missing is dynamic involvement of users and an engaging narrative.*

*Although, digital models today are becoming more and more realistic representations of the physical objects and in general of the environment, they still lack a narrative which describes the intangible elements of cultural heritage, human attitude in this environment and simulates the cultural context. In order to guarantee an effective engagement with learning experience and offer better entertainment to a larger audience, other than conservators, historians and archaeologists, this study will introduce an interactive and immersive approach in heritage 3D platforms based on game design tools.*

*The paper will explore first the state of the art on virtual heritage worldwide and in particular applications in the case of Albanian heritage, highlighting the level of interactivity and user engagement. Then, interactive tools from video games will be analysed and discussed in view of their incorporation in virtual heritage platforms or serious games to make the dissemination of virtual heritage more interactive and immersive. In this sense, this study will discuss how to develop interactive narrative for historical heritage based on interactivity and narration elements, how to develop an interactive story space and introduce player character as a view point in heritage exploration.*

## **Keywords**

game design, heritage exploration, post-pandemic heitage, digitisation, *heritage 3D platforms*

## Digitalization of architectural heritage

Digital technologies are becoming more and more important in architectural heritage research and education. Digitisation of heritage and the creation of open digital archive contribute in a large-scale dissemination of history and culture. Architectural heritage as a disseminative human activity is related to the recovery and representation of the physical remains of historical objects and serves to communicate knowledge and transmit ideas and values. It includes three main domains *documentation, representation and dissemination* (Addison, 2000).

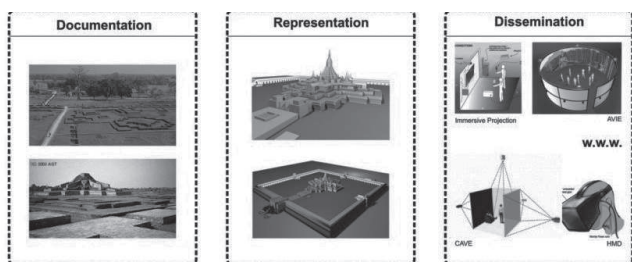


Figure 1. Three main steps of Digital heritage (source: Addison, 2000)

**Documentation** means data collection regarding the study objects which serve for object 3D representation and as a “deposit” of information for the object.

**3D Representation** is the 3D model of existing heritage object, or the representation of the supposed object which is no more existent. In this step, research deal mostly with the 3D modelling techniques, texture, polygons and real time rendering.

**Dissemination** of virtual heritage refers to the way the 3D content is offered to the user based on a purpose of use. VH can be used for excavation, documenting, data analyses and publications, education, display, digital reprocessing, tourism and serious games.

Nowadays, technology allows us not only to easily access information on heritage and view 3D models of buildings or artefacts, but also to experience virtually historic sites or historic object, by representing them accurately, either referring to the recreation of existing objects or rebuilding models of objects as they may have appeared in the past (Roussou, 2002). Herein, UNESCO in 2003 introduced the term ‘Digital heritage’ referring to the recourses “created digitally or converted into digital-form from existing analogue resources”. This means that architectural heritage can be scanned and 3D models can be produced. Architectural heritage recorded digitally has contributed in preserving it but has also significantly increases their accessibility to larger audience (Tonta, 2008). Moreover, digital heritage platforms allow visitors to navigate through virtual spaces and access information data, but still provide a low level of interactivity and immersion (Champion, 2008). Researchers in this field agree that the level of Interactivity in virtual heritage is still very low. (Sanders, 2012, Champion, 2002; Roussou, 2006;) sustain that heritage dissemination should encompasses also the cultural and artistic evidences and narratives. Although, digital models today are becoming more and more realistic representation of the physical objects and in general of

the environment, they still lack a narrative which describes the intangible elements of cultural heritage, human attitude in this environment and simulates the cultural context. According to Yang et al. (2006), the lack of human interaction and the limited cultural content in these kinds of representations make them more technical and limit people engagement with heritage.

In order to guarantee an effective engagement with learning experience and offer better entertainment to a larger audience, other than conservators, historians and archaeologists, its essential to introduce an interactive and immersive approach in heritage 3D platforms. 3d reconstruction and data availability is not enough to explore the socio- cultural context as it could be done through the use of narration techniques or the exploration through motion and interaction. Advanced digital technologies and interaction techniques on one side facilitate interaction modes, but still other motivation and entertaining elements are needed.

## Historical overview on virtual heritage

Virtual heritage can be considered as a sub-category of digital heritage as it is related with VR technology and a real-time navigation through a computer-generated three-dimensional space. ‘Virtual heritage’ (VH) is a term used to describe works that deals with virtual-reality (VR) and cultural-heritage (Roussou, 2002). The role of virtual reality in this case is not only to reproduce digitally historical content and data, but also to process and display heritage through the use of VR technology. It means that heritage content becomes digital or through the use of computer VR technologies it’s possible to simulate it, if it is lost and deliver it openly to the global audience. VR technologies such as Mixed Reality and Augmented Reality are being used recently to rebuild digitally historical sites, visualise it to the audience by improving user’s experience. Nevertheless, the role of virtual reality is not just to visualize existing or lost objects and other type of historical content, but also to attribute them significance, through the use of interactive media. According to Stone and Ojika, as cited by Champion (2016) virtual heritage is defined as “*the use of computer-based interactive technologies to record, preserve, or create artefacts, sites and factors of historic, artistic, religious, and cultural significance and to deliver the results openly to a global audience in such a way as to provide formative educational experiences through electronic manipulations of time and space.*” For the purpose of this study Virtual Heritage is not just the 3D modelling and animation but refers to a fully immersive 3D virtual space where a user is able to navigate interactively (Champion, 2008; Sanders, 2012). Moreover, Addison (2001) apart from the use of technology to *record, model, visualize* highlighted also its role to *communicate* cultural and natural heritage. Herein, virtual heritage is more complex than just the realistic reconstruction of objects in VR, and information about them, but it includes also the story and context that give meaning to this representation, and offer engagement and entertainment for people. According to Champion (2008) interaction is crucial for virtual heritage to communicate and transmit significance to the user.

Virtual reality was first used in heritage visualisation in 1994, with a brief 'walk-through' 3D reconstruction of Dudley Castle in England. It can be considered as the genesis of virtual tours. Since then, archaeologists start to experiment with virtual reality in research projects demonstrating time by time the power of the new technological systems. In 1995, in the first virtual heritage conference held in England, were presented interactive models of historical objects and hereafter was created VRML programming language (Virtual Reality Markup Language),



**Figure 2.** The 'walk-through' 3D reconstruction of Dudley Castle in England and an image of Dudley Castle

which allowed highly detailed and fast performing virtual worlds from personal computers. This opens up the possibility of large use of VR in heritage for education. The first interactive models proposed were the ancient sites of Olympia, Epidaurus, and Miletus (Refsland 1998 in Sanders 2012). At the time, these models presented poor graphics and textures and had a low navigation performance which started to be improved in the late 1990s with the development of Alpha world, an online immersive and collaborative virtual environment populated by virtual pedestrian who explore and walk through the 3D space. This has anticipated adventure videogames (such as *Myst* and the sequel *Riven*) with high performance of computer graphics and real-world simulation where players explore the large set of game world and manipulate surrounding objects (Cyan, 1997).

Still during the 1990s, virtual heritage was not fully embraced by archaeologists and compared to video games, this field was left behind. Only few projects (ex. Nemrud Dagi virtual world, Turkey) tried advanced virtual environments with detailed 3D reconstruction models and interactive data linked to objects in the virtual world.

During the 2000s, virtual heritage became the primary technology for the dissemination of architectural heritage. Technological achievements such as faster graphic cards and higher hardware performance, high-resolution laser scanners, megapixel photography, GPS, etc. enable large access not only to professionals but also to public for teaching and education use. Moreover, they urge complex and accurate virtual environments (with high-polygon-count), with highly realistic textures and an increased level of interactivity. Nevertheless, when considering real time rendering, visualisation performance was still low.

An interesting project developed during these years was the interactive 3D model of the battle monument of Octavian at Actium. Through navigation in virtual reality and interaction with object pieces was possible to understand the complex construction methods of this object, which not only was not possible to do in 2D representation, either with the real object, which could be damaged by manual use. Hence, VR in this case was used as a mean to offer new visualisation and interaction modes to relate to the historical objects or constructions. In other projects (ex. the ancient shipwreck found in Cyprus coast) VR was used to put together separate pieces of objects found, and to work on hypothesis of assembly. This model evaluation practice is standard in architecture schools and is used as a mean to check the visual impact of real object or objects that are projected in mind. In architectural heritage they constitute an instrument to test hypotheses about the past. In the historical reconstruction of Athens Acropolis, this practice was used to test the reconstruction and the visual impact of the old Athena Temple upon the classical structure of the Acropolis.

In the last decade, virtual heritage projects are employing advanced communication means such as interaction based on artificial intelligent communication between user or avatar and virtual characters, advanced manipulation of objects in VR, collaboration platforms that link models instantly and give access to users worldwide in real time.

In the VR reconstruction of Assyrian Northwest Palace was introduced interaction between users and virtual characters based on artificial intelligence. Visitors navigate inside the palace and background information's are provided to them depending on the various locations. Moreover, they meet virtual characters and can interact with them. Communication interactivity between them is based dialog stimulated by artificial intelligence. In this regard, research is going further. Interactivity based on the capacity to manipulate objects in 3D space was used in the case of digital reconstruction of historical objects made of separate pieces which needed to be put together (ex. an Egyptian wooden model of ship). This allows object verification, and makes possible various interpretations. In the last decade, digital technology and in particular VR has been

highly evolving allowing not only highly realistic visualisation, but also the possibility to developing interactive narrative of architectural objects or sites (interactive 3D story space). This

Year 1990's	Year 2000 's	Year 2010's
Simple 3d models	Advanced / realistic 3d models	Realistic /Accurate 3d models/
Low polygons	Higher polygons	Very high polygons
	BIM (Building Information Model)	BIM (Building Information Model)
Navigation in VR, limited viewpoints	Better Navigation in VR, Different viewpoints	Advanced Navigation in VR infinite number of viewpoints
Low interactivity	Better interactivity	Higher interactivity
		Simulation
		Manipulation and contribution of VE
		Collaboration
		Artificial intelligence

**Figure 3.** Virtual heritage characteristics in time (Source: author's)

makes it a highly useful tool to analyse and disseminate data in clear way, to visualise objects in an accurately and in a realistic way and introduce highly engaging environments. So actually, the challenge of interactive virtual environments for cultural heritage and not only, has become the design of virtual “experience”. According to Sanders (2012), there are five main group of users of Virtual heritage: 1. Historians of architecture, archaeology and conservation experts who are interested in understanding the past; 2. Visitors of museums 3. Students and education professionals 4. Researchers 5. Players.

### Game elements for engaging virtual heritage environments

People learn about culture from observation, action and conversation (Champion 2006), which in virtual heritage can be translated in visualisation or representation, experience and interaction. According to Roussou (2007), these are the main components of virtual heritage environments and they represent also the principal video game components. That's why, video games as an interactive and dynamic visual media are a relevant tool to incorporate narration and ludic aspects and make the dissemination of virtual heritage more interactive and immersive. Having a different aim and utility compared to games/ video games, these virtual spaces are often known as serious games and serve as learning platforms/applications for research, education, entertainment and marketing. The application of game design elements in architectural heritage such as historic structures, monuments, cities, landscapes can offer a high level of user engagement. Below are listed and discussed the main game elements and their role in an engaging VH.

#### *Representation*

The representation of the architectural heritage in virtual reality usually tent to resemble or be faithful to the real world building. Nevertheless, depending on the target groups and purpose, in order to offer a compressible representation, the visualization can be subject of artistic interpretation (ex. in children education, video games). Nowadays technological achievements allow designers to achieve highly realistic representations. Highly engaging environments are influenced especially by the last two components experience design or storytelling and interaction, which contribute in creating an interactive experience in virtual reality. Other elements that make representation

engaging are 3D models seen as information systems, which embody data of different nature (architectonical, material, constructive, economic and environmental) and offer the possibility to access then in real time.

#### *Design Experience through storytelling*

An engaging virtual environment is an entertaining space that triggers interest and offers experience to the visitor. Experience is expressed through storytelling or the way the story is narrated. Various scholars (Nitsche and Roudavski 2003) sustain that “narrative” plays an important role in driving the virtual world and consequently in the success of virtual heritage projects. Stories in virtual heritage connect architectural historical objects to human experiences. In virtual heritage, narrative is not just the story you hear or watch walking through the space, but the events and the same spaces you see and discover and the way you are involved to interact with them. The Dissemination of heritage in VR is based on a story driven approach which grounded on collection, selection and display in a meaningful way of objects and information. They can specifically be multimedia elements such as image, sound or video narrative, miseen scene that immerse the user. In video games there are different type of storytelling lines which can serve as a tool to design a narrative based experience of virtual heritage. However, the story does not represent faithfully the historical content, but is an interpretative process. Moreover, it gives an insight on the virtual reality historical content and as a learning tool that engages actively the audience.

#### *Design experience by introducing digital characters*

Designers should include digital characters to enhance visitors experience in virtual heritage environment. According to professor and media artists Margaret Morse, virtual heritage without characters populating the story is like a kind of “Natura Morta” (Morse 1996). Virtual space becomes more engaging when user can see and interact with virtual characters, similarly as in real life. Although the focus of architectural virtual heritage is the object and space, the emphasis on the characters populating the space (virtual humans) is important not only to create the historical, social and cultural context and a sense of inhabitation of the space by adding significant value to architecture object but also to increase user motivation and engagement. Characters can help drawing attention and can be useful providing motivation to explore the virtual environment. They can be conversational agents that provide specific information or feedback on particular objects or sites. Moreover, the same user can become an avatar or role-play ( Cruz-Neira, 2003) and perform actions inside the virtual space, or became actor/narrator effecting an interpretation of the story. Similarly, as in videogame, avatar can be personalized by choosing gender, body and physical features, style, clothing or character type. In both cases they learn about the environment by experiencing it as they were real citizens.

#### *Design experience by stimulating senses*

An engaging virtual environment needs to be multisensory to fully immerse the user into the environment. User for example can have a physical contact with the objects, can touch them

and have a feeling of the materiality. In architecture seeing and touching can help to have a full perception of the objects. Hearing can also help to interact with digital characters or interactive media present in the VR. McLuhan in the '70 predicted that the age of visual is overpasses and we are now into the age of the aural and tactile (McLuhan 1964).

**Interaction: from navigation to manipulation and contributive interactivity**

Engaging virtual heritage environments are not virtual space that resemble exactly to the real world. The component of interactivity usually offers a new, interpretative point of view that provides an escape from reality. Various authors (Jacobsen and Holden, 2007, Champion 2008) suggest that virtual heritage aim is to convey information and communicate cultural significance of historical objects or sites, and interactivity and simulation are powerful means to achieve this. Interactivity is the ability to interact with objects or characters in a digital or virtual environment. It includes exploration of virtual space through navigation, acting and completing tasks, communication between users or virtual characters, performing quizzes or queries, and real time collaborating.

*Interactivity as navigation is visualization-based*

Initially, interactivity in VH was limited to spatial exploration, the basic form of interactivity, which consists of walking, flying and examining objects in VR in a different perspective. Exploration depends on the possibilities of navigation, the amount of explorable area, navigation options and the possibility to experience a live experience of the site through augmented reality - mix reality. Interactive navigation interfaces include additional options such as moving the head, focus on point of interest, go ahead or backwards zoom in and out, pan, change viewpoints etc which are not always possible in the real world. Navigation could be either guided (passive) or person control movement (active). In both cases, user has different point of view and the freedom to move, but the environment is not interactive at all, as he cannot modify it.

*Interactivity as manipulation and contribution is activity/task based*

In video game design, actions and tasks are related to the need to complete or succeed a game goal. In virtual heritage, tasks are used to improve technical and historical knowledge, by involving in first person the user to learn by acting in VR. This can encourage users' interest and consequently his level of engagement. Last decades, advanced interactivity offers to the user the ability to change the environment (Ryan 2001) which include manipulative and contributive interaction (Pares and Pares, 2001). Manipulative interaction resides in the ability of the user to manipulate objects in VE and modify the virtual world, while contributive interaction transforms the environment by adding elements. Both of them are determined by the creator when designing interactive narration of VE and by the freedom of the user to transform the environment.

*Interactivity as ludic activity*

Ludic activity related to cultural heritage can engage users in

the learning process. Bellotti et al. (2012) suggested quizzes, puzzles, etc to be incorporated in virtual heritage applications as a way to learn similarly to the tests in books. EX. museum games are 'Virtual Egyptian Temple', 'Olympic Pottery Puzzle'

*Interactivity as dialog and collaboration*

The dissemination of architectural heritage needs to be seen not as a closed scientific activity reserve only to professionals, but as a communication medium that shares information between professionals, public and gathers feedback from them. Collaboration of virtual heritage communities refers to communication and shared experience between multiple users who share the same virtual space. It can be either by sharing materials (images, drawings, photographs, information, etc) , space or to take part in a dialogue with a real /virtual character. Dialog happens through artificial intelligence or pre-programmed character. Pre-programmed character can only respond to limited topics as predicted by narrator. Different authors (Cruz-Neira, 2003; Jacobsen and Holden, 2007), consider dialog and in general communication as an element to use in learning virtual heritage applications in order to involve students to be active members of that society. Similarly, to multiplayer games which allow collaboration of confliction relationship between players, virtual heritage can be a shared space where user is a role-play member and they can collaborate with each other.

**Type of virtual heritage.** The virtual heritage environments can be divided in two types:

**Serious Games for Heritage.** Virtual museum or virtual tour – Exploration of virtual herit

ELEMENTS	Sub- Elements	Details
REPRESENTATION	Realism and accuracy	Level of polygons, level of detail, texture
	Representation of the intangible	Cultural, historical, visual, behavioural values
	Visual and Environmental	Visual style
	Sensorial reality	Environmental effects, sound effects, etc.
DESIGN EXPERIENCE	Narrative / Storytelling	Voice over narration/ Story design / Branching design/ Interactive design
	Digital characters	Avatar/ Personalised Avatar/ Role-play/ Multiplayer
	Stimulating senses	Five senses
		Moderate motion: walk, fly, examine, turn head, rotateobject of interest, go ahead/back, pan, change camera optics, jump to another viewpoint, etc. Location Reference: Time and space
DESIGN INTERACTION	Navigation	
	Manipulation and contribution	Move, add, change, edit etc.
	Ludic activity	Quiz, challenges, missions, achievement, levels
	Dialog and collaboration	Multiplayer in virtual social space

Figure 4. Elements of Game design for an engaging virtual environment (source: authors)

age is made through navigation, access to data and information, digitalised archive etc. Exploration can occur through VR a 360 grade photographic exploration or 3D reconstruction in which visitor can navigate. Ex: Walk through Ancient Myletus; The Virtual Egyptian Museum etc.

3D model prototypes – that simulate architectural heritage, but have also an interactive content on historical buildings or sites given in some cases also by virtual characters (Ex. Historical video game "Pompei: The Legend of Vesuvius"; Serious game 'Roma Nova'). They aim is to teach notions of history by providing not only realistic and historical fidelity exploration but also political, religious and artistic living

background and virtual characters that act within the virtual environment and offer interactive communication to the user.

### Entertainment Video Games for Heritage

Entertainment Video Games for Heritage are fun games that provide players knowledge of historical content by offering them the possibility to engage with the past. Players are invited to be part of events such as battles, construction processes, rituals etc and to learn about people, objects and history. (ex. Napoleon: Total War (2010), is a strategic and tactic video game set during the napoleon period. Player immersed in this historical setting learns about. Below a series of virtual heritage will be analysed considering the methods, techniques and outcomes related to the purpose of the project.

### Analyses of Case Study

#### Serious game for Virtual heritage analyses

#### Virtual tour and virtual platforms in Albania

In the last years, in Albania have been implemented a series of projects related to virtual heritage. Most of them were virtual tours or platforms based on 360 VR technologies, such as Museum “House of Kadare, Historical National Muzeum Historik, National gallery of Arts, and the platform for cultural heritage in Italy (Puglia), Albania and Montenegro. In Virtual tours is possible to navigate in 360 photographic VR, to make measurements of the space and to access text-based information on particular objects inside the space. The virtual platform part of the project 3Dimpact is an online documentation platform on historical castles and provides digitalised archive with large information (textual, web-GIS maps, 3d scanned model of monuments, 360 VR) about selected castles in both countries. Hyperlinks are used as navigation tools in the navigation map in the top right part of the interface. In both cases the level of interactivity is very low and only basic game tools has been used, mostly related to navigation map and basic blueprints used for detailed information about specific elements in the visual frame.

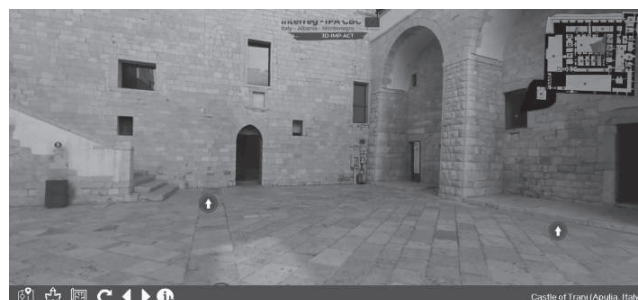
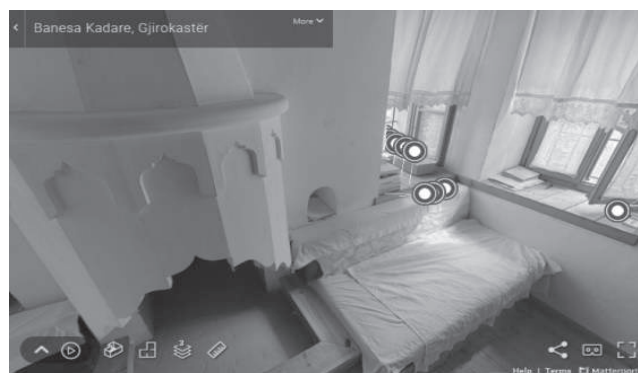
#### Virtual heritage and virtual platforms worldwide

##### VIRTUAL ROME platform (2008)

Virtual Rome is an online platform build by Virtual Heritage Lab of ITABC-CNR in collaboration with CINECA. This platform is built to visualise and explore in real-time the archaeological landscape of Rome in the 2nd century AC. (Pescarini et al, 2008). It includes also open-source technical information, data and 3D models that create a cooperative environment that involves different professionals that work for interactively reconstruction of Rome.

Project workflow is based on the following steps:

- the development of the plug-in for Internet Explorer and Mozilla Firefox; 3 OSG4WEB PLUGIN
- the development of 2D and 3D contents (Highly detailed 3D terrains, vegetation, optimized 3D models, multimedia hyperlinks, a 3D Internet site).
- Reduction and optimisation of 3D contents for interactive web deployment



**Figure 5.** Screenshot of Virtual museum of Kadare House (source: <https://kultura.gov.al/3dsite/banesa-kadare-gjirokastrë/>); Screenshot of virtual platform “3D impact” for castles of Albania, Italy and Montenegro (source: <https://3dimpact.poliba.it/>)

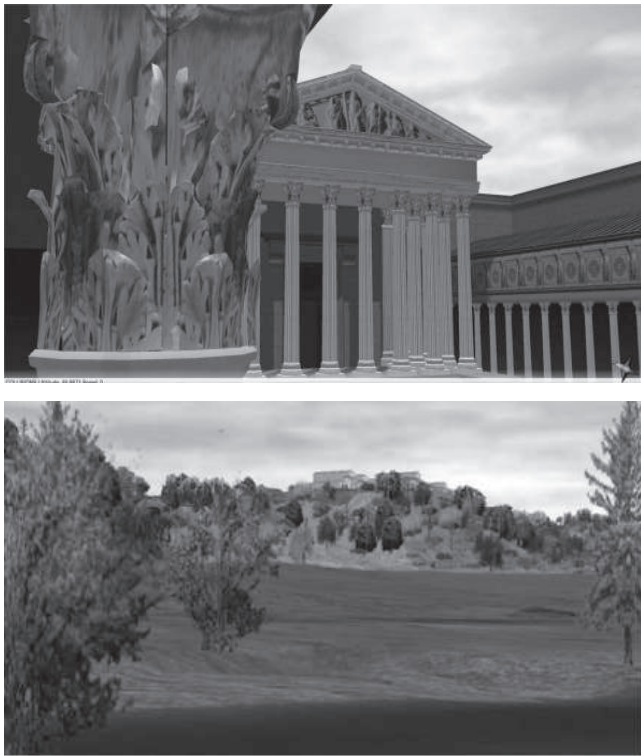
the development of a Plug-in for 3d space navigation: Open SceneGraph,1

- The creation of a front-end 3D interactive environment for on-line exploration of large archaeological landscapes. This allows users to explore the scene, acquire information (orientation, height, speed, position, and other useful data for immediate feedback) and interact by switching between two different terrain models.
- The development of ViRo, a navigation system that provides the user with a simple and usable tool to explore the virtual world. Users can walk inside the monument and fly up to different historical periods. Advanced collision detection and obstacle avoidance algorithms, joined with different exploration modes, are provided together with the walk mode, using basic physical effects such as gravity and surface adaptation.
- The development of a BACK-END collaborative system (VR webLAB) in order to enable the integration of the reconstructed 3D terrain dataset, high resolution 3Dmodels, vectors, vegetation information, and metadata edited dynamically.

##### ROME REBORN (2007- 2018)

Reborn is a series of 3D digital models that presents information and illustrates the urban development of ancient Rome in 320a.c. The model has detailed information about the identification, location, and design and accurate visualisation of approximately 250 buildings belonging to Class I monuments, while Class II buildings, lacking detailed information, are very schematic and rely on textures instead of geometry for architectural



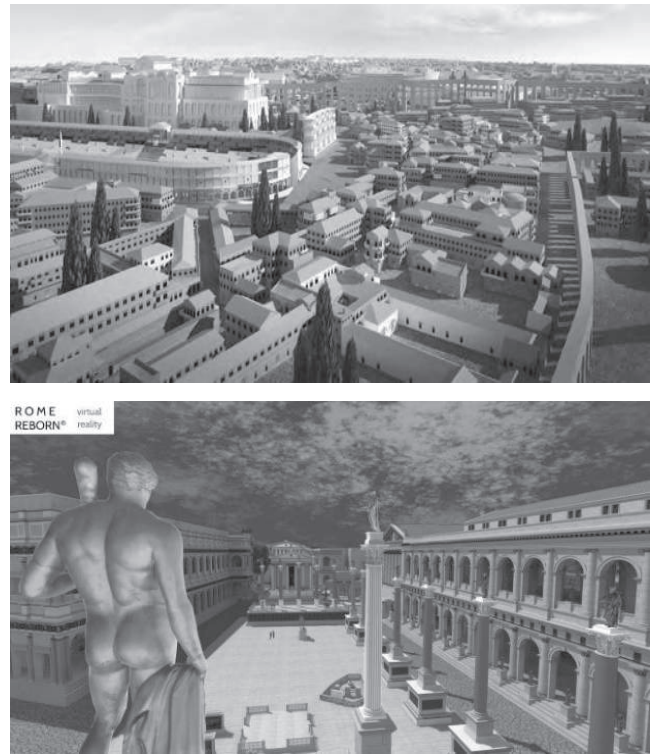


**Figure 6.** Virtual Rome (source: Pescarin, et al 2009)

al details. The overall image is based on realistic environment with interactive lighting. This platform is used for knowledge about the urban topography, infrastructure and monuments of ancient Rome at various periods of time. The model has data such as on built features in the city and can be used to run urban or architectural experiments, such as how well the city or the buildings within it functioned in terms of heating and ventilation, illumination, circulation of people, etc. Its purpose was to present to students or public the image of the city and the main architectural monuments of a particular period and to create a collaborative platform for professionals to discuss theories and ideas regarding the urban history of ancient Rome and its hypothesis of reconstruction. Rome reborn was first displayed on PCs as a real-time interactive urban model using Open Scene Graph. In the new version 2.2 were added animations of humans moving on the city streets (Dylla, et al 2010). This digital characters, although are passive, contribute in giving the model a sense of scale. As regarding interactivity design, this platform offers a smooth walking and flying navigation from ground level to bird's-eye view of the city. While moving in VR and come up against monuments, user can listen to the story of that particular object. Still the level of interactivity is limited to ordinary type of navigation and audio interactivity.

### **VIRTUAL KYOTO (2008)**

Virtual Kyoto is a virtual representation of the historical development of the city of Kyoto in Japan. The platform displays first a 3D modelling of the city reconstructed referring to the main historical periods of development. It includes also an organized archive of materials of the development phases of the

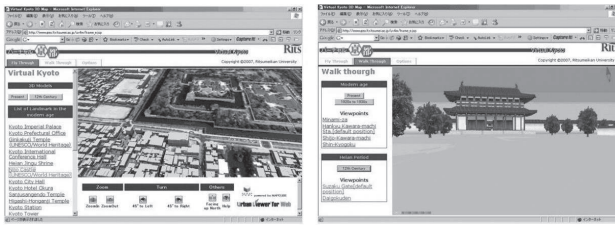


**Figure 7.** Snapshot of Rome Reborn bird eye view of the 3D model (source: <https://www.romereborn.org/>)

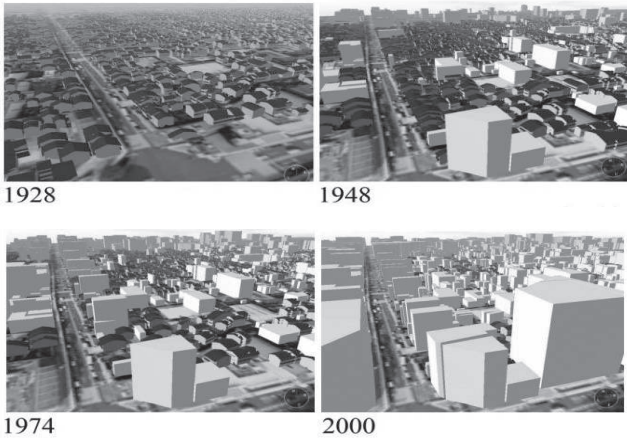
city: different type of maps (historical, topographic, cadastral maps, aerial photographs, historical landscape painting and photographs, historical documents, street and buildings photographs). Moreover, it provides a digital infrastructure which contains a database of all existing buildings and historical or cultural heritage archive, in particular numerous temples and shrines which were also created in 3D. The 3D models were not detailed and therefore the overall reconstruction and visualisation of the city is in low quality. The aim of the platform is to simulate the land use and landscape changes in the different development periods and to disseminate the cultural and historical heritage of the city. The system provides a user-friendly interface and allows users flying-through city, viewing detailed building models and access associated information on each of them. User, by walking through the city, in real time, to have the possibility to change the configuration of the city at the same viewpoint turning from present to past.

### **SIRACUSA 3D REBORN (2013)**

Syracuse 3D Reborn is 3d documentary that described and analysed monuments of Syracuse and war mechanism and devised conceived and designed by Archimedes in that context, offering the opportunity to learn about history. The whole context has been reconstructed digitally including the main buildings. After building accurate 3D models and rendering them, all scenes were processed in with “Adobe After Effects” program in order to create realistic effects of smoke, fire, sea foam etc. Since the Virtual reality in this project was used in the context of cinematographic, a narrative was incorporated, divided in two themes which represent the two historical phases of the



**Figure 8.** Fly through and walk through Virtual Kyoto ( source: Takase et al, 2012)



**Figure 9.** Changes in urban landscape of Kyoto- Virtual Time-Space of Kyoto ( source: Takase et al, 2012)

site development. The first phase was illustrated through the road network, houses blocks and the public area configuration including the main temples. The second phase was based on the transformation and destruction of part of the city and the construction of new buildings, fortifications and monuments. Narration was conceptualised and visualised through storyboard, in which was given particular emphasis to the detailed recreation of artefacts and digital characters animating space which through their acting provide knowledge about the historical and social context. Images and 3D reconstruction of site was overlapped by illustrative texts and audio. In this case, documentary aim was didactic and the story as based on the historic urban development and the main events happening in Syracuse during that period. For this purpose, initially was the interpretation of historical context. Therefore, an intentionally didactic narrative was translated into a storyboard in which was chosen to provide passive cognitive tools ( typical of documentaries) to transmit knowledge without diminishing the emotional aspects.

### **VIRTUAL TIME TRAVEL OF PRE-REFORMATION EDINBURGH ( 2017)**

The virtual reconstruction of pre-reformation Edinburgh is a project that offers the opportunity to see the old city of Edinburgh as it was prior to the reform and to move along houses, marketplaces, and streets connecting the virtual with the real. This platform offers the possibility to experience dual realities (virtual and real) on the same space by using digital time travel binoculars. Visitor are considered as virtual-time travellers as they can contemporary see the various historic layers while moving along the city streets. “Position and orientation within the two worlds are synchronised enabling intuitive exploration



**Figure 10.** Snapshots from Siracusa Reborn documentary (source: <http://www.archeotour.eu/en.html>)



**Figure 11.** Snapshots from Virtual time travel of pre-reformation Edinburgh

of both worlds through movement in the real world” (Miller and Millican 2016). Moreover, visitors can navigate inside important historical buildings. This project is based on 360 photographs of a reconstructed historic model developed in the UN-REAL4 Game Engine. This offers also a friendly interface, and an interactive navigation with video fly-throughout the city and interactive map.

## INCEPTION - Inclusive Cultural Heritage in Europe through 3D Semantic Modelling (2015-2018)

Inception is a platform for cultural heritage documentation and dissemination among different stakeholders such as scholars, professionals, authorities and visitors or non-expert users in order to promote the accessibility and spread the knowledge of European heritage. The platform is based on the development of time-dynamic 3D models of buildings, sites and artefacts, which are semantically enriched in the digital content with documentation, analysis and management tools. It includes different categories of data recording such as historic material, geometric and architectural model, building materials, structure and structural analyses, external condition assessment, risk definition and conservation interventions that contribute in creating a library of parametric objects. These objects (BIM models) contain geometric information in order to be updatable for professionals and useful for conservation purpose. The platform in itself contains not only a digital representation of object in H-BIM, but includes also the management of data from different disciplines. Every user was enabled to upload data, materials and information in relation to BIM models, updating a single file in real time. (Maietti et al 2018). Herein, the platform is open and interactive, and allows experts of various disciplines to give a contribution and actively collaborate with each other sharing updated content and facilitating cross-disciplinary researches and public users for education purpose. The dissemination of content was based on in situ applications for tourists and professionals and remote applications for audience that is interest in accessing knowledge about cultural heritage.

This platform has structured an methodology for data acquisition based on Heritage Building Information Modelling (H-BIM) which facilitates time-dynamic update and online collaboration. However, referring to an engaging virtual heritage the platform is not highly immersive.

First, interactivity is limited, because real time navigation is slow and the navigation tools used are zooming, clipping planes, change shades, walkthrough, pan, rotate, filter elements, etc. ( Maietti et al 2018). Changing viewpoints, fly-modes and other type of navigation that offer new insight of the buildings or site are not used. Moreover, it there is limited interaction with objects. Users can perform action on the model, “such as visualize and download videos and images, select elements of the model, measure distances or surfaces or move within the model.” ( Maietti et al 2018). In addition, objects and their components can be visualised separately based on filters, but they cannot be manipulated, moved or transformed. Moreover, there is no ludic activity included, as the platform is mainly for professional use.

Referring to experiencing of virtual heritage, there is only the possibility to be engaged by running virtual guides (Maietti et al 2018). For the rest users can not really immerse themselves in virtual heritage, since there is no narrative and non tangible cultural aspects of historical buildings and sites are not covered. As regarding representation, the visualisation of historical buildings is low quality texture resolution.



Figure 12. Inception Platform interface. 3D model and possible interactions (BIM model, point cloud, images, documents, videos, etc.) ( source: Maietti, F et al (2018)

GAME ELEMENTS		Virtual Rome	Rome Reborn	Virtual Kyoto	Siracusa 3D reborn	Edinburgh	Inception Platform
REPRESENTATION	Sub- Elements						
	Realism and accuracy	Yes and no	Yes and no	no	yes	yes	Yes and no
DESIGN EXPERIENCE	Interpretation of visual and auditoria reality	no	no	no	yes	Yes	no
	Narrative / Storytelling	no	no	no	yes	no	Yes and no
	Digital characters	no	yes	no	yes	no	no
DESIGN INTERACTION	Stimulating senses	limited	limited	no	no	no	no
	Navigation	yes	Yes bird eye, human	yes	predefin ed	Yes Time and space	Yes, limited
	Manipulation and contribution	no	no	no	no	no	Yes and no
	Ludic activity	no	no	no	no	no	no
	Dialog and collaboration	yes	yes	no	no	no	yes

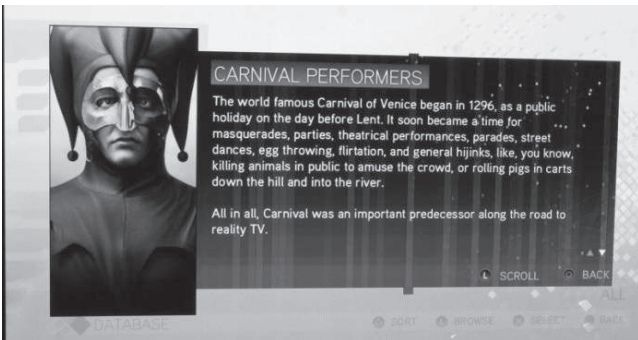
Figure 13. Analyses of game elements in Virtual heritage museum or platforms ( source: Authors)

## Entertainment Video Games for Heritage ASSASSIN’S CREED (Ubisoft Montreal, 2009-2020)

Assassin’s Creed is a 3D action adventure game set in different historical contexts such as the Renaissance epoch in Italy, the Revolutionary Paris of 1798, the Victorian London of 1868; the Ancient Greece and Egypt, etc... The games recreate digitally famous historical sites and characters with great cultural, visual and behaviour fidelity and accuracy based on historical documents, in order to transit realistically the spirit of that epoch. In this way it serves players t learn about that epoch but can serve also the scientific community as the reconstruction of historical sites or buildings for this game were high accurate. However, some alterations to historical facts or material evidences were made for the sake of the game. For virtual heritage this game becomes important, not only because of the 3D VR representation of particular sites in time and place, but also because of the incorporation of database, in particular in the latest series. The game’s database means detailed information about characters, objects or locations which the player meet during his adventure journey in the game world. Moreover, as a video game, it presents high interactivity, in terms of navigation possibilities, manipulation of the game world. Objects and characters part of the game world are movable within certain limits. (ex. houses can be taken and used to speed up the player and to accomplish the game challenges). In advanced series, Assassin’s Creed presents dialog choices with text options. Navigation mode is also more flexible, with the possibility of scaling viewpoints.



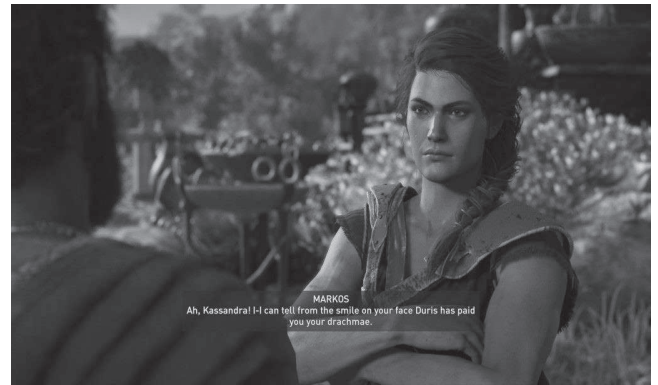
**Figure 14.** Snapshot from Assassin's Creed Video game. Reconstruction of Notre Dame Paris and Reconstruction of Renaissance Florence.



**Figure 15.** Snapshot from Assassin's Creed Video game. Database on characters and dialog choice.

**RED DEAD REDEMPTION' (Rockstar San Diego, 2010).**

'Red Dead Redemption' is a 3D action adventure game set in American-Mexican border at the turn of the 20th century. The geography of the site mirrors highly realistic and sublime landscape in the United States. Redemption is built on third-person perspective, following protagonist John Marston, who plays the role of an historical character, the cowboy archetype. The introductory sequence of the game is based on a dialog between virtual characters which introduce the protagonist, the story and set the historical background. Along the way, the player meets different characters, learn about their backgrounds and their life's. The development of the narrative structure offers the, player high degree of freedom and allows emergent game narrative. The player can chose between different characters and



**Figure 15.** Snapshot from Assassin's Creed Video game. Database on characters and dialog choice.



**Figure 16.** Screenshot from Red Dead Redemption: protagonist in the realistic game world ( on the left the interactive map); on the right weapon options and information wheel)

GAME ELEMENTS	Sub- Elements	Assassin's Creed	Red Dead Redemption
REPRESENTATION	Realism and accuracy	Yes and no	Yes
	Interpretation of visual and auditoria reality	yes	yes
DESIGN EXPERIENCE	Narrative / Storytelling	yes	yes
	Digital characters	yes	yes
	Stimulating senses	limited	yes
DESIGN INTERACTION	Navigation	yes	Yes bird eye, human
	Manipulation and contribution	yes	yes
	Ludic activity	yes	yes
	Dialog and collaboration	yes	yes

**Figure 17.** Game elements used in highly engaging video games ( source: Authors)

different activities to do like free exploration, hunting treasures or animals, etc. In addition, there are multiplayer options available, which make the game a collaborative platform.

## Conclusions

Virtual reconstructions and interpretations of history and culture is becoming increasingly important in shaping our perception of the past. In the past, virtual heritage was limited to the accurate and realistic visualisation of objects and sites. The above case studies of 3D, virtual tours or interactive platforms as virtual representations of historical heritage, are a tentative to enable people to relive historical space, to understand it and learn about the past in an engaging and entertaining way. They open up to the opportunity to create interactive storytelling experiences by combining interactivity with narratives in virtual environments. In entertainment Video Games for Heritage, it's evident that the level of representation, design experience and interaction is higher and complete in all elements that guarantee engaging space in virtual reality. Therefore, game design tools need to be taken into account when designing virtual heritage. Game engines supporting highly detailed game worlds and being equipped with artificial intelligence, are able to offer interaction while being guided by a story model.

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# Processing Nature, Beyond the Antinomy Of Ecological Pretence In Contemporary Planning. A Critical Understanding Urban Ecosystems, The Epitome Of Liveable Cities

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## Abstract

*In the still dominant perception of a hierarchical order of nature, humans are disturbing ecosystems factors. We should move away from the one-dimensional dichotomy between natural and human interaction towards a more effective representation without nostalgia. The contact between human and natural habitats is close to the idea of maintaining and conserving a certain state of equilibrium, instead of letting natural habitats evolve into new ecosystems. In other words, energy management and the capacity of a system to self-organize (autopoiesis) defines the difference between human and natural habitats. Where this capacity is not limited, a natural habitat is present. Contemporary landscapes (tourist coasts, reclaimed land, etc.) demonstrate this thesis by highlighting how human intervention is an indispensable factor in their maintenance. It is necessary to provide precise and sophisticated tools capable of synthesizing agents and forces within territorial transformations starting from a global understanding of natural processes. Ecological dynamics must be transformed into project parameters involved within design process. Here a further degree of integration is suggested above the level of simple natural ecosystems, where human is assumed as a key factor in landscape transformation and geography construction. Considering other paradigms that interfere with the same epistemological area, the contribution questions the theoretical and practical implications of rethinking the interaction between natural and artificial ecosystems within the framework of landscape resilience. This perspective allows a territorial update by increasing the level of compatibility between the evolution of human habitat and the maintenance of natural regeneration times. This articulation, however, requires a reconsideration of landscape aesthetics beyond the beautiful and the consolatory, as well as a fundamental shift in landscape thinking from representation to action.*

## Keywords

*eco-systems, natural habitat, ecological, human intervention, landscape*

## Introduction

The contact between human and natural habitats is close to the idea of maintaining and conserving a certain state of equilibrium, instead of letting natural habitats evolve into new ecosystems. This perspective allows a territorial update by increasing the level of compatibility between the evolution of human habitat and the maintenance of natural regeneration times. The need for professionals who care not only about preserving but also about creating and managing landscapes (McHargh, 1969) is now more pressing than ever. The integrated or balanced approach in which several abiotic, biotic and cultural objectives are pursued simultaneously is part of current planning practice but multipurpose planning necessitates more transdisciplinary approach to address the complexity of the challenge (Ahern, 2005). In addition to environmental factors, landscape modifications are often the result of forces applied on the territory by *drivers* far from the *spontaneous ecological processes* - such as the economy and socio-cultural factors (Farina, 2012). As already stated, humans have become a dominating component after modifying and using approximately 95% of land (Ellis, 2018)<sup>1</sup>. Indeed, with the advent of the industrial revolution and the consequent shift to a global-scale economy, interactions between man and the territory have gone beyond the immediate modification of nearby space. The issue has become of global importance, in the search for resources and energy, in the movement of products and people, in the transformation and modification of landscapes. This represents the passage to an Era in which materials and energy are artificially produced, transformed and moved in a sophisticated and articulated way, altering spontaneous dynamic process.

According to that, it is necessary to provide precise and sophisticated tools capable of synthesizing agents and forces within territorial transformations starting from a global understanding of natural processes in order to achieve a conscious and performative habitat condition. Ecological dynamics must be transformed into project parameters involved within design processes. This articulation, however, requires a reconsideration of landscape aesthetics beyond the beautiful and the consoling, *images and symbolic values are always in stake within landscape perception, there is no place for division between reality and appearance in the continuous interaction between man and environment* (Furia, 2020). At the same time a fundamental shift in landscape thinking from representation to action is required. Here a further degree of integration is suggested above the level of simple natural ecosystems, where human is assumed as a key factor in landscape transformation and geography construction. Considering other paradigms that interfere with the same epistemological area, this contribution questions the theoretical and practical implications of rethinking the interaction between natural and human ecosystems within the framework of landscape resilience.

Landscape is always in motion, subjected to evolving process that brings to continuous shift of energies and substances flow in a time-space relationship, a perpetual transforming situation that moves with and within reciprocity between ecological,

economical and energetic components. Landscape is always in motion, subjected to evolving process that brings to continuous shift of energies and substances flow in a time-space relationship. As highlighted by IPCC (2019) “*biophysical interactions’ are exchanges of water and energy between the land and the atmosphere*”.

Talking about heterogeneity and spatial arrangement in an ecological sense, Richard Forman argues that “*form is the diagram of forces*” (Forman, 1995). From this ecology point of view not only do flows create structure, but structure determines flows. Therefore, the configurations that contemporary territories assume follow the flows pulse regulated by economic processes dealing with the management of resources for commercial purposes (Belanger, 2016). Ecology has highlighted the finiteness of resources. It’s important to understand the logic and the interpretation of evolving landscape, in order to incorporate it within design processes, as the results between *forces, flows and functions*.

## Landscape as a dynamic system: a contextual thinking

Scientific theories and studies envisioned landscape as a dynamic system, anticipating of decades the current debate on landscape design praxis and theoretical speculation. Starting from the paradigm of complexity, the ecologist Almo Farina (2012) argues that “*the landscape is not just a heterogeneous spatial configuration of objects and processes, thus landscape has to be defined as a domain, a system, an unit*”. A system is a *cohesive conglomeration* of interrelated and interdependent parts that is either natural or man-made<sup>2</sup>. Changes in one part affects other parts and the whole system - with predictable patterns of behaviour -, subject matter of the research *in system theory*. *Systems theory*<sup>3</sup> is an interdisciplinary field of study between mathematics, physics and natural sciences. Along last decades, several scholars contributed to set out theoretical and comprehensible formulation for describing the principles and the opportunity of *systemic thinking* applied to landscape and ecology. Significant references can be found in the written production of Ramon Margalef, Zed Naveh, Almo Farina, Frit-

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<sup>1</sup>Phenomenological and physical consequences of human activities are related to the upgrade of tools and technologies that leads to constantly shift the way of shaping landscape and territory in comparison with previous periods. Thus human activities have become the main drivers that can transform and alter the environment (Wu), and can be considered an integral part of environmental dynamics by landscape ecologist (Farina, 2012).

<sup>2</sup>Every system is: delineated by its spatial and temporal boundaries; surrounded and influenced by its environment; described by its structure and mainly expressed in its functioning. In this regard the system resulting from elements aggregation is not merely their addition, but it’s something different, with new and emerging properties, because of the interactions between the system’s elements.

<sup>3</sup>It was founded during the first half of the 20th century as a result of the great shock, in which the scientific sector has realized that systems cannot be understood through analytical investigation (Capra, 1996). Analysis proceeds isolating to the object of the study in the attempt to understand it. While systemic thinking frames this object within of the context of a higher whole (Capra, 1996). Thus systemic thinking is contextual, and opposed to classic analytical approach



of Capra. Although, the higher contributions are due to Howard Odum, an American ecologist celebrated for his pioneering work on *ecosystem ecology*. He's well-known for his provocative proposals for additional laws of thermodynamics, informed by his work on general systems theory which includes the study of landscape and their components. In Odum's outline *landscape* is conceived as an *open, dynamic and complex system*, in which part of its elements are organized by a *spontaneous emergence of order*, defined as *self-organization and autopoiesis* (Odum, 1971). He synthesized the energy and matter flows in the Energy Systems diagram (Fig. 1). The text *Ecology: bases scientists for a new paradigm* (Odum, 1953) influenced an entire generation of ecologists, lately also inspiring landscapers and designers.

### Energy, ecology, economy

By associating the environmental relationship with the energy control of economy, H. T. Odum predicted their social-political implication in a time when this phenomenon was at its very beginning. In 1973, he formulated in a famous essay entitled "*Energy, ecology and economics*": "*There is a unit of the single system of energy, ecology and economics. The world's leadership, however, is mainly advised by specialists who study only a part of the system at a time*". In contemporary interdisciplinary debate Odum's theories are taken as reference by prominent authors, such as Nina Marie Lister (Lister & Reed, 2014) and Pierre Belanger (2016)<sup>4</sup>, for contextualizing *landscape design praxis* in the framework of *systemic thinking* through ecological models of spatial organization suggested by Odum's *open-system theories*. In this view mankind activities became the main vector between forces that are involved in *building and transforming geography*, overcoming and often disrupting the threshold of nature regenerative time, self-organization capability and *autopoiesis*. In Belanger's reinterpretation of Odum's: "*Vectors cause storms that we call economies, across different tides of supply and demand, a morphology of socio-economic ebbs and flows. Infrastructures, fixed or fluid, are their landfalls and landfills.*" (2014).

In conclusion, the main difference between these models of spatial organization - made by *networks* and *systems* - demonstrates how the modern concept of networks addresses form and physical space (operationalized through a closed systems of points and lines), compared to how the post-modern concept of systems addresses *fluidity* and *flows* (animated through vectors, flows, fields, inputs, outputs, energies, exchanges, patterns, processes). If *network thinking* characterizes the mid-century approach to urban design, then open systems thinking - that is the ecological optic - is applicable to *complex, indeterminate conditions, risks and hazards* that are typical of contemporary and future urban patterns.

### Resilience as adaptive system across natural and human habitat

According to Zed Naveh (2000), "*In ecology, undisrupted systems have relatively high organizational level that can renew, repair, and replicate themselves as networks of interrelated component producing processes, in which the network is cre-*

*ated and re-created in a flow of matter and energy, are called auto-poietic systems (self-creation).*" In other words, the *energy management* and the capability of a system to *self-organize* define the difference between *human* and *natural habitat*. The *human habitat* can be defined as *the set of areas where the human population lives or is active permanently (also through the contribution of subsidiary energy), limiting the self-regulation capability of natural systems* (Treccani, 2020). Where this capability is not limited, it is in the presence of natural habitat. A large amount of protected areas have lost their natural features and connections with water and material flows that generated them. Thus, without anthropic works for their maintenance they would face many environmental criticalities. In this regards, common examples are: coastal dune systems, that often have to be restored with human intervention (Fig. 2); numerous wetlands, that need to be provided with fresh water for maintaining their ecological functions; forests, that need management in order to keep them safe from fire and other disruptions. Rather than aspiring to develop an idealised spatial form with associated ecosystem services, the quest for sustainability is necessary to implement the resilience of anthropogenic and non-anthropogenic spatial systems (Ahern, 2012).

In this view the contact between human and natural habitats is very profound and close to the idea of *maintenance and conservation of nature* at a certain state of equilibrium, instead of let natural habitats evolve towards *novel ecosystems*<sup>5</sup>. The emerging concept of resilience as adaptive system tries to overcome this limitation. According to its original definition: "*Resilience is the capacity of a social-ecological system to absorb or withstand perturbations and other stressors such that the system remains within the same regime, essentially maintaining its structure and functions. It describes the degree to which the system is capable of self-organization, learning and adaptation*" (Holling 1973, Gunderson & Holling 2002, Walker et al. 2004). *Landscape design praxis* involves such systems, where climate, socioeconomic trends, built systems, and riverine processes affect flood hazards and disasters. They operate like both evolving ecosystems (characterized by complex behaviours associated with nonlinearity, emergence, uncertainty, and surprise) and engineering systems that should keep urbanized areas safe (Fig. 3). The paradigmatic difference between *engineering* and *ecological resilience* can be illustrated by the ball-and-cup heuristic (Scheffer et al. 1993, Walker et al. 2004) (Fig. 4; Tab. 1). The *engineering resilience* concept assumes only

<sup>4</sup>In particular Pierre Belanger argues *As mutual agents, capitalism and ecology coexist and co-evolve from islands of exclusion toward an open sea of materials, elements, and entities through the opening of resource streams, the weaving of material sheds, the preordination of processes, the generation of ground effects, and superintendence of time.* (Belanger, 2014)

<sup>5</sup>*Novel ecosystems key characteristics are (1) novelty: new species combinations, with the potential for changes in ecosystem functioning; and (2) human agency: ecosystems that are the result of deliberate or inadvertent human action, but do not depend on continued human intervention for their maintenance. Such ecosystems result from biotic response to human-induced abiotic conditions and/or novel biotic elements (e.g. land degradation, enrichment of soil fertility, introduction of invasive species).* (Hobbs, 2006, 2)

one regime, hence only one possible basin of attraction; and the very bottom of the basin represents the ideal steady state. The *ecological resilience* concept assumes *multiple regimes*, hence more than one *basin of attraction*. The system may move about within the basin, never settling at the bottom; it may also overcome a threshold and settle in a new basin of attraction. The notion of *engineering resilience* is concerned with whether the system can remain at the bottom of the basin; while the notion of *ecological resilience* is concerned with whether the system can remain within the current basin.

Urbanized floodplains are such systems, where climate, socioeconomic trends, built systems, and riverine processes affect flood hazards and disasters. They operate like evolving ecosystems rather than engineering systems and are characterized by complex behaviours associated with nonlinearity, emergence, uncertainty, and surprise. According to Lister (2014) "Ecological thinking remains a powerful lens for understanding complex adaptive systems." Several solutions proposed in the field of landscape design are an hybridization of these two kind of resilience (Fig. 5).

### Conclusion

The knowledge required to address sustainability and landscape resilience must rapidly evolve in an integrated planning and design praxis, as a complement to urbanisation and territorial transformations processes, through a merging of theoretical and practical content. The provided insights can add to both substantive and procedural design elements within landscape architecture by paving the way for an integrated understanding of landscape components that can fully account for ecological resilience. Design praxis needs a broader vision capable of integrating these concepts from the preliminary and study phases of the project. Acting with ecological resilience in mind would increase the adaptive capacity of the territory, opening up new transformative scenarios without fossilising within rigid engineering schemes.

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# The Fifth Landscape: A Transdisciplinary Approach To interpreting Perceptual Landscape Transformations?

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## **Abstract**

*The conception of “Fifth Landscape” (Repetto & Aimar, 2021) originates from the presentation ‘Fifth Landscape/Landscape 5.0’ held by Diego Repetto at the conference ‘Shaping the City: A Forum for Sustainable Cities and Communities’, ‘Culture for Sustainable Cities’ section, organised by the European Cultural Centre in 2018. It is a fresh implementation and evolutionary development of the concept of Fourth Landscape (non-profit association Quarto Paesaggio, 2013), and an homage to Gilles Clément’s well-known Third Landscape (2004). If Clément defines the ‘Tiers paysage’ [Third Landscape] as “... made up of all the places left behind by man” (Clément, 2004:1) and exhorts to consider the “... the inherent mechanics of the Third Landscape - as an engine of evolution” pointing out the necessity to “teach the engines of evolution ...” (ibid., 24), subsequent elaborations derive their substance from this evolutionary nature and reworking of the landscape waste. Indeed, the Fourth Landscape uses art as an engine to stimulate citizens participation in the reflection on the meaning of the suburban landscape and their role in this re-appropriation and re-interpretation, as the urban landscape is also a common good (CR Florence Foundation, 2018).*

## **Keywords**

landscape design, subsidiary energy, natural–human habitat; Ecosystem complementarity

The concept of "Fifth Landscape" (Repetto & Aimar, 2021) originates from the presentation 'Fifth Landscape - Landscape 5.0' held by Diego Repetto at the International Drawing Study Day in Genoa May 28, 2019, organized by the Department of Architecture and Design DAD, Polytechnic School of Genoa (Bianconi, Filippucci & Repetto, 2019).

It is a fresh implementation and evolutionary development of the concept of Fourth Landscape (CR Florence Foundation, 2018), and a homage to Gilles Clément's well-known Third Landscape (2004). If Clément defines the 'Tiers Paysage' [Third Landscape] as "made up of all the places left behind by man" (Clément, 2004:1) and exhorts to consider "the inherent mechanics of the Third Landscape - as an engine of evolution" pointing out the necessity to "teach the engines of evolution" (ibid., 24), subsequent elaborations derive their substance from this evolutionary nature and reworking of the landscape waste. Indeed, the Fourth Landscape, as suggested by choreographer Virgilio Sieni, uses art as an engine to stimulate citizens participation in the reflection on the meaning of the suburban landscape and their role in this re-appropriation and re-interpretation, as the urban landscape is also a common good (CR Florence Foundation, 2018).

In the *Fifth Landscape*, the concept of the centrality of image and its media impact as the creation of virtuous valorisation/revitalization processes in the landscape is explored. Employing real and virtual works, albeit temporal, such proposed activities work as practical actions to operationalise resilience in the landscape. They are new possibilities for thinking and engaging with the environment, echoing an oneiric experience. In this regard, Melis refers to the close connections among technology, art, and science from a paleoanthropological point of view, and that they are therefore "a manifestation of this redundancy, variability and diversity that we need to strengthen our resilience" (Melis in Aimar, 2021). Consequently, experiential works such as *Beauty*<sup>1</sup> (1993) by Olafur Eliasson, *Imagine Peace Tower*<sup>2</sup> (2007-ongoing) by Yoko Ono, *Leviathan*<sup>3</sup> (2011) and *Descension*<sup>4</sup> (2014) by Anish Kapoor, *Infinity Mirrored Room*<sup>5</sup> (2012, 2020) by Yayoi Kusama, *Astronomia Nova*<sup>6</sup> (2017) by Faith XLVII and Lyall Sprong, support the building of this operative perspective. The capacity to create shared memories through emotional reactions to performative events can help reinforce the sense of identity in a community and also for members of future generations functioning as emotional triggers. In this way, possible landscapes will be created by hybridising creativity (art) and the tangible (nature) to produce results in the sphere of the intangible (emotions), proposing a new way of relating the social and ecological parts of a system.

Along with the evocative mediums included in the Fifth Landscape concept, the digital approach offers potentially endless possibilities to meet the needs of an increasingly atomized and dispersed audience (Bauman, 2000) for expected, predictable (systemic shocks), or unpredictable situations (i.e. the "black swan", Taleb, 2007). While previously the issue of including every visitor in the 'on-site' enjoyment of cultural heritage at different territorial scales through multisensory projects

was relevant (e.g., the Land(e)scape the Disabilities project in the Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato, 2016), today the impact of the Covid-19 pandemic on a global scale (2020-ongoing) has made clear the need to further expand this experience. Due to its flexibility and adaptability, with the help of tools such as Virtual (VR) and Augmented Reality (AR), the virtual has turned into a primary means for experiencing art venues and landscapes beyond borders.

Considering this perspective, could the *Fifth Landscape* then become a key to transdisciplinary interpretations of perceptual landscape transformations? Reproducing an artwork through modern surveying techniques to generate digital models, as well as with photography to create increasingly high-resolution images (Latina, 2016), does not seem to offer immersive ways to enjoy such content. In a world where the voracious appetite for consuming intuitive and instantaneous visual content, evidenced by the over 1.8 billion monthly users of Instagram and TikTok in October 2020 (Statista, 2020), exciting opportunities for artwork dissemination are emerging in the field of Augmented Reality. TikTok itself outlines a course of action in the app's download description: "Unlock tons of filters, effects, and AR objects to take your videos to the next level."<sup>7</sup>

Other AR apps like 4th Wall<sup>8</sup>, for instance, show how the exhibition space can be 'moved' to an unconventional location. Made for iPhone and iPad, it materializes the artwork anywhere, generating a new interaction between art, landscape, and audience. Through virtual or real imprints, the landscape becomes a spectacular experience, as in the video mapping projection of Giotto's frescoes in the squares and streets of Assisi, Italy<sup>9</sup> (2020). Thus, *Landscape 5.0* is composed of new forms of AR that can be defined as Spatial Augmented Reality. In it, the physical environment of the user is augmented with the projection of images and sounds. The focus is on the story by enhancing the artwork through different spatial scales. As such, it generates an entanglement of the perception of multiple landscapes. From the hard-to-use to the 'imagined' ones, where key factors are the user's hopes and dreams as the latent potential to be actively included in the reading.

However, as Pellegri and Scaglione (2021) already ask, can a digital imprint influence the future of a real landscape? In everyday reality, digital and real are increasingly intertwined and overlapping. The outcome of the digital overwriting of the real may generate a global intelligence application that, in some re-

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<sup>1</sup><https://olafureliasson.net/archive/artwork/WEK101824/beauty>

<sup>2</sup><http://imaginepeacetower.com/>

<sup>3</sup><http://anishkapoor.com/684/leviathan>

<sup>4</sup><http://anishkapoor.com/1010/descension>

<sup>5</sup><https://www.tate.org.uk/whats-on/tate-modern/exhibition/yayoi-kusama-infinity-mirror-rooms>

<sup>6</sup><https://faith47.com/astronomia-nova-2/>

<sup>7</sup>[https://play.google.com/store/apps/details?id=com.zhiliaoapp.musically&hl=en\\_US&gl=US](https://play.google.com/store/apps/details?id=com.zhiliaoapp.musically&hl=en_US&gl=US)

<sup>8</sup><https://apps.apple.com/us/app/4th-wall/id1325881248>

<sup>9</sup><https://www.mcarchitects.it/mario-cucinella-direttore-artistico-del-natale-di-francesco>

spects, falls under user experience and performing media. Thus, the use of VR and AR in experiencing an environment increases the resilience of those enjoying it, as it multiplies the possible options for its use.

All of this has reinforced the intra-pandemic approach to cultural property enjoyment, which has led to an increasing decoupling of content and container from traditional forms of enjoyment. Analyzing monitoring data of World Heritage sites closed due to Covid-19 in 167 countries (as of December 7, 2020), only 47% kept them open, 22% shut them down completely, and the remaining 31% opted for partial closure (UNESCO, 2020). In this context, technological innovation in the remote



**Figure 1-2.** the Royal Park of the Castle of Racconigi, Piedmont, Italy. Coloured digital storks in origami form appear using the AR app “ARTgo” installed on a mobile device (photos property and courtesy of Diego Repetto. Authors’ elaboration).

fruition of cultural services and events has overcome the physical impediment of their local or territorial enjoyment, as in the open-air contemporary art museum Kalenarte<sup>10</sup>, Molise, Italy. This may prove to be an opportunity for the democratization of use, allowing for broader accessibility. Concurrently, it generates questions for the post-pandemic period. Increasing the ability to enjoy the artwork in different ways could exacerbate a gap in the appreciation of the cultural asset. User affordability could define the level of engagement, with the more affluent enjoying themselves live while others will be connected remotely via scalar bands of access to premium multimedia content.

Current examples of new digital technologies combined with cultural heritage include several apps for iOS, Android, HarmonyOS, and Windows Mobile operating systems, among others, as supporting tools that can strengthen Tourism 3.0. In 2016 and 2017, the arch. Diego Repetto and his development team, along with the Director of the Royal Castle of Racconigi (province of Cuneo, Piedmont, Italy), tested the use of VR and AR to boost the exploration of the Royal Castle Park.

The implementation of virtual content, such as digital storks in origami form, was intended to test a new way of experiencing and visiting art venues (Fig. 1-2). Consequently, cultural assets such as parks and museum spaces would be renovated in their message and reinterpretation, transferring the concept of gamification to landscape perception. This would have integrated with new meanings by virtue of AR, where augmented objects become a source of multiple, site-specific information.

In 2021, the Marini San Pancrazio Foundation - Marino Marini Museum, Florence, in collaboration with the TuoMuseo Cultural Association, is announcing the third edition of the "Playable Museum Award," which opens the challenge to cre-

ative people and visionaries from all over the world to develop an idea for the Museum of the Future, an engaging, "playable" museum in which technology supports creativity, stimulating ideas, including through play, that can rethink the connection between people, artworks, and the museum.

The transdisciplinary working group, formed for the occasion by arch. Diego Repetto, musicians and composers Aiazzi and Marocolo, sociologist Paolo Bertetti, space architect Valentina Sumini and illustrator Federico Bria, joined by start-up companies specializing in VR and AR, developed the "FLOATHINGS" project<sup>11</sup>.

The proposal aimed to stimulate visitors to experience the museum space in a novel way through the combination of multiple creative languages, from music to graphic art, and the technological innovation of VR environments. The installation is generated by two immersive spaces, virtual and real. In the centre, a suspension structure accommodates one visitor at a time equipped with a VR visor, harnessed and suspended in the air a few inches above the floor. The viewer, inscribed in a circle of light, floats, immersing himself in a virtual and sound environment depicting planets and sculptural elements, wandering in deep space. The floating objects, Marino Marini's sculptures revisited by illustrator Federico Bria (Fig. 3), arise from the planets on the horizon through inputs generated by Marocolo and Aiazzi's musical composition.

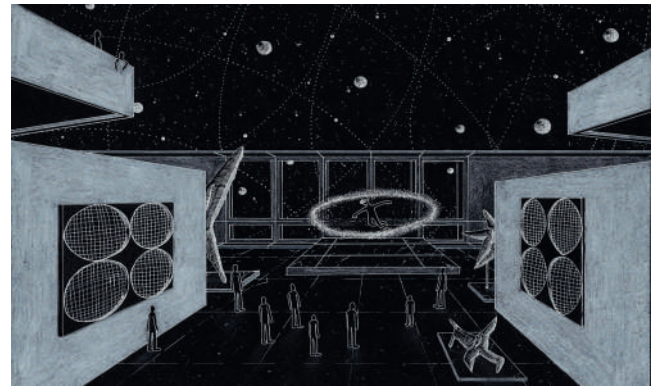
Based on the movements of the suspended viewer, variations are generated to the music, making the sound environment unique and personal each time. Visitors around the central core of the installation move on a platform equipped with sensors that allows them to perceive through vibrations the visual sensations experienced by the VR viewer, who becomes a kind of living sculptural Vitruvian figure (Fig. 4).

In the real world, one is immersed in the evocative sound environment through directional audio systems. The work aims to make the museum spaces alive and joyful, intriguing and stimulating the visitor to new ways of observing and getting to know Marino Marini's works. A new dialogue is generated between the works of the Tuscan artist and visitors, involving the technological and entertainment languages of the new generations. Finally, to generate a greater connection between visitors and the museum, sensors and music cooperate together. Using beacon sensors, small devices that work with BLE (Bluetooth Low Energy) technology used for proximity marketing, i.e. communicating with users via their smartphones, visitors can be enveloped by Marocolo and Aiazzi's musical composition when standing near a work by Marino Marini or outside the Museum itself. It generates a unique museum sound path, which can have its beginning or conclusion in the piece "FLOATHINGS".

As semiotician Paolo Bertetti suggests in the descriptive project report of the proposed installation at the Florentine museum, the definitions of figurative forms arrive by immersing one-

<sup>10</sup><https://www.kalenartemaack.com>

<sup>11</sup><https://www.intoscana.it/it/articolo/origaming-cosi-la-visita-al-museo-diventa-un-gioco-ad-arte/>



**Figure 3-4.** "FLOATHINGS" project for the Marino Marini Museum (photos property and courtesy of Federico Bria. Authors' elaboration).

self in sensory hyperstimulation with the staging of ongoing processes, in the human perceptual experience, starting from sensations one arrives at categorizations and, through the contribution of the different sensory orders. It is a process that is polysemous and synesthetic in nature. The "FLOATHINGS" experience reinforced the concept of Landscape 5.0 in which the visitor, both body/perceptual subject within a landscape/installation and object of observation from the outside, makes explicit and enacts through the technological medium what sociologists Nick Abercrombie and Brian Longhurst call the "spectacle/performance paradigm" (1998).

We live in a spectacularised world within which each of us is both a spectator and audience of some media. In today's society, everyday life is strongly permeated by media imagery; indeed, our identity is, at least in part, defined by being a member of an audience, by our relationship with certain media forms, and ultimately by our consumption choices. In a growing process of the aestheticization of everyday life, this identity is increasingly the object of a narcissistic construction, in which individuals increasingly perceive themselves as "performers." In a "performative" society, each of us is both producer and spectator, and in which media fruition practices are thus no longer limited to mere consumption but can evolve into performance and production practices.

Perceptually, through technical support and the voluntary and/or involuntary performative experiences of artists and viewers, we can see that the landscape is continually being changed, both in the virtual and physical and online environment, further defining Landscape 5.0 or *Fifth Landscape*. VR and AR allow the visualization of artworks, places, objects, and data also by using holograms (Art exhibition in Palermo, Italy, 2020), to be appreciated while walking between or towards an asset. The result is a new interaction between landscape and audience, in which one traverses an 'alien' environment to be built as in the game *Minecraft* (2009). In it, the entertainment component plays an increasingly strategic role, as it is immersive. The *Fifth Landscape* is an imagined landscape. A conveyor of place regeneration, where anything is possible. It investigates a truly inclusive democracy of enjoyment in tangible and intangible ways.

Therefore, the *Fifth Landscape* becomes the bearer of a choral message. Interaction through new technologies can contribute, as in the case of the "Earth Speakr"<sup>12</sup> project (Eliasson, 2020), to making the landscape a common good usable by all. Designed in collaboration with the Goethe-Institut, the young user can draw his or her face and record the own voice to animate the environment, plants, logs, rivers, the sky, and any other element of the landscape. In that way, children's messages are placed on a virtual map using Augmented Reality. Squares, parks, and institutional buildings both become places to encourage people to listen and means to raise awareness of climate change issues.

In addition to the use of VR and AR systems, virtual or real footprints can transform the landscape into a spectacular experience, as in the case of the urban light art, urban light and video-mapping festival "RGB Light Experience 2020" organized by the Luci Ombre Association. During this festival, an itinerant and experimental exhibition was created by redesigning urban architectural surfaces in the Pigneto and Torpignattara (East Rome) neighbourhoods with eighteen site-specific works, including the Alexandrian Aqueduct in Sangalli Park and the elevated causeway of the Eastern Bypass designed by Japanese architect Kenzo Tange. New imagery was created by focusing on a different relationship between humans and the environmental context, transforming that part of the city into a veritable temporary open-air museum.

Because of Covid, the festival/exhibition had to change its mode of fruition, in this regard, artistic director Diego Labonia said in an interview<sup>13</sup>: "in these times dictated by distance, isolation and fear, the RGB project has been completely rethought to allow it to unfold to its fullest potential. Instead of the usual walk along a path littered with artworks, it will be the artworks themselves that will move within the urban fabric."

To this end, two trucks were equipped to bring all the scheduled works to a different site out of the four selected each day, making them available to pedestrians, those passing by car or public transport and those watching from flat windows, but also live streaming on RGB's social channels.

<sup>12</sup> <https://olafureliasson.net/archive/artwork/WEK110940/earth-speakr>

<sup>13</sup> <https://www.exibart.com/fiere-e-manifestazioni/il-cielo-luminoso-sulla-sera-di-roma-al-via-rgb-light-experience-2020/>



**Figure 5-6.** "Y.K. L'altra metà del cielo" by Diego Repetto and Gianni Marocco for RGB Light Experience 2020, the Alexandrian Aqueduct of Sangalli Park and the elevated causeway of the Eastern Bypass, Rome (photos property and courtesy of Diego Repetto).

A phygital event was created, which was namely between the physical (in presence) and the digital (streaming).

A special aspect was, for some works, the creation of soundtracks, which further intensified the surreal and immersive dialogue with the urban context, also made of the city vehicular traffic. On this occasion, architect Diego Repetto with musician and composer Gianni Marocco celebrated the French painter Yves Klein (1928-1962), Yves Le Monochrome, who found his highest artistic expression in blue, with an audio-video animation work entitled "Y.K. The Other Half of the Sky." The work projected in the chosen urban locations as the backdrop for the Roman light art festival depicts the continuation of Klein's "leap into the void," ideally continuing the symbolic image of Nouveau Réalisme by making it fly into the blue sky. In doing so, the artist himself becomes the sky, capturing the absolute blue in the other half of the sky. Accompanying the French painter's "leap" was the sonata for saturated bass solos loosely inspired by Yves Klein's *Symphonie Monotone*, created by Gianni Marocco, which during the performance enveloped the urban space, integrating perfectly with the daily traffic, the latter being transformed into a kind of white noise (Fig. 5-6). In addition to celebrating Yves Le Monochrome, the work pays tribute to 2020 as the year of blue, so named in late 2019 by the Pantone Color Institute. Laurie Pressman, vice president of the International Sellers of Color, told the Associated Press on the occasion of the colour nomination for the year 2020 that the blue offers stability and connection, conveying a reassuring presence and creating a feeling of great space and confidence in the future<sup>14</sup>. In these terms, the Repetto-Marocco duo intended to bring a message of hope to a world torn apart by the pandemic and uncertainty in the future. Despite the short duration of the festival (four days), the areas of intervention felt redeemed: each artist intervening in the architecture made them different from their everyday imagery. The public thus explored a material heritage, in some cases historical and/or functional and others aesthetically questionable, renewed by immaterial art. An ephemeral action that transforms every day into an un-

precedented temporary museum landscape, perfectly in line with the concept of the *Fifth Landscape*.

All the experiences described lead one to reflect on the fact that art, being subjective, both in those who enjoy it and those who make it, draws on one's subconscious, one's emotional baggage, even the ancestral past, and the traces one unconsciously carries in one's mind. The *Fifth Landscape* could be defined as a kind of contemporary Baroque. If Romanesque and Gothic are materials in which architectures are emotional and intimate caskets because of the use of massive matter in the definition of spaces (Romanesque) and as a pretext for the exaltation of the ephemeral form (Gothic). In the Baroque, however, the matter becomes decoration that exists as a function of architectural space, which uses light materials in its definition (grout, wooden mouldings, paper-mâché, etc.). Baroque gives character to the scene, is scenographic, and elaborates a specific mental construction of the space concerning the container. In its being creates, precisely, scenographies: representations. The *Fifth Landscape*, therefore, can be called a 'Baroque 2.0', because it dematerializes the 'Baroque 1.0' by doing an additional work of material subtraction: defining a scenography that is also space, something that was previously reserved only for architecture. The *Fifth Landscape* is thus, in creating spaces usable by all, an 'anti-barrier action', and it is its potential to be architecture (in that architecture creates spaces) that finds a connection with the world of VR and AR, in its most pushed and innovative architectural declinations (such as living a life in a digital reality).

Lastly, *Landscape 5.0* seeks to make possible the visualisation of what one talks about and feels (even sentimentally), generating an overall meaning that appears as something conatural to the world. The significance attached to it and its impermanence define the complex contemporaneity of the landscape. As Turri suggests, the "landscape-theater" (2001) is the set where actors and spectators act in a metaphor that is then our existence, which is simultaneously shaped by themselves to host the play. Consequently, the *Fifth Landscape* is a narrative landscape (Socco, 1998) in which latent and unexpressed potentials emerge as if in a revanche of social justice over the worn-out dictates of tourism. It also denounces the consumerist use perpetrated to the detriment of the landscape. Quoting

<sup>14</sup> <https://www.solace-srl.com/colore-dellanno-2020-classic-blue-pantone/>

geography scholar Martin Schwind, «... every landscape is like a work of art, but much more complex” in that “a whole people create a landscape, which is the deepest reservoir of its culture and bears the imprint of its spirit» (Schwind, 2015:96). In this sense, human beings, in symbiosis with the landscape, generate evocations and collective images that are cultural facts for the benefit of all.

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# Reflecting About the Last Territorial and Administrative Reform in the Republic of Albania

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All political parties recognized the need for the territorial and administrative reform that was drafted between 2013 and 2015, and there have generally been no reservations about it. In order to provide Albania, the chance to perform to its full potential in this aspect, such atmosphere galvanized high expectations from the public opinion and garnered a significant lot of support from donors.

The opposition at the time decided to withdraw for recognized reasons and did not participate in the process. In these circumstances, territorial consolidation and the number of municipalities dominated the public and political discourse, while the governance structure and the division of powers at the central-local level received little attention.

These reforms proceed through iterative cycles until a social and political balance is achieved, as evidenced by experiences from other nations/countries. The current outcome of this reform in Albania after six years of implementation enables us to evaluate what has been accomplished thus far. What action is necessary now?

In my opinion, the Reform is not "black and white." Of course, there have been some successes; any changes should not seek to undo or start over, but rather to rectify and improve in accordance with the needs of the nation, economy, and communities.

Without getting into specificities of data and numbers, I just want to stress that all of the evaluations to date — both

donor-funded and independent — have demonstrated that the reform has "lights and shadows" and has not yet achieved the goals for which it was intended. In essence, it results in a considerable rise in both the cost of services and the number of people in the administration. Currently, it appears that there exist four key issues regarding the implemented reform that all decision- and policy-makers must consider to address:

## **The Issue of Representation**

While the reform was being conceptualized, experts worked to come up with a "set of criteria" that would be used to implement the territorial reform. These factors were not taken into account as much as they ought to have been since there was not a political balance (also because of the fact previously mentioned that the opposition did not participate in this debate). Instead, the desire for political representation in terms of electoral interests dominated.

The marginalized communities before the reform appear to be even more in worse conditions now, since the territorial consolidation happened, which was required at the time as a good argument. Indeed, it has skewed the representation of communities inside the major territorial-municipalities. For instance, some municipal councils do not represent at all rural or very remote communities, by having solely members from urban areas. Today, local councilors no lon-

ger even visit certain communities and regions on the field.

Such paradigm has strengthened urban centers that have already been consolidating, but it has depopulated small and secondary cities, rural areas, and particularly hinterlands. It takes hours to access basic amenities at the closest location, and services in these locations are almost "dead." It is no coincidence that it was impossible to keep track even of the number of deaths during Covid-19 pandemic in these locations.

Therefore, any decision-makers should really visit at least some of these regions and see, speak live with the locals there, before making any adjustments or decisions. The north, northeast, and southeast of the country are currently deserted. People still live in extreme poverty conditions reminiscent of the "Middle Ages", in some of the most isolated parts of the country. Emigration has grown significantly in popularity. Reports say that over 750,000 Albanians have left the country for the EU, North America and other developed countries, since the reform's inception up to the present times.

The reform almost wiped these areas off the map, but the resources and economic potential remain there. Countries similar to ours have not made such mistake. They have either drafted positive "discriminatory" policies, or applied the principles of "asymmetric" decentralization.

In short, correcting representation is a pressing issue that, in theory, must guarantee local self-government for every village and outlying areas, as well as the provision of basic infrastructure, services in the sectors of agriculture, health, and education, as well as the encouragement and retention of young people and businesses there.

### **The Issue with Increasing Decentralization**

While territorial consolidation dominated discussions of the reform, other, even more significant issues were formally addressed in the new Local Government Organization Law. These issues included the range of competences, functions, and services that the local government should have in the territory.

But in practice, centralization of power in decision-making still exists. An urgent restoration of decentralization is required in this situation. It was accomplished in Albania in the years of 2000s, as a result of a cooperative political-parliamentary atmosphere/process, which regrettably still stands as an isolated case of comprehensive changes with strong political willingness up to date.

Without rushing, this approach might be used right away to resolve the situation beyond a timeline of three months (the present timeline duration of the agenda of the respective Parliamentary Commission). This would ensure the reform's applicability and durability, as well as its potential to generate consensus and consolidate local governance.

In particular, I don't believe we should create something from scratch. At least four in-depth studies have been conducted by local and international expert groups, and according to three of them, Albania could be divided into 80 to 90 municipal units (including the new 'asymmetric' municipalities), while still recognizing the value of functional regions and the need to implement asymmetric decentralization principles.

### **Regional Developmental Inequality**

According to what has been observed thus far, urban regions and the nearby rural suburbs that performed better before the reform continue to do so after it. Even though the urban-rural areas with historical development issues, they are now substantially under worse circumstances.

This demonstrates that the idea of changing borders should not be the sole focus of any future discussions of the reform. Today, it is evident that we are dealing with systemic developmental issues, as the aforementioned examples, which cannot be resolved until the governance structure and local and regional representation are changed first.

In these circumstances, it is advised that the leitmotif of the reform should place more emphasis on the need to examine the governance model, the representation model, and the country's democracy, than it should in the case of changing the country's borders and electoral map for more electoral purposes.

### **Investments in territorial and regional development**

In the conditions of regional inequality that exists in the territory, it is necessary to reevaluate the entire process of drafting development policies at the local and regional level, in order for development priorities and investment benefits to be determined by the interests of the communities and not to be imposed from "above", as it currently happens.

Even the Regional Development Fund must be completely reformed precisely on this principle. In the meantime, I believe that the Law on the Development of Regions should be further detailed upon and implemented in a practical and significant manner. Partnership and subsidiarity are two concepts that shouldn't just exist on paper.

There is no need to invent the wheel in this situation either. Two of the four recommendations made by domestic and foreign experts that address this issue, not occasionally concur that the country should be divided into 4-6 regions. The "County/District" idea as an administrative-territorial entity, appears to be at an end.

At this point for the sake of country's development, in my opinion, the country could be reorganized into 80-90 municipalities and 4-6 regions with direct elections. This would better position the nation for real democratization, as well as the rapprochement of communities and regions with the expected EU developmental objectives/funding in the coming years of accession.

I would also suggest a reorganization into 4-6 smaller municipalities, comparable in size to other municipalities in the country, in the case of the existing "Tirana Municipality – the capital", which is disproportionately large in terms of population and economic potential compared to the average of other current municipalities. This would be coordinated with a regional coordinating authority for Greater Tirana (Tirana, Kamëz, Krujë, Vorë), that could be one of the 6 new regions with direct elections.

Finally, a few thoughts on the phases and fundamental ideas of a thorough parliamentarian/political procedure to plan and implement the evaluation of the model of governance and representation.

Some of the potential steps and core concepts for a thorough planning and implementation process for the evaluation of the model of governance and representation are:

Maintain the cooperation with the Strategic Actors from the International Community, especially those who have backed the reform. Decision-making cannot be conducted as if everything is new because donors have been involved in this process for a long time. In addition, the international partners operate as a sort of de facto "guarantor/intermediator" between the political parties in the country, handling changes that go beyond the purely formal and biased electoral perspectives.

To expand the conversation beyond the existing "Bi-Partisan Commission" for Reform. It is important to acknowledge that all political forces in the parliament are not fully and comprehensively represented by this Commission. Numerous justifications are possible, but none of them are helpful. If there is political will, this issue can and should be remedied right away, through a consensual spirit. Additionally, any truly inclusive commission can and should seek for inputs from all parties who have contributed to this subject thus far, compiling a list and matrix of concepts, successes/failures, and issues.

A comprehensive definition of the reform's mandate must be provided by the "All-Inclusive Bi-Partisan Commission" after the appropriate consultations have been held.

The government, or specific political forces, can resolve this issue on their own and without the assistance of other actors if the political elements determine that the primary issue is just the feature of political representation. Of course, by keeping also the obligations brought forth by unilateral decision-making.

However, this formula would only address the following electoral issue; and it would not ensure national stability, vision, or development goals.

If the modification of the governance and representation model would actually be the main objective, I advise that the "Bi-Partisan Commission" establish as soon as possible an "expert team" that would be affiliated with this Commission, and that was already proposed by all the parliamentary parties.

In the instance of the decentralization reform, the team would develop a specific proposal for the reform based on clear principles regarding the goal and anticipated outcomes of the reform. This would be done using the political consensus model that was developed in the 2000s during decentralization era. Of course, taking such a route, calls for a work schedule that extends beyond the present 3-month projection of the parliament and majority.

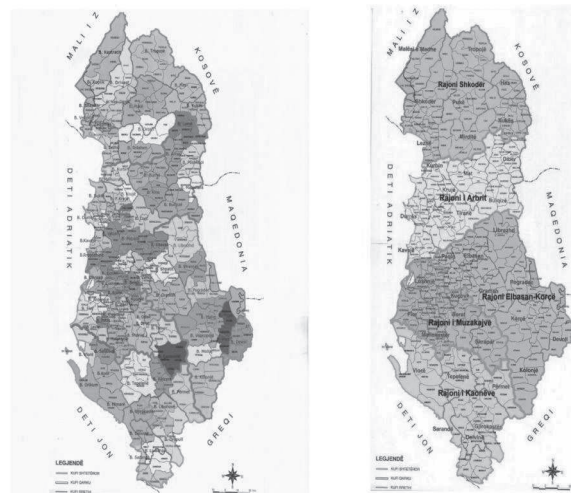


Figure 1. Map of Reorganization of municipalities (local governments)



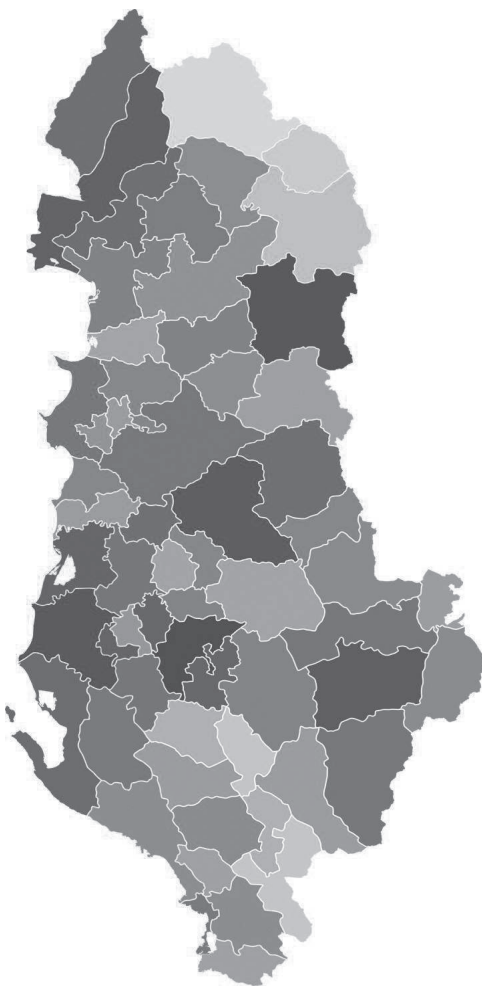
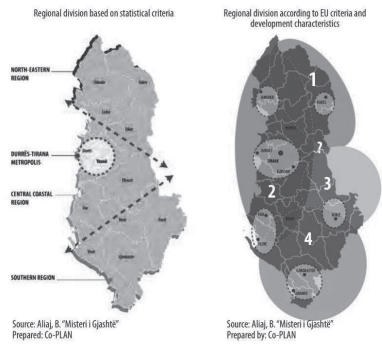
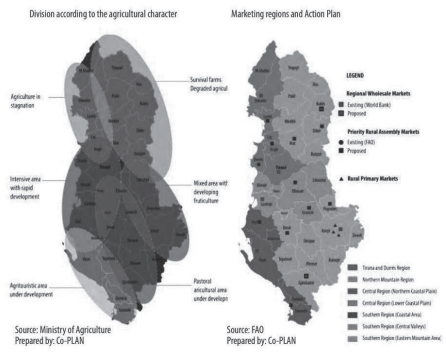
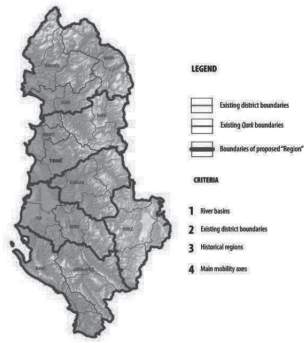
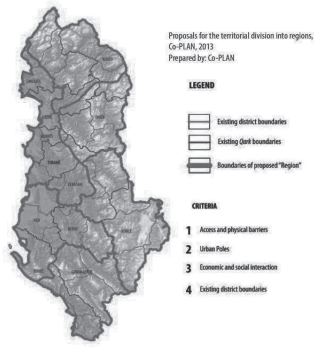


Figure 2. Map of Reorganization of Regions

## The Destructive Rebirth of the Pyramid

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More than a decade has passed since the heated debates on the destruction of the Pyramid of Tirana, and its substitution with the new Albanian Parliament, a winning competition entry by Coop Himmelb(l)au. Whether it should have been demolished or not, and whether there should have been a parliament in its place or not, were two different debates *erroneously* packed in one. This debate degraded into a false either-or political choice, namely, that between a new Albanian parliament building that would symbolize the democratic values and a building that presumably embodied the values and memories of the old communist regime, as the former Museum of Enver Hoxha, Albania's communist dictator. The parliament proposal, however, was only an unambiguous instance of a destruction process and a destructive force that had already started and continues to this very day. The Parliament proposal did not go forward, yet the Pyramid was eventually not saved. I would argue that it is only today at the very moment of its 'revival' or 'rebirth' into a digital hub through a design of MVRDV that the Pyramid is finally destroyed. What MVRDV's design destroys is the only thing that Pyramid really had of its own, regardless of its initial function and reference: *its form*.

The Pyramid-Museum was designed by Klement Kolaneci, Pranvera Hoxha, Pirro Vaso and Vladimir Bregu, and it was finished in 1988, just three years before the communist sys-

tem would fall. When it was first built, its shiny white marble finishes and its monumental composition radiated an aura of eternal stability and continuity, which, in those unforgettable late eighties, contrasted not only with the economic poverty but also with an unconscious sense of intimidation and uncertainty in the face of what was soon about to come. The wind of change would soon sweep Albania and turn everything upside down. The country was opened to the world after 45 years of isolation; many people emigrated, some never to come back; and the market economy and capital spread in all its forms across the whole territory. This wind of change also affected the Pyramid: it blew away the plexiglass star on top of it; the original museum function disappeared together with the statue of Hoxha in the lobby. In the early nineties the pyramid became an International Cultural Center, but this would be only one of the many functions that the building has had or was planned to have. At the same time, in and through its very deterioration, even as its marble tiles started to fall, and the glass roofs started to leak, the Pyramid acquired a special status in the cognitive map of post-communist Tirana; it became *the* 'Pyramid', what everyone knows and has a special - personal or collective - relationship with, a public place where people passed through, met, or sit in the steps outside, a gap, a void, a space of freedom, and a point of reference in the frenzied, everchanging

landscape of a city determined to erase its own past, to a point of no return. Such embedded referentiality was sustained by the *form* of the pyramid itself, revealed as the only thing 'left' to the pyramid during the time of its deterioration, of its use and abuse. *It is this coupling of form and time that is the real heritage of the Pyramid, or the real Pyramid as heritage.* And it is precisely this heritage that is erased by MVRDV's design.

But what does 'form' mean in this case? Henry Focillon's distinction between sign and form might be helpful in addressing this question. Focillon argues that both sign and image on the one hand and form on the other signify, but their signification is different: "whereas an image implies the representation of an object, and a sign signifies an object, form signifies only *itself*."<sup>1</sup> Sign is the conceptual content of form, its contour or diagram, the "graph of an activity:"

Although an earthquake exists independently of seismograph, and barometric variations exist without any relation to the indicating needle, a work of art exists only insofar as it is form. In other words, a work of art is not the outline or the graph of art as an activity; it is art itself. It does not design art; it creates it. Art is made up, not of the artist's intentions, but of works of art ... [Art] must renounce thought, must become dimensional, must both measure and qualify space. *It is in this very turning outward that its inmost principle resides.* It lies under our eyes and under our hands as a kind of extrusion upon a world that has nothing whatsoever in common with it save the pretext of the image in the so-called "arts" of imitation.<sup>2</sup>

In Jean Molino's terms, the sign would be "no more than an identity card, or police record."<sup>3</sup> Focillon further argues that "the sign bears general significance, but having attained form, it strives to bear its own individual significance; it creates its own new meaning; it seeks its own new content, and then endows that content with fresh associations by the dislocation of familiar verbal molds."<sup>4</sup> Sign and form are not oppositions or exclusive of one another; instead, they are two different stages in an interval, process, or "activity" of transformation of the material, an activity in and during which form overflows the signifying space of the sign by acquiring an internal, formal "dimension" of its own, which paradoxically turns "outward," toward a radical exteriority that cannot be accounted for and signified by the signs. This occurs both on the level of the making process, the process in and during which the form is found, as well as *after* this form is found, once it is implicated in a dynamic network of other signs, meanings, and contexts.

In the case of the Pyramid of Tirana, the pyramid – as the geometrical signifier 'pyramid' signifying the pyramid as a transcendental idea – is the *sign* of the *actual* Pyramid (that is, that before its destructive rebirth...); the geometrical signifier is the pyramid's "identity card," but *not* its form. The form of the Pyramid of Tirana is not its identikit - a pyramid. Neither it is a star or an eagle when looked from above, as many quite confidently claim. The form of the pyramid consists of a eurhythmic composition of radially distributed masses with different inclinations and proportions around an interior void (which was only temporarily occupied by a statue of the dictator, and which

has already been occupied again with some cubes placed perhaps 'loosely', say, with a formal 'negligence', that pretends to contrast with the uniqueness of the statue..., but that, indeed, it turns out to be as oppressive in its hegemonic formalism as the initial statue). Only those on the west side, facing the Boulevard, are pyramid-like, as they slope and taper toward the top. Yet upon close inspection, the identikit-pyramid fails to account for the articulation of their form. These sloped masses are more like piers that form a sloped entrance portico, or one that has 'fallen' on parallelepiped and subtracted a chunk of it. The two main piers on both sides of the entrance tapered to receive the entrance glass structure, which is also articulated, in turn, into two strips on the side that fold into the main glass plane in the middle, leading to the entrance. The massive sloping piers slope less, and thus become longer, away from the central axis as they are gradually transformed into cubic masses on the side and the back (Figure 1). In the back, the building looks very different from the front; it consists of chunks of cubic solids spaced by thin voids. Overall, the form of the building evokes the image of a huge rock carved from within. The space around the pyramid is as important as the building itself and an integral part of the form. The space is defined not by walls but by the object in it. The building is not placed in the middle of the space but a greater distance from the boulevard than from the street behind it. Such distance is balanced by the strong symmetrical axis of the entrance at a right angle with the boulevard's axis. This right angle receded from the boulevard engages and connects the other buildings along the boulevard with the Lana axis and the neighborhood behind the pyramid. The pyramid is more than just one building, it is an urban ensemble or formation that works at multiple scales.

All this complexity and density of the form of the pyramid is neutralized and anesthetized by MVRDV's design. "Working on a brutalist monument like the Pyramid is a dream", says founding partner of MVRDV Winy Maas.<sup>5</sup> The characterization of the Pyramid as a Brutalist building is false, according to Rayner Banham's definition of Brutalist style as being about "1: memorability as an image; 2: a clear exhibition of structure; and, 3: a valuation of materials as found."<sup>6</sup> While the Pyramid *seems* to fulfill the first point in having a memorable, albeit, as we have already emphasized above, a highly nuanced and ambiguous image (is it a pyramid or a parallelepiped...?), it does not fulfill the other two points: The Pyramid does not use materials as found, but is clad instead in a highly polished marble skin; it does not have a clear exhibition of structure since the concrete frames are hidden behind or embedded in the sloping, tapering planes/piers. But even if the Pyramid was of a Bru-

<sup>1</sup>Focillon, H. (1992) *The Life of Forms in Art*, (Trans C. Beecher Hogan & G. Kubler, Trans). New York: Zone Books, 1992, 34;

<sup>2</sup>*Ibid.*, 33-34 (my emphasis)

<sup>3</sup>Molino, J. Introduction of *The Life of Forms*, *Ibid.*, 23

<sup>4</sup>*The Life of Forms in Art*, *Ibid.*, p. 40

<sup>5</sup><https://www.mvrdv.nl/projects/312/the-pyramid-of-tirana>, accessed September 28.

<sup>6</sup>Banham, R. (1955). *The New Brutalism*. *Architectural Review*, 355–59.

talist style, MVRDV's design does not respect this brutalism; does not respect the form of the Pyramid as given, as found; it covers over it; hides it and quiets it down. The strongest, most neutralizing move of MVRDV's design is a series of seemingly randomly distributed cubes across the Pyramid, in its grounds around the building, on top of it and even in the interior, like a cube-disease taking over the building (Figure 2). This rash of cubes is an effective tactic in deactivating or 'jamming' the form of the building, its massing, its eurhythmic composition, its orientation, its proportions and different axialities.

Such deactivation isolates the building from the urban ensemble that it was part of, and thus turning it into just another, new building of the new urban 'archipelago' of Tirana. The cubic masses in the interior fill and thus erase one of the most important attributes of the building: its interior void, which structured and held together the original eurhythmic disposition of the piers. Like a virus, these cubes undo and annihilate the original monumental disposition of the building. On the other hand, the stairs on the sloping piers – in itself, a rather cheesy – and the horizontal screens in the front completely dim the strong piers of the entrance portico. It is as if all the design decisions have been guided by a fear or phobia of architectural form, panic-driven to cover up any raw and authentic architectural expression.

MVRDV's design, however, is not an unconscious act, but a conscious one; it is the same act as all those 'archipelagic' objects *thrown* on the 'cheap' land, without a past... of the Albanian capital, either by destroying an existing building, or under the guise of destructive revitalizations. The intention behind such acts is precisely to erase the *image* of the city, its patrimony, its spaces and its forms. The intention behind MVRDV's 'revival' of the Pyramid is the same as MVRDV's Downtown One project, 200 meters east of the Pyramid, which incorporates a heightfield image of Albania's map in its façade, a sign of Albania as vernacular real estate... There were only two choices that could have been taken with regard to the pyramid: one solution could have been to demolish it completely, and another building or, better, no building at all be built in its place. This would have been a violent solution (which, unfortunately, we are not short of...), but at least an honest one, if our (or at least our majority's) declared disapproval of the communist regime were genuine... This solution would have been quite poignant and radical particularly in the second case, that of not building, of leaving the plot empty, that is, celebrating the void and not the solid, as an urban commemorative condition... In this case, one could think of a *real* monument against the communist regime (a monument that we do lack); or more universally, an anti-monument that would commemorate the damage that regime brought about, through the void of the inability to re-present that damage coherently and fully in a collective scale; a monument *à la* Vietnam Memorial, which would not occupy the plot volumetrically but simply dig or scratch it... Perhaps the blueprint of this scratch could be the very planimetric projection of the Pyramid... The second possibility would have been to preserve the Pyramid to accommodate any kind of function – including today's digital hub, but restoring it in such

a way that her form would be revealed, engaged, emulated, factored, and released, with the very formal specificity that characterizes it – a solution that would have encouraged a multitude of interpretations and would have mobilized a wide range of theories, practices and schools of restoration. The possible solutions could range from the most conservative ones *à la* Cesare Brandi – which would require not only the preservation of what Brandi calls the first or the author's time but also the second time<sup>7</sup>, in this case being that of its degradation – to radical avant-garde interventions *à la* Gordon Matta Clark where the Pyramid could be cut or 'sliced' with different geometric shapes, thus releasing and revealing the very essence of its form. A moderate, but still powerful approach, in my opinion, would have been to replace the glazing with thin marble elements *à la* Beinecke Library at Yale, a building designed by Gordon Bunshaft of SOM in 1963: such a solution would allow a restrained and silent light to be shed into the inner void and would enable the reading of a monolithic form of the object from the outside. *What should not have been done is only what was actually done.*

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<sup>7</sup>Brandi, C. (2005). *The Theory of Restoration* (C. Rockwell, Trans.) Firenze: Nardini Editore, 61. Brandi writes: "First, there is the duration of the externalising of the work of art, while it is being formed by the artist; second, we have the interval between the end of the creative process and the moment when our consciousness becomes aware of the work of art; third, is the instant when the work of art strikes consciousness like a bolt of lightning."



Figure 1. Pyramid of Tirana, Albania, Creative Commons Attribution 2.0>



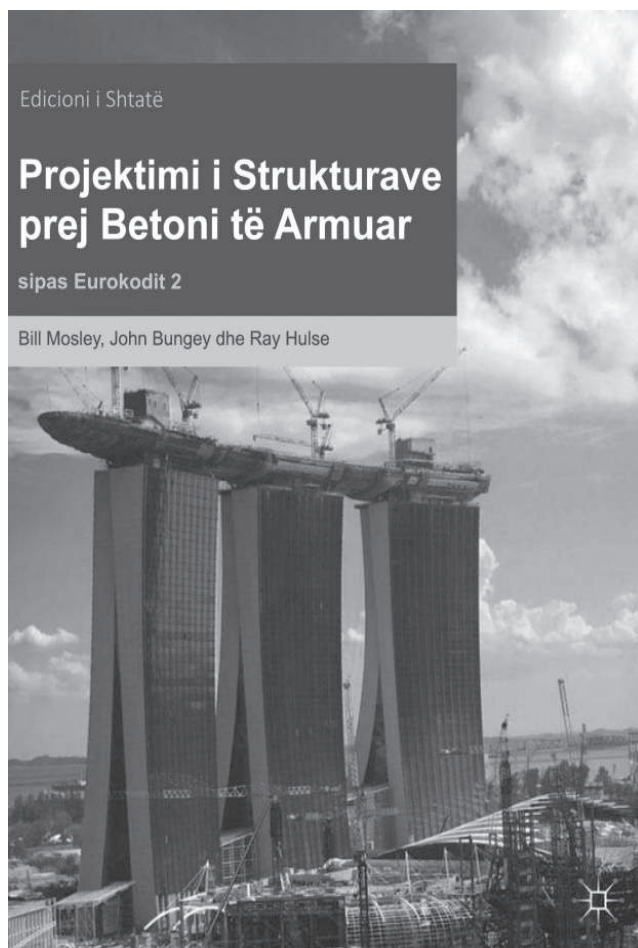
Figure 2. East Side of the Pyramid of Tirana, Albania, photo by author, October 22, 2022



## Reinforced Concrete Design to Eurocode 2 Seventh Edition

ILDA RUSI

POLIS University



**Author:** B. Mosley, J. Bungey & R. Hulse

**Publisher:** POLIS Press

**Pages:** 447

**Year:** 2022

**ISBN:** 978-9928-371-01-

The adaption in the Albanian language of the book *Reinforced Concrete Design to Eurocode 2 seventh edition* is a work of more than 4 years undertaken by the Department of Architecture and Civil Engineering at POLIS University, composed by a staff of former and young professors, who have been already used this book in their teaching courses. Being part of the working group my review, which is more of a summary, notes the main topics and sub points considered in each chapter along with a selection of critical or supplementary observations. The well-known book *Reinforced Concrete Design* by Mosley, Bungey, and Hulse (Palgrave), which is based on British Standards, was updated in this new version with the intention of maintaining its structure and characteristics. It is feasible to contrast the various consequences when structures are created to either code by comparing the two volumes and highlighting the key distinctions between Eurocode 2 and earlier British Standards. The fact that Codes of Practice are constantly subject to revision should be emphasized. Readers should make sure they are utilizing the most recent edition of any applicable standard.

This book's objective is to give a clear introduction to the ideas and procedures of concrete structure design. It is especially aimed towards students and young engineers who need a clear explanation of the fundamental theory and design techniques. The establishment of a number of these Structural Eurocodes, which are technical papers designed for acceptance throughout all the member states, is the result of efforts to harmonize Technical Standards across the European Community (EC). By applying these uniform criteria, construction companies will be able to compete more fairly across the EC and will be able to remove trade barriers. In the UK, BS8110 was replaced by Eurocode 2 (EC2), which deals with the design of concrete structures. The four elements of Eurocode 2 adopt the limit state principles laid out in British Standards. Part 1, which covers general building regulations, is the section this book mostly relates to. Other European Standards such as Eurocode

0 (Basis of Design), which deals with analysis, and Eurocode 1 (Actions), which addresses loadings on structures, must be utilized in addition to Eurocode 2. Eurocode 7 (Geotechnical Design) and Eurocode 8 are other pertinent Standards (Seismic Design). A variety of supplementary materials with comments and historical context have also been prepared by a number of UK organizations. The National Annex, which contains material particular to each individual member state and is backed in the UK by the British Standards publication PD 6687:2006, which gives background information, is another piece of supporting paperwork. The Concise Eurocode for the Design of Concrete Buildings, which was created by the Concrete Centre, also contains information that has been condensed from EC2 but is presented differently than the main Eurocode and only includes the data that is crucial for the design of more commonplace concrete structures.

The fundamental aspect of EC2, however, is that the design concepts it embodies are nearly identical to those found in BS8110. Therefore, even though there are some minor differences, engineers who are accustomed to designing to the prior British Standard should have no trouble understanding the key components of EC2. Both of these qualities are included in this edition, which also makes use of new grades of reinforcing steel and design principles based on concrete cylinder strength.

The terminology used in this work has been kept as consistent as practicable with standard UK practice; for instance, loads have frequently—though not always—been used in place of actions. At pertinent times in the text, other "new" terminology is noted. The usage of actions to represent structural loading and the words permanent and variable actions to express imposed and dead loads are the two most notable examples.

Chapters 1 through 5 of this book's subject matter are mostly concerned with theory and analysis, while the other chapters cover the design and details of various sorts of members and structures. There are sections on seismic design and earth-retaining structures, as well as chapters on prestressed concrete and composite construction, in order to cover topics that are typically covered in an undergraduate course.

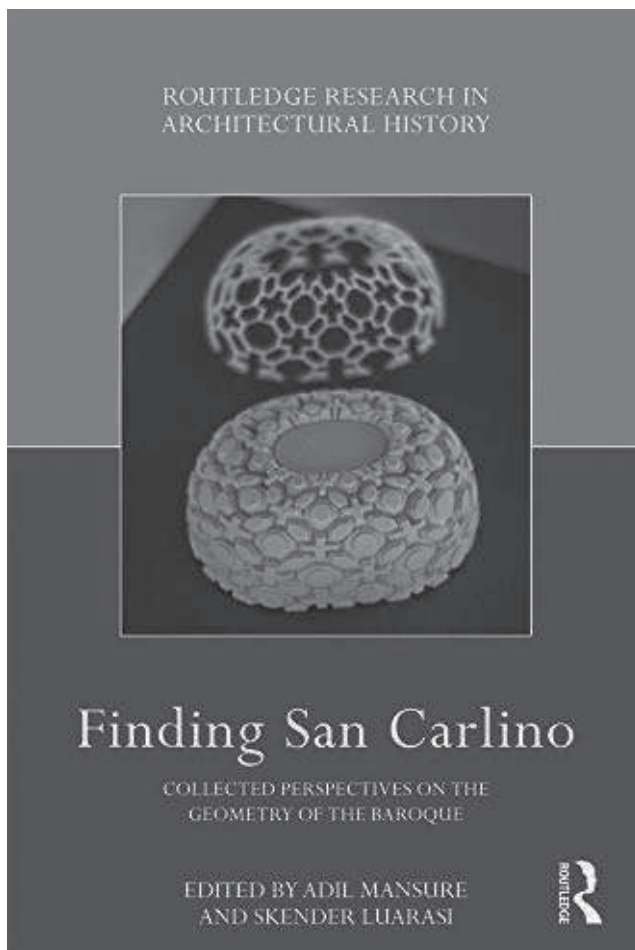
Along with other new sections, such as the design of deep beams, a new chapter on water-retaining structures has been introduced. In order to reflect UK usage of EC2 since its debut, additions and alterations have also been made. For better comprehension, more examples and graphics have been included, and Chapter 1 has received a new section that introduces design methods. This takes into account conceptual design, sustainability, health and safety, as well as the use of design software.

To sum up, generations of students have relied on and used this best-selling textbook, which offers a clear and useful introduction to the principles and procedures used in the design of reinforced and prestressed concrete structures. The book includes a ton of practical examples to help readers understand the different facets of design that are discussed in the text. Design tools including charts, tables, and formulas are included, and an appendix with a summary of crucial design data is included for convenience.

## Finding San Carlino

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**Editors:** Adil Mansure, Skender Luarasi

**Publisher:** Routledge

**Pages:** 204

**Year:** 2021

**ISBN:** 978-1032-081-977

For centuries the work of Francesco Borromini has attracted the interest of researchers and architects from every part of the world. His works and drawings, even though studied from different perspectives and through multiple approaches, always seem to carry with them some secrets and new possibilities still to be traced and explored. When questioned on the importance of Borromini in the history of architecture, the Italian critic Bruno Zevi, stated that - differently from the past - in the work of Borromini no perspective painting embraces the whole of reality, to take possession of which a kinetic commitment is needed, an itinerary that allows capturing its multiple, unpredictable effects. The architecture of the Swiss-born architect is then intended as a complete experience where the body is the main actor of a spatial discovery that blends architectural masses, light, and the viewer itself. It is not a secret then that there is still so much to say about the work of Borromini and still new paths can be traced in the exploration of his timeless practice.

The book 'Finding Carlino' - edited by Adil Mansure and Skender Luarasi - is another step into this research and the attempt of the researchers, raised and educated in the best schools in US and Canada, to disclose some brand-new insights on this topic. The text is organized as a miscellany of several essays from researchers in these fields while Mansure and Luarasi skillfully weave the canvas of a narrative that invites the reader to focus on the several ambiguities, non-consensuses, and complexities behind the work of Borromini. The list of contributors to the next is astonishing, as much as the number of questions raised by the authors. The inquiries developed by the contributors do not focus only on the historiographical issues of the church under examination - San Carlino alle Quattro Fontane, built from 1634 to 1644 under the patronage of cardinal Francesco Barberini - but also on the complex relationships among the drawings of the master, the compositive and symbolic behind the building itself.

The *Preface* and have the role of setting the debate for the reader and anticipating the different topics that will be deep-

ened in any of the single contributions from which the book is composed. After some first notes regarding the history and reasons behind the construction of San Carlino, Mansure and Luarasi speak wisely of the geometrical interpretation of the church and the questions still opened regarding the generation of its form. Furthermore, they state that there are still some missing points between the final construction and the drawings of Borromini itself and they invite you to reflect on the possibility of the existence of a new framework of analysis for San Carlino, precisely the discovery of a new technical framework that might be offered to the architectural community to explore such a piece of masterpiece.

The first essay, *On Borromini's Drawings and 'Practical Geometry'* – by Werner Oechslin – is an attempt to retrace the tradition of geometry belonging to the times when Borromini worked. Recalling the times when the architect was employed as a mason, he sees how geometry for Borromini was never a way of crystallizing and cooling forms but of investigating the world, space and its possibilities fusing at the same times the abstract and sensorial peculiarities of geometry itself. Furthermore, he divides the 'gestures' of the architect into two different families: 'lines' and 'complex figures', both mutually exclusive and operational.

In *Toggling through San Carlino*, Luarasi affirms that San Carlino is a nuanced work of both the methodologies and figures described earlier. The author states that the church is at the same time serious and fun; normative and fun; focused on method and structure but, at the same time, also fashion and derived from a common sense of pastiche derived from the times when it was built. Inspired by Whitehead's philosophy, for Luarasi the work of the architect can be intended as motivated from two different perspectives: on the one side jiggling between *subject* and *superject*, and the other between *norm* and *freedom*.

Two other essays along the books weave the strands of the so-called *invisible geometry* behind the work of Borromini. John Hendrix, in *The Deep Structure behind San Carlino*, uses a neo-platonic lens to investigate the work of the architect. In his thoughts, he implies that geometry can be seen as an embedded phenomenon in the mind. For Hendrix, the *hidden geometry* in the church must be searched in the many symbols used and repeated in Borromini's drawings and invests the building of some new readings inspired by the Neo-Platonic philosophy of the 20th Century. Meanwhile, Karsten Harris, in his *Architecture, Geometry, and the Sacred*, emphasizes the importance of the space to be 'shaped' rather than be 'bound' and the inner dichotomies in the work of the architect such as perfect/imperfect – visible/invisible, can be read through a metaphysical lens to be understood.

*Baroque Constructive Geometry?: Borromini's Design for the Elevation at San Carlino*, is the text authored by Jonathan Hales, where the main object of inquiry is the acceptance of underlying geometric order and structure in the church. He overlays recent scanner studies in the church with some hypotheses such as design and Triangulum vs. design and Quadratum, and

the connection between medieval and post-renaissance figures of geometry. In the following essay, *From String to Volume*, Lauren Jacobi and Karl Daubmann discuss the affinity of San Carlino with contemporary architectural praxis. While moving our interest from the central space of the church, they mutually investigate the Madonna and Crucifix Chapels, where the former is considered about life while the latter is about death either symbolically, geometrically, formally, and stylistically. The majesty of the first one is balanced by the austerity of the second and both of them suggest the inner relation and delicate relation between comedy and tragedy.

The topic of the surface of the church is explored in the essay of Adil Mansure. In his '*Surface*', the Canadian researcher reflects on the meaning of the surface in the work of Borromini. According to him geometry, structure, form, and space are all entangled and readable on the surface/s of the building itself. The idea is that there is no existence of a deeper structure and then a surface which is created to cover but everything should be seen as a whole, as an inner coherence in the work of Borromini where everything concurs with the meaning of his architecture. Mansure explores three cases of this relationship: the column-wall juncture; the pendentive zone; and the dome. The surface is then proposed to be both a meta-concept and spatio-temporal interface that creates an indissoluble bond among the architect, the viewer of his drawings and an unknown visitor of the church.

The last contribution, *The Xenophora Principle* – by Niklas Maak – deepens the operative metaphor of an object in its fluid environment that covers many aspects of the analysis of the church. Using some reminiscences from Neo-Platonic philosophy, San Carlino is intended as an overgrowing mollusc secreting its abode throughout time, while being continuously shaped by the forces of time, chance, and visitors with unpredictable consequences.

As it might have been noticed in this review, the book is a complex text where many different voices have been put together to disclose new and several points regarding not only one of Borromini's masterpieces but the work of the master itself. I was told once, during my studies, that 'everyone needs to have Borromini's syndrome' to be considered a researcher in the field of architecture. This book, for me that I am writing this short thought on the text, is a confirmation of that. The wise way through which geometry, symbolism, philosophy, and investigative tools such as drawings – and not less important, the use of software – to investigate the church, creates a perfect picture to project new light on the work of one of the most influential architects of all time and, as an ending note, the importance of operative frameworks in the work of the architect – and the research in the field of architecture – is one of the most precious secrets contained in this text.

## Post Pandemic City

**RENIS BATALLI**

*POLIS University*

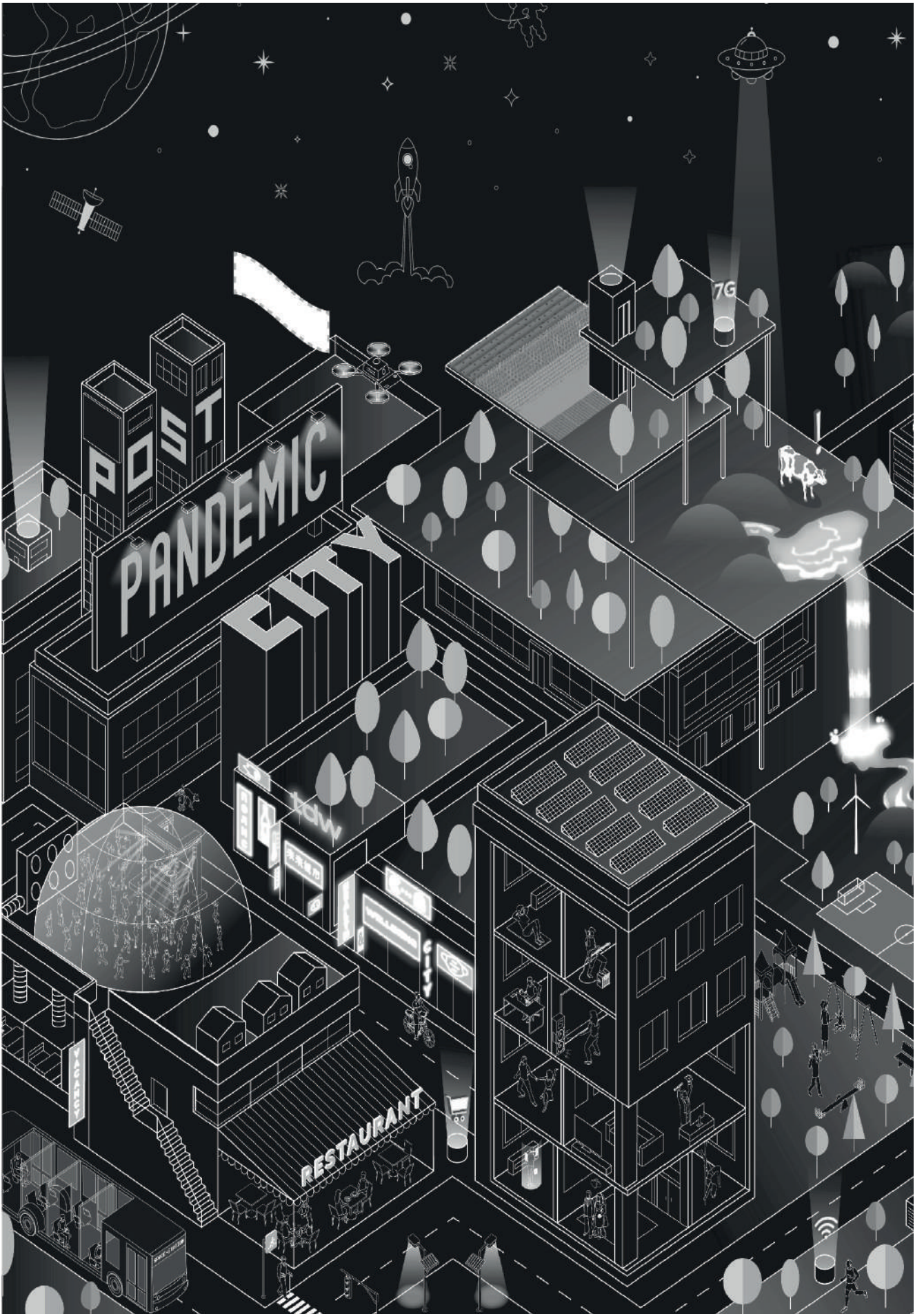
The Post-Pandemic City illustrates a “back to new normal” narrative. It describes scenarios which may seem futuristic, but always giving an uncertain timeline going from 100 to 1 year from now.

The pandemic has affected our lives in different levels. The way we live in our homes has become more sustainable and multifunctional, changing the purpose from a simple bedroom to an office, gym, concert hall and much more. Social life has become more vigilant, ventilation is key to closed public spaces and there is more awareness on distanceness, often marked on the floor and walls. The same has happened with public transportation, limiting the number of passengers per ride and reinforcing the concept of booths rather than big open spaces.

But the Post-Pandemic City is not only about restrictions. In this utopian world, living in nature, and bringing it into the city is a common practice, with green walls & terraces being a requisit per square mile, as well as urban farming quarters. Openness and greenery are a vital element of every future city planning. Finally, the healthcare system will bring the concept of digital architecture and prefabricated units, that will facilitate the process of quarantine and transportation of patients.

In the end, the Post-Pandemic City is an optimistic place, where we learn by uncommon circumstances and prepare for upcoming crisis.

**Drawing.** Original artwork by Renis Batalli







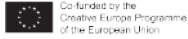
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