

# Architecture & Urbanism in the Age of Planetary Crisis

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## CONFERENCE PROGRAM

### Friday 23 October 2020

10:00-10:15, Opening Speech, Professor Dr. Senem Zeybekoglu, Conference Chair, Ecodemia

10:15-11:00, Keynote Speech: *Towards Lightness and Freedom: Reimagining Architecture and Education.* Professor David Gloster.

11:00-12:30, Session 1, Moderator: Professor David Gloster

*The Urban Commons as a Possibility for the Socio-Spatial Justice in the Cities of the Global South: Rethinking the Favelas in the Metropolis of Rio de Janeiro.* Bernardo Soares.

*Creating Geographies for Capital Accumulation and the Reproduction of Crises.* Paria Valizadeh.

*Post-Democracy Governance in Refugee Camps. Unveiling the Socio-Spatial Conflicts of Refugee Crisis in Athens and Thessaloniki.* Charalampos Tsavdaroglou, Konstantinos Lalenis.

*Recovering the City, Citizen Empowerment towards A Tactical Urbanism.* Jéssica Andrade Dos Santos, Sarah Ben Salem, Letícia Pacheco Dos Passos Claro, Carlos Enriquez Diaz, Madelyn Lackman, Amine Mseddi, Asil Zureigat.

*What Do We Have to Be Careful about Public Space in the Age of Planetary Crisis?* Beatrice Galimberti.

*The Contributions of Architects to Post-Conflict (Re)Construction: Social Processes Towards Building Peace Case studies from Rwanda, Colombia and Iraq.* Sabine Lepere.

12:30-13:30 Lunch Break

13:30-14:15 Keynote Speech: *Unveiling Istanbul: Taksim Urban Design Competition for Prost's Espaces Libres.* Professor Dr. Ipek Akpınar.

14:15-15:45 Session 2, Moderator: Professor Dr. Ipek Akpınar.

*De-urbanisation as Paradigm and Process: The Embedded Transdisciplinarity in De-Urbanisation. Danielle MacCarthy, Joshua Hurtado.*

*Towards Post-Pandemic Urban Change; Renaissance of Bicycle Networks. Gürkan Güney, S.Ayşegül Tokol.*

*The Urbanization Processes of Northern Istanbul in the Anthropocene Era: The Yavuz Sultan Selim Bridge and the Northern Marmara Highway. Evren Aysev.*

*Strategy and Planning from the Field: An Alternative Methodology. Fátima Silva, Rui Seco.*

*The Incentivization of Freedom and Its Future. Muhammad Isfandiyar Khan, Ahmad Waseem Ghauri.*

*An Analysis of Children's Perceptions on the Concept of Neighbourhood through Their Own Paintings. Nevşet Gül Çanakçıoğlu.*

15:45-16:00 Break

16:00-17:30 Session 3 Moderator: Dr. Guido Cimadomo.

*Sustainability and Smartness during a Pandemic Scenario. Monica Santos Salgado.*

*A Reading on New Social Praxis and Its Possible Effects on Built Environment in the Post-Pandemic Era through the Brave New World Text. Ece Ceylan Baba, Merve Cengiz, Sinan Yasan.*

*The Pandemic Reveal: American Housing Policy 1920 - 2020, and its Lasting Impact on the Black Community. Jerrod Delaine.*

*House Types, Settlement Patterns, Infrastructure and Physical Distancing Measures during the COVID-19 Pandemic. Adedayo H. Ayoola, Amira Osman.*

*The Crisis of Place-Based Labour at the Crossroads of Planetary Gentrification and the COVID-19 Pandemic. Gülşah Aykaç.*

*How Evolution of Virtual Workplaces during Pandemic Affected Urban Planning and Zoning. Ghazal Khaksari.*

*Seeking Potentials in the New Cultural & Material Reality of the COVID-19 Pandemic: A Critical Appraisal from the Lenses of New Babylon. Ali Dur.*

## **Saturday 24 October**

13:30-14:15 Keynote Speech: *Reproducing Architecture and Urbanism in the Midst of a Pandemic Condition. Professor Dr. Ashraf Salama.*

14:15-15:45, Session 4: Moderator: Professor Dr. Ashraf Salama.

*How Can Architects Serve the Climate Crisis? Presenting a Design-Led Solution to the Wicked Problem. Rebecca Jane Mcconnell.*

*Using Case Studies to Explore the Concept of Buildings-as-Energy-Service. Maurizio Sibilla, George Blumberg.*

*Ti.hum: Tierra Húmeda | Species Coexistence Urban Model for Vulnerable Basins The Case of Tierra Amarilla, Agro-Mining Town of the Copiapó River Basin, Atacama Region, Chile. Alessia Valenti.*

*At Home in the Earth, Made without Hands. Iliona Outram Khalili.*

*Redrawing Reconstruction: Defining a Mapping System for the Comprehension of Urban Metamorphosis Following Extreme Events. Mattia Bertin, Jacopo Galli.*

*Transform to Transform Ourselves. María Ignacia Lucares, María Paz Jiménez, Alexandre Carbonnel, Hugo Pérez, Daniel Escobar, Dayana Gavilanes.*

15:45-16:00 Break

16:00-16:40 Keynote Speech: *Transition Design: An Approach for Addressing Complex "Wicked" Problems and Catalyzing Transitions toward More Sustainable Long-Term Futures. Professor Terry Irwin.*



## CONFERENCE CALL FOR PAPERS

Architecture and urbanism play a significant role in the production and reproduction of urbanization and the supremacy of the state and capital, which results in the current planetary crisis. Unveiling the interconnection of this crisis and architecture and urbanism is the first and the most significant step to finding out the ethical function of architecture and urbanism in the solution of this crisis.

Wars, deforestation, poverty, soil erosion, hunger, pollution, injustice, climate change, inequality, mass extinction of species, uncontrollable wildfires, and current epidemics - the ravages of our time - as well as mass migration have changed the 21st Century to a century of planetary crisis.

In addition to the ecological effects of this crisis, especially climate change and associated extremities which mostly preoccupy our attention, the social impacts of the current crisis are also major concerns. We are witnessing alarming inequalities that are unprecedented in history. While the richest 1% of the world population is holding almost 50% of the wealth of the planet, the majority of the rest is struggling with poverty, wars, autocratic regimes, racism, and famine. All these make the most excluded communities of the world more susceptible and vulnerable to the impacts of this crisis.

With all its different aspects from injustices to environmental disasters, this crisis is a result of a union of hegemonic forces between state and capital which are both products and byproducts of current urbanization and its consumerist life, centralized services and hegemonic control mechanisms over massive populations that largely reside in easily steerable dense areas. These characteristics eradicate human scale relations, and people's will and control over their lives, their self-sufficiency and independence and builds consumer, dependent and vulnerable societies.

This conference aims to examine the different roles architecture and urbanism, as agencies of the current urbanization, have played in the emergence of the current planetary crisis and more importantly to explore the necessary shifts in the education and practice of architecture and urbanism which can lead to possible solutions to this crisis and promise a better world for all of its inhabitants.

## KEYNOTE SPEECHES

## **Towards Lightness and Freedom: Reimagining Architecture and Education**

*Professor David Gloster, [David.Gloster@riba.org](mailto:David.Gloster@riba.org)  
RIBA Director of Education*

This paper will suggest that both the capability of architects and capacity of architecture to catalyse social and environmental change are routinely unchallenged through adherence to outdated modes of practice. The cultural contributions architecture may make to places and cities have been subordinated to a post-modern view of the profession as a service industry for capital. Many architects are uneasy about describing architecture as having a cultural dimension, and shrink from discourse describing the subject in academic terms. Yet those cultural, social, environmental, psychological, and spatial benefits were clear as recently as the late Victorian era, and early Modernism was propelled by manifestoes insisting that architecture was a constructed form of philanthropy.

Crisis - especially on the global scale we currently experience - is an excellent pretext for political obfuscation. This can undermine citizens' rights to the city, and access to education and healthcare. In reacting to the demands of educating intelligent architecture graduates who will penetrate the ideological fog and offer new business models for practice outside the mainstream architect-developer model, schools may consider reacting to 3 principal issues. These are climate, complexity, and contagion.

All three are ethical issues. As has been hinted at in reactions to the RIBA's expert group on fire safety convened to consider the fundamental issues compromising building safety arising from the Grenfell tragedy, the profession is often insecure about the design decisions it makes - and will compromise these when considerations of time and money prevail. Further, a normalisation of crisis as the dominant mode of existence will inevitably challenge architects' habitual optimism, and may forever hold back the remodelling of the profession's relationship with the communities they should serve. The paper will propose 5 heads addressing the intellectual dilemmas in architectural education, and a further 5 which develop the practical skills essential for graduates to develop the confidence to successfully subvert and reimagine our very old-fashioned profession.

From great crisis, great alternatives may spring. The role of architectural education is to present such opportunities to our students and graduates, and

give them the knowledge to work usefully, embedded in collective actions benefiting the majority, rather than the few.

## **Unveiling Istanbul: Taksim Urban Design Competition for Prost's Espaces Libres**

*Professor Ipek Akpinar (Ph.D.), [akpinari@gmail.com](mailto:akpinari@gmail.com)  
Izmir Institute of Technology*

Since the mid-2019 Istanbul Metropolitan Municipality has paved way for a series of architectural and urban design competitions – focusing on the rebuilding the public urban spaces in the city. And the one at Taksim, the symbolic national centre, “place for everyone and everything”, has become the most debated one. Taksim, possessing a representative aspect, has been a milieu of signification where administrations have displayed power via the space. The spatial story at Taksim, transformation, demolition and rebuilding processes and the experiences not only shape but also determine its true meaning – as pronounced by Haydar Karabey, the concellor of the international jury. The Taksim Square International Urban Design Competition, organised in accordance with the relevant regulations of the Public Procurement Law, has proposed a new approach in the practice of design and competitions in Turkey with its process structure. It has welcomed a hybrid model both during the preparation, assessment stages as well as the evaluation phases of the competition. What makes the Taksim competition different is the emergence of a new approach is the bringing society together, exploring the system of relationships through open methods of negotiation and consensus. Regarding the structuring of an election system involving multiple partners during the assessment process and a participatory method.

To what extent can architectural and urban design competitions trigger critical discussions not only in the achitectural community but also the entire society? To what extent can we unveil an urban space for the public's self-expression in the built environment? To what extent can various social actors, experts, administration come together to set up a common future in a period of global and national crisis? To what extent can a participatory design process be constructed by competitions?

In the light of these questions, the study, focusing on urban design competition at Taksim, displays the crucial role of the making of public urban space in contemporary Turkey, and Taksim is not an exception. This study envisages Taksim as a cultural landscape that continuously responded to the transformations of culture, as well as contributing to the production of it. In other words, at Taksim, architecture and the built environment are embedded

in cultural and social tissues, and are continuously produced and reproduced by multitudes of actors - discursively, as well as physically. In this framework, the study grasps Taksim as a “space of struggle” and develops with a necessity to answer the above-mentioned questions through socio-historical research. Theoretical and socio-historical explorations of the research process unveils the layers of Prost’s *espaces libres*, proposed in the first master of Istanbul in 1937. A critical re-reading of the urban history displays a theoretical framework centering upon keywords such as identity, memory, history, power, architecture, nationalism, globalization, cosmopolitanism. Dwelling on a number of sub-intersecting issues, the study sheds light on the role of competitions bringing together architects and urban designers, administration and various social actors and experts for the re-making the city of Istanbul and in general.

## **Reproducing Architecture and Urbanism in the Midst of a Pandemic Condition**

*Professor Ashraf Salama (PhD), [asalama@gmail.com](mailto:asalama@gmail.com)*

*Chair in Architecture, University of Strathclyde, Glasgow, United Kingdom.*

This talk expands the discourse about the potential contribution of architecture and urban design and planning in generating knowledge that responds to pressing questions about the current and post pandemic condition. While I have instigated initial ideas and responses since April 2020, it is increasingly evident that the global pandemic is altering the way we think about and use the spatial environment at various scales. This warrants a continuous discussion on what the implications of disease spread are for architectural and urban research, education and practice. The implications of the pandemic for architects and urban planners appear to be wide and far reaching and are already reshaping architectural research and education and the overall discourse. Looking ahead to the post-pandemic architecture and urbanism, architecture and urbanism as academic disciplines and professions that influence, in many different ways, individuals, communities, and societies, can support efforts through: developing new insights into the impact of a pandemic on cities and urban environments now and in the future; developing new understandings relevant to the characteristics of urban spaces which ensue from these insights; conducting research to comprehend the socio-spatial implications of COVID-19 measures and guidelines introduced by governments and authorities to fight the spread of the disease; identifying new conceptions related to emerging lifestyles which stem from the new spatial environments that integrate working and living patterns; and ultimately developing design responses towards creating healthy environments that successfully accommodate the infected populations while addressing the associated social and psychological ramifications. While the talk embeds several lines of inquiry framed to address the pandemic condition now and in the future, it offers an outlook on the reproduction of architecture and urbanism in the midst of this condition.

## **Transition Design: An Approach for Addressing Complex "Wicked" Problems and Catalyzing Transitions toward More Sustainable Long-Term Futures**

*Professor Terry Irwin, [tirwin@andrew.cmu.edu](mailto:tirwin@andrew.cmu.edu)*

*Director of Transition Design Institute, Carnegie Mellon University*

In this talk, Terry Irwin introduces Transition Design, a transdisciplinary approach for addressing the complex, wicked problems facing 21st century societies. Wicked problems are systems problems and include things like climate change, terrorism, forced migration, poverty, racism, police brutality AND pandemics like COVID-19. These problems are interconnected, interdependent, exist at multiple levels of scale, and ALWAYS manifest in place and culture-specific ways. Transition Design also argues that entire organizations, communities and societies need to transition toward more equitable, sustainable and desirable long-term futures and that wicked problems are barriers to these transitions.

The emerging Transition Design approach frames wicked problems in radically large systems contexts that include the past (how the problem evolved), the present (how the problem is manifesting at different levels of scale) and the future (in which the problem has been resolved). To demonstrate the approach, Terry will discuss a recent hypothetical research project to map the spread of and response to COVID-19 in the U.S. through the lens of Transition Design. The project includes a “systems” map of COVID-19 in 5 key areas (political/governance issues; business/economic issues; infrastructure/technology/science issues; social issues; environmental issues) and a second map showing the historic evolution of the problem. These two maps, when combined with a third phase of long-term visioning, create a radically large problem context that reveals new insights and opportunities for developing “ecologies of systems interventions” that solve for multiple issues and problems simultaneously.



## **SESSION 1**

# **1. The Urban Commons as a Possibility for the Socio-Spatial Justice in the Cities of the Global South: Rethinking the *Favelas* in the Metropolis of Rio de Janeiro**

*Bernardo Soares, [bsoares.urb@gmail.com](mailto:bsoares.urb@gmail.com)*

*Ph.D. Candidate, PROURB - Graduate Program of Urbanism, Federal University of Rio de Janeiro, Brazil*

This paper is part of an investigation on counter-hegemonic forms of production of urbanization, identifying the dialectical relations of power in the socio-spatial weft in order to overcome the polarization of supremacy between the forces of the State and Capital. It recognizes, from the notion of the Common, the insurgency of social forces composed by an emancipation movement of popular, independent and collective character in the construction of cities.

Its object of study is the “Urban Commons” and their relationship with the contradictions of neoliberal urbanization transformed into conflicts and contrapositions to this hegemonic model of urbanization, problematizing the social impacts that, inherently, constitute a planetary urban crisis. On the other hand, it recognizes that from its contradictions and conflicts also dialectically arise new forms of social participation between the ethical functions of Architecture and Urbanism. With this, the urban commons emerge as a new theoretical-practical paradigm based on democratization, collectivization and associativism, as well as new autogestioned and auto constructive experiences of housing and the city for the socio-spatial justice in the Global South.

As an empirical object, we take the model of the Favela Community Land Trust (F-CLT) to recognize elements of the Common within the scope of the urban informality that characterizes the situation of the favelas in the metropolis of Rio de Janeiro, Brazil. Thus, it seeks to reflect on the contribution of this model to urban struggles against actions of dispossession, gentrification and removal and by guaranteeing land ownership and the right to housing and the city, triggering new methods of interlocution and design in the participatory project of Architecture and Urbanism in the urbanization of favelas.

First, we understand the Common from a conception of dialectical materialism, revealing itself from the contradictions of capitalist urbanization, tied to the primitive accumulation and the processes of expropriation of communal lands for the institution and accumulation of private property and the reproduction

of capital, in which great human masses are suddenly and violently stripped of their means of subsistence. On the other hand, we can also observe continuous movements of appropriation-privatization-expropriation, especially in the Global South, presenting a disciplinary regime on land and housing as reserves of value and restricting public policies for guarantee and housing production, in a kind of global and contemporary accumulation.

In contrast, this new development sets a series of dispossessions and creative destruction, destroying social solidarities. And this is how neoliberal urbanization reveals itself as a process composed, dialectically, of contradictions, conflicts and contrapositions, constituting the crisis of planetary urbanization. From the interstices of urbanization actions of State and Capital, resistances to the production of space, land, housing and the city emerges, characterized by elements of autonomy, alterity, collectivization and commoning.

But the Common is found not only in these forms of [temporary] appropriation of space by social claims by liberalization of power and democratization. Its elements are also identified when land and housing are produced by value-in-use, claiming the right to the city by means of new autonomous, autogestion and autoconstruction experiences of housing and the city. And such experiences can be identified in a particular way in the cities of the Global South, in the midst of underdevelopment and on the periphery of capitalism, in which urban informality, specifically the favela whose narratives, representations and theorizations appear as an urban metonymy.

A perspective on Urban Commons in the context of cities in the Global South, therefore, leads us to an approach on territories of urban informality and favelas. Its political principle points to a form of reappropriation and collective production of land and housing, as opposed to contradictions and conflicts of the crisis of planetary urbanization and under an emancipatory, autonomist and autogestion character. These elements of collectivization can mean an alternative form of social property, in which “community land taken out of the speculative real estate market and owned by nonprofit, public or private entities. When determining separation between land ownership and housing rights and between value-in-use and exchange value, this instrument paves the way for a process of decommodification of land and housing.

Based on these experiences, the Favela Community Land Trust seeks to exercise the social function of the city and property, conceiving a form of co-

ownership, in three favelas in the city of Rio de Janeiro, Brazil. It values the idea of a term between the collectivity in the management of the territory that everyone has in common; ratifies the separation between collective land ownership and buildings; establishes democratic management over the territory; self-sets both independently of the State and resistant to market actions of dispossession and accumulation of land value, such as real estate speculation, gentrification, urban renewal and removals; and establishes collective and non-profit management of land and housing, incorporating principles of autonomy, autogestion and social participation.

Finally, we consider urban commons as a form of resistance to the planetary urban crisis, overcoming forms of appropriation of space through new modes of social production of land and housing based on the principles of autonomy, autogestion and participation, especially in urban informality. Some of its elements can be found in the Favela Community Land Trust, in order to superimpose the value-in-use over the exchange value, constituting itself as a way of struggling against dispossession, gentrification and removal in favelas in Rio de Janeiro. Aiming at guaranteeing collective ownership of land and housing, it may constitute a claim for socio-spatial justice in cities in the Global South, marked by urban informality, which application shall demand new theoretical and practical alternatives for Architecture and Urbanism.

## References

Angotti, Tom (2008). *New York for Sale: community planning confronts global real state*. Cambridge, London: The MIT Press.

Harvey, David (2015). *A Crise da Urbanização Planetária*. Retrieved from: <<https://blogdaboitempo.com.br/2015/01/10/david-harvey-a-crise-da-urbanizacao-planetaria/>>. Acesso em: 28 dez. 2020.

Marx, Karl (2013). *O Capital: crítica da economia política: Livro I: o processo de produção do capital*. São Paulo: Boitempo.

Maricato, Erminia (1996). *Metrópole na Periferia do Capitalismo: ilegalidade, desigualdade e violência*. São Paulo: Editora HUCITEC.

Rolnik, Raquel (2015). *Guerra dos lugares: a colonização da terra e da moradia na era das finanças*. São Paulo: Boitempo.

Roy, Ananya (2011). Slumdog Cities: Rethinking Subaltern Urbanism. *International Journal of Urban and Regional Research*, Vol. 35, Issue 2, 223-238.

Sassen, Saskia (2014). *EXPULSIONS: Brutality and Complexity in the Global Economy*. Cambridge, London: The Belknap Press of Harvard University Press.

## **2. Creating Geographies for Capital Accumulation and the Reproduction of Crises**

*Paria Valizadeh, [paria.valizadeh@neu.edu.tr](mailto:paria.valizadeh@neu.edu.tr)*

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There is a continuous interaction between spatial forms and social processes, then, spatial shapes social as much as social shapes spatial. Spatial forms and social processes have interpenetration so that spatial forms contain social processes and social processes are spatial (Harvey, 2009[1973]). The broader viewpoint of the existing socio-spatial dialectic per se provides a critical approach toward the built environment and its crises. The crises of different sorts from injustice, urban poverty, socio-spatial polarization, class-determined fragmentation, marginalization of the lower social strata, to the exploitation of nature all can be taken into account as the products of the processes of urban space production. Hence, the understanding of the processes and the means involved in space production along with the social relations processes is of significant importance (Lefebvre, 1991). It is not possible to expect a more inclusionary, fair and free urban life experiences for all city dwellers regardless of their social class unless by moving beyond the visible current planetary crises as the outcomes to the processes produce them.

Contemporary process of urbanization, in fact, is wedded to what Merrifield (2002) best called it as the ‘general law of capitalist accumulation’. The production of space under capitalism produces different experience of urbanism for different social classes through constructing structures of advantages and exploitation that benefit the dominant class, together with structures of disadvantages and deprivations that alienate the rest of the society. Within this system, urban space and quality of urban experiences both become like a commodity for who could pay for it. Under political economy of capitalism, fixing capital spatially in order to create geographies for capital accumulation is a never-ending tendency. Thus, capital is in a perpetual movement and major parts of this movement occur at the spatial level. Since capital mobility pattern is extensively rested upon exploitation, environmental problems across the urban space—where capital is in its most mobile form—can be witnessed. In the absence of any intervening action, space production under hegemonic command of capital and the state will be solidified and will reproduce crisis that leaves its profound impacts on the most vulnerable and poorest of the poor strata.

As a part of planning an intervention to change the predominant pattern of space production that brings about crises, is to highlight the social responsibility that the architect has to take on toward the society. Of course, this could be accomplished unless by making some changes in the architectural education to have socio-political responsive architects as future graduates. To this end, the attempts should be directed toward integrating architectural education in particular design studios with insights from socio-political mechanisms that are engaged in production, reproduction and manipulation of urban space. The design project, indeed, should be regarded as a research project that requires a critical examination of the present socio-spatial dialectic. Then, building on the obtained critical examination, design project should be programmed concerning existing concrete problems of the society. Architecture does not happen in a vacuum, but reducing it to some naïve formal approaches devoid of concrete realities of its existing context can turn it into abstraction. The architectural practices could be liberating if embracing socio-political engagement; moving from the final outcome to the space production process; and addressing the collective social well-being.

### **Concluding Thoughts**

Ultimately, the architect, architecture and urbanism are also parts of the current production and reproduction of urban space. Hence, the radical openness of urban future, foremost, entails architecture and urbanism to not be employed as instruments for capital accumulation. As long as the mode of space production is driven by the hegemonic command of capital and the state, monopolizing urban space for a small portion of society, wealthy elite, and their needs while marginalizing the poor can be a prevailing practice. The production of socialist space necessitates the move from the urban space as an exchange-value to the urban space as a use-value (Merrifield, 2014). That is to say, not the logic of capital but socially driven mode of production that gives priority to the social choices is the most needed for the contemporary world. Reminding the architect to be aware of his/her position and role not as a passive agent contributes to the current dominant mode of space production and subsequently the urban crises come along with it; but as a socio-politically conscious, responsive and active subject that engages in the very process can be the basis for inventing future in a different way.

### **References**

Harvey, D. (2009 [1973]). *Social Justice and the City*. Athens/London: University of Georgia Press.

Lefebvre, H. (1991). *The production of space*. New York: The Blackwell Publishing.

Merrifield, A. (2002). *Dialectical Urbanism: social struggles in the capitalist city*. New York: Monthly Review Press.

Merrifield, A. (2014). *The New Urban Question*. London: Pluto Press.



### **3. Post-Democracy and Governance in Refugee Camps: Unveiling the Socio-Spatial Conflicts of Refugee Crisis in Athens and Thessaloniki**

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#### **Introduction**

In the last five years, the majority of refugees that found themselves in Greece after the closure of the Balkan route and the prohibition of their passage to Central and North European countries have been stranded in State-run camps located in the perimeter of Athens and Thessaloniki. These twenty-six camps compose a massive State program for the accommodation of almost 40.000 refugees. There is a number of controversial issues linked to this program that concern the spatial and social conditions (Tsavdaroglou and Lalenis, 2020; Tsavdaroglou, 2019; Yapicioğlu, et al. 2020) and that impact on the quality of life in these camps. In this paper, we focus our analysis on the spatial governance and argue that the refugee camps constitute a place where a postdemocratic model is implemented under top-down policies, lack of public participation, and violation of urban planning legislation and exclusion of refugees from decision-making processes.

The paper is based on an extensive three years fieldwork, spatial analysis and ethnographic research in refugee camps in Athens and Thessaloniki. Following the literature of post-democracy, critical approaches on refugee camps and urban planning theories, it discusses the creation of refugee camps as places of law exception that appear to follow a post-democratic model of governance.

#### **Post-democracy and critical approaches on governance in refugee camps**

According to several scholars (Mouffe, 2005; Rancière, 1998; Stavrakakis, 2011), during the last two decades in Western Europe and North America “under the impact of neoliberal hegemony and the gradual dissolution of ideological differences between mainstream parties” (Stavrakakis, et al. p. 56), the democratic system has been marked by a remarkable shift to a post-

democratic model of governance. Crouch (2013) argues that a “post-democratic society is one that continues to have and to use all the institutions of democracy, but in which they increasingly become a formal shell.” While Swyngedouw (2009) considers the concept of postdemocracy in relation to a postpolitical condition highlighting that a “postdemocratic arrangement ... has replaced debate, disagreement and dissensus with a series of technologies of governing that fuse around consensus, agreement, accountancy metrics and technocratic ... management” (Swyngedouw, 2009, p. 601). A summary of the main arguments around the postdemocratic shift of governance by Esposito (2020, p. 317) stresses that, “although the formal institutions of democracy remain, its living substance is being exhausted in favour of a different regime that can no longer properly be called ‘democratic’”. The reasons of this shift should be sought in the “threefold crisis of representation, legitimacy, and sovereignty” (Ibid., p. 317) that brought “a shift of power to supranational organizations of the unelected finance-economic, and thus democratically illegitimate, type” (Ibid., p. 318).

The approach on postdemocracy seems adequate to explain the regime of refugee camps which has been critically examined by several scholars (Minca, 2015; Ramadan, 2013; Tsavdaroglou and Lalenis, 2020) who underline that camps consist places of exemption, “regimes of marginality” (Wacquant, 2007) and spaces of “discipline and governmentality” (Hyndman, 2000). Turner (2016, p. 141) in his analysis, emphasizes that the camps “are legally under the jurisdiction of the host society but also exempted from it”. Many of the critical approaches follow Agamben’s analysis on “the state of exception” which “tend[ed] increasingly to appear as the dominant paradigm of government in contemporary politics” (Agamben 2005, p. 2). For example, as Ramadan (2013, pp. 67-68) points out the people in a camp “are excluded from the rights and protections of the law, stripped of their political existence and reduced to ‘bare life’”. In this vein, the paper claims that the condition of postdemocracy finds its proper place in the regime of refugee camps.

### **Post-democratic governance in refugee camps in Athens and Thessaloniki**

The most appropriate definition of postdemocracy for the purposes of our study is offered by Rancière (1998) who argues that:

*“Postdemocracy is the government practice and conceptual legitimization of a democracy after the demos, a democracy that has eliminated the appearance, miscount, and dispute of the people, and is*

*thereby reducible to the sole interplay of state mechanisms and combinations of social energies and interests.” (Rancière, 1998, pp. 101-102)*

The refugee camps, places where life, social relations, mobility and dissensus are controlled and managed by a postdemocratic apparatus, perfectly convey the above description. State mechanisms of police, army and bureaucratic services, supranational institutions like the European Union and the UNHCR and international humanitarian organizations, are responsible for the management of the newcomers. Yet, democratic processes like voting, freedom of speech, freedom of assembly, participation in decision-making are not included or prohibited. Thus, we argue that the refugee camps constitute an emblematic place of a postdemocratic model of governance. Although the camps and their residents fall under the jurisdiction of a country that follows democratic processes, they are places of exception, exclusion and deviation from established legal, political and democratic standards. Thus, we would like to emphasize four main points that communicate the postdemocratic model of governance in the refugee camps.

Firstly, the Greek State program of refugee camps did not follow standard procedures in the choice and assessment of the camps' locations, failing to take into consideration and include in the decision processes the local communities (Tsavdaroglou and Lalenis, 2020). Processes concerning the location of most of the camps in Athens and Thessaloniki followed a top-down model without consulting the host communities, nor the local municipality authorities. This was followed by several solidarity actions with refugees but also by frequent xenophobic responses.

Secondly, the camps violate official urban planning legislation as they are built in non-residential areas. According to the local municipalities' land uses maps, the areas of the camps are designed for mainly industrial uses in which residential uses are prohibited (Regulatory Urban Plan of Athens and Thessaloniki Metropolitan Areas, 2014). At the same time, the camp planning standards of the UNHCR (2007) indicate a minimum area of 45m<sup>2</sup> per resident. However, most of the refugee camps in Athens and Thessaloniki are overpopulated with a less than 25m<sup>2</sup> area available per resident (Tsavdaroglou and Lalenis, 2020). Furthermore, the camps are located in abandoned old factories and military campsites, far away from the city centers and cut off from social services. According to numerous reports (Greek Council for Refugees, 2019; International Rescue Committee, 2016; Liapi, et al. 2019) and our

personal observation, refugees face precarious living conditions in the camps defined by extreme lack of amenities, unhygienic conditions, physiological stress and gender-based violence.

Thirdly, refugees are excluded from any form of involvement and participation in the management and governance of the camps. Although there is a rich variety of community development programmes (Bakewell, 2003; NRC, 2015; UNHCR, 2006) and community participatory methods, toolkits and directions (Dima Albadra, et al. 2020; Dabaieh & Alwall, 2018; Sabie, et al. 2017) available for the design, planning and management of refugee camps and accommodation centers, in the case of refugee camps in Athens and Thessaloniki these have been remarkably overlooked.

Finally, in present times of covid-19 pandemic, the quarantine measures are lifted for the citizens in Greece but not for the population residing in the refugee camps, who are still under movement restrictions. The newcomer refugees remain isolated inside the State-run camps while Greece opened its borders for tourists. This specific situation that has been severely criticized by numerous humanitarian organizations (Action Aid Hellas, et al. 2020; International Rescue Committee, 2020), demonstrates that the postdemocratic management of refugees is enforced in times of health crisis.

### **Towards égaliberté. Concluding remarks on demos vs. ghenos**

“[Postdemocracy] is as if from that point onward the *kratos* of democracy no longer referred to the *demos* but to a *bios*, or even to a *ghenos*.” (Esposito, 2019, p. 319)

“In a democracy the *demos* [the people] is *kyrios* [the governor].” (Aristotle, 1278b9-14)

The refugee camps constitute emblematic spaces where the governance of “*kratos* of *ghenos*” replaced the “*demos*”. As we saw, the legitimacy of camps is based on the separation between the ethnic stranger and the ethnic citizen. Indeed, people with a different *ghenos*-nationality as indicated in their passports are stigmatized and excluded in the political, social and spatial margins. This discrimination reflects the disassembling of “*demos*” as the unity of every people living in the territory and the enforcement of undesired groups to the invisibility of the camps’ regime.

We suggest thus that against the isolation of refugees in the State-run camps, proposals for synergies between the host communities and refugees should be addressed. Also, proposals and recommendations for co-design strategies for refugees' accommodation could actively involve residents of the camps. As noted, a participatory process could "exceed the enhancement of a product or an environment, as it benefits participants by empowering them through engagement and making their voices heard" (Dima Albadra, et al. 2020, p. 3).

Consequently, a presupposition for the re-invention of "demos" entails the recognition of refugees as equal people who can participate in the planning and governance of their shelters. But at this point we must emphasize that not only equality, but also liberty is the sine qua non of co-governance. Meanwhile, one of the main slogans used by refugees when they demonstrate in the camps says, "hurrya, asadi, freedom now" (freedom in Arabic, Farsi and English). Balibar's (2010) term "égalité", as the unity of equality and liberty, "the former defined as the absence of discrimination and the latter as absence of repression" (Swyngedouw, 2014, p. 129) is appropriate here. We strongly believe that governance based on "égalité" could open new horizons for less discriminatory and repressive societies.

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## **References**

Action Aid Hellas, Amnesty International, ARSIS, Defence for Children, Greek Forum of Refugees, Help Refugees, HIAS, HumanRights360, Human Rights Watch, International Rescue Committee, Jesuit Refugee Service, Legal Centre Lesbos, Médecins du Monde, Network for Children's Rights, Praksis, Refugee Legal Support, Refugee Rights Europe, Refugee Support Aegean, Solidarity Now, Stichting Vluchteling, Safe Passage International, 2020. *Greece: Move asylum seekers, migrants to safety. Immediate hotspot decongestion needed to address COVID-19.* Retrieved from <https://www.hrw.org/news/2020/03/24/greece-move-asylum-seekers-migrants-safety>.

Agamben, G. (2005). *State of exception*. Chicago: University of Chicago Press.

Bakewell, O. (2003). Community services in refugee aid programmes: a critical analysis. Working Paper No. 82, *New issues in Refugee Research*, U.N.H.C.R.

Balibar, E. (2010). *La proposition de l'égaliberte*. Paris: Presses Universitaires de France.

Dabaieh, M., & Alwall, J. (2018). Building now and building back. Refugees at the centre of an occupant driven design and construction process. *Sustainable Cities and Society*, 37, 619–627.

Dima Albadra, Z., Elamin K., Polychronaki, E., Coley, D. A., Holley J. & Copping, A. (2020). Participatory design in refugee camps: comparison of different methods and visualization tools. *Building Research & Information*, DOI: 10.1080/09613218.2020.1740578

Crouch, C. (2000). *Coping with Post-democracy*. London: Fabian Society Pamphlet.

Crouch, C. (2013). Five minutes with Colin Crouch: "A post-democratic society is one that continues to have and to use all the institutions of democracy, but in which they increasingly become a formal shell". *London School of Economics*, February 5.

Esposito, R. (2019). Postdemocracy and biopolitics. *European Journal of Social Theory*, 22(3), 317–324.

Greek Council for Refugees. (2019). *Country report Greece*. Asylum Information Database.

Hyndman, J. (2000). *Managing displacement: refugees and the politics of humanitarianism*. Minneapolis: University of Minnesota Press.

International Rescue Committee. (2016). *IRC deeply concerned over poor humanitarian standards at refugee transit sites in Greece*. Retrieved from <http://www.rescue.org/blog/refugee-crisis-latest-updates-storify>

International Rescue Committee, (2020). *5 reasons why it's near-impossible for refugees to follow guidance on coronavirus*. Retrieved from <https://www.rescue-uk.org/article/5-reasons-why-its-near-impossible-refugees-follow-guidance-coronavirus>.

Liapi, M, Giannopoulou, C., Tyrovolas, T., Kountouri-Tsiami, E. & Saratsi, S. (2019). *Accessibility and barriers to gender-based violence services for refugee and migrant girls, boys, women and men in Greece*. Athens: Center for Research on Women's Issues Diotima.

Minca, C. (2015). Geographies of the camp. *Political Geography*, 49, 74–83.

Mouffe, C. (2005). *On the Political. Thinking in action*. London: Routledge.

NRC - Norwegian Refugee Council, (2015). Community participation. In *Camp management toolkit*. Retrieved from <http://cmtoolkit.org/chapters/view>.

Rancière, J. (1998). *Disagreement: politics and philosophy*. Minneapolis: University of Minnesota Press.

Ramadan, A. (2013). Spatialising the refugee camp. *Transactions of the Institute of British Geographers*, 38(1), 65–77.

Regulatory Urban Plan of Athens and Thessaloniki Metropolitan Areas. (2014). *Draft Law New Regulatory Urban Plan of Athens and Thessaloniki Metropolitan Areas*. Retrieved from <http://www.opengov.gr/minenv/?p=5935>. [In Greek].

Sabie, S., Easterbrook, S., Munteanu, C., Singh, K., St-Cyr, O., & Hashim, F. (2017). *Participatory shelter design for displaced populace: Reflections from a user study*. HCI across Borders Symposium, Denver, CO, USA.

Stavrakakis, Y. (2011). PostDemocracy. *Atlas of Transformation*.

Stavrakakis, Y., Kioupkiolis, A., Katsambekis, G., Nikisianis, N., Siomos, T. (2016). Contemporary Left-wing Populism in Latin America: Leadership, Horizontalism, and Postdemocracy in Chávez's Venezuela. *Latin America Politics and Society*, 58(3), 51–76.

Swyngedouw, E. (2009). The antinomies of the postpolitical city: In search of a democratic politics of environmental production. *IJURR*, 33(3), 601–620.

Swyngedouw E. (2014). Where is the political? Insurgent mobilisations and the incipient “return of the political”. *Space and Polity*, 18(2), 122–136.

Tsavdaroglou, C. and Lalenis, K. (2020). Housing Commons vs. State Spatial Policies of Refugee Camps in Athens and Thessaloniki. *Urban Planning*, 5(3), 163–176.

Tsavdaroglou, C. (2019). Reimagining a Transnational Right to the City: No Border Actions and Commoning Practices in Thessaloniki. *Social Inclusion*, 7(2), 219–229.

Turner, S. (2016). What is a refugee camp? Explorations of the limits and effects of the camp. *Journal of Refugee Studies*, 29(2), 139–148.

UNHCR, (2006). The UNHCR Tool for Participatory Assessment in Operations. Geneva: Office of the United Nations High Commissioner for Refugees

UNHCR, (2007). *Handbook for emergencies*. Geneva. Retrieved from [https://www.ifrc.org/PageFiles/95884/D.01.03.%20Handbook%20for%20Emergencies\\_UNHCR.pdf](https://www.ifrc.org/PageFiles/95884/D.01.03.%20Handbook%20for%20Emergencies_UNHCR.pdf)

Wacquant, L. (2007). Territorial stigmatization in the age of advanced marginality. *Thesis Eleven*, 91, 66–77.

Yapıcıoğlu, B., Lalenis, K. and Tsavdaroglou, C. (2020). Post-Traumatic Spatial Selforganization of Mobile Populations. *Transactions of the Association of European Schools of Planning*, 4, 27–39.



#### **4. Recovering the City, Citizen Empowerment towards a Tactical Urbanism.**

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#### **Introduction**

As planetary crises become ingrained into the everyday lives of city dwellers, it has become increasingly important to understand how the built environment shapes and responds to social injustices, environmental degradation, and economic inequalities, especially in cities. As these planetary crisis continue to jeopardise the social, economic, environmental, and political fabric of our society, it is evident that the transformation of social structures will enable citizens to obtain greater decision-making power within the urban democracy and, ultimately, shape how the built environment facilitates the emergence of collective action in response to a potential crisis. By understanding the role that citizen participation in building social capital, designers can begin establishing qualitative insight to how urbanism and architecture promotes social cohesion and facilitates community resilience in times of calamity.

This paper aims to examine how the temporary appropriation of urban space can move beyond profit-oriented and socially elusive development schemes towards more socially integrated use of space that activates citizen engagement and regulates a community-based response to social, environmental, economic, and political crises. Understanding how public space can be utilized as a mobiliser for social solidarity and urban sustainability that simultaneously questions the current order of urban governance has become the forefront in developing a design framework that mainstreams community resilience into the built environment.

#### **Cities in crisis**

In recent history, the rise of planetary crisis has presented a unique opportunity to transform the social and political fabric of urban centres. The increased mobility of the market-driven global economy, as well as environmental and conflict driven migration has left the built environment struggling to address

socio-spatial segregation that dictates modern day urban governance. The increased amount of social, economic, and environmental pressure has left city inhabitants invisible to urban democracy, all while capitalist agendas to form modern day urban politics to reject 'wicked problems' leaving many city inhabitants vulnerable to potential disasters and crises. The current urban democracy lacks the social and spatial structure needed to facilitate collective action and citizen participation, where city inhabitants have political power to shape the future of their city (Purcell, 2003).

Architecture and urbanism as a part of an industrial and post-industrial economy create a number of fundamental issues for the urban structure of cities. For starters, the huge technological shift has led to a "nature vs economy" paradigm, where nature and the Fordist economy struggle to co-existence and where one must be sacrificed for the other to thrive. This idea of rivalry is clearly manifested in the actual perception of urban areas as an epicenter for economic growth and prosperity while the countryside do not have an equally bright image in terms of attractiveness. While opportunities for economic development remain endless, urban areas have continued to grow spatially, often at the expense of the natural environment. Second, the materialistic economic model that thrives on the consumptive behaviour leading to an irresponsible competitiveness. In the race for profit, corporations fail to take irreversible environmental damage that is caused by unsustainable business practice into consideration, which has led to the increase of air pollution and pressure of the planet's natural resources (Aberkane, 2018). From a wider perspective, much of the global wealth in the contemporary economy heavily relies on extraction of raw materials, like oil, gas, and other profitable minerals, all of which are often acquired at the expense of vital ecosystems and habitats. As planetary crisis continue, society has begun to question the current economic and political model that shapes how society operates within the built environment. A reexamination of the current system will help start crucial debate on urban governance and help establish a foundation that produces tools and framework that will generate an urban transformation that is for the people, by the people.

Cities that have always been witnesses to urban transformations caused by their inhabitants. According to Henri Lefebvre, the city is the laboratory of humanity; an abstract space created by humanity in which it is continually experimental as it develops and defines itself. Lefebvre emphasizes that the greatest conflict reflected in the practice of urban development is concentrated in a growing industrialization and pre-established political agendas, which continually shape society towards capitalist ideological

interests of economic priority (Lefebvre, 1973). As the planetary crisis becomes more centralized in cities, mainly due to growing urbanization that consequently generates excessive pollution and influences climate change, urban development has fostered social inequalities reflected in public participation.

The current 21st century crisis has presented the opportunity for a rise in bottom-up and grassroots activism that starts with civil participation and the empowerment of the individual to the right of the city. The fields of architecture and urbanism have consistently played an important role as facilitators of humanity's representation of power over spatial domination, which is reflected in global contemporary cities. However, the connotation of power in most societal structures are represented by social hierarchies according to the level of economic power that determines the influence of participation in the decision-making process (OECD, 2001). Participation has become a key consideration in the discourses and practices of urban policy at local to international levels. Nevertheless, the emphasis of searching for techniques and methods to improve an inclusive participation, still results in a lack of corresponding inquiry into the epistemologies which underlie how participation is being conceptualised in urban development processes (Wenger, 1998). It is the underlying epistemology which frames understandings of inclusive participation and sets the context in which decisions about processes, tools and techniques are made (Blanc & Beaumont, 2005). By looking at how participation is 'practiced,' practitioners and researchers run the risk of using tools, practices and techniques inappropriately, with undesirable consequences for the urban environment.

### **Arnstein's Ladder of Citizen Engagement**

To comprehend the level of power distribution regarding participation, decision making and stakeholder inclusiveness, Sherry R. Arnstein's "social ladder" of citizen engagement illustrates the metaphor for describing and evaluating participatory activities (Arnstein, 1969). Arnstein's ladder set out to distinguish different levels of participation in relation to levels of power that has been consistent in the structure of contemporary societies (Collins & Ison, 2006). Each group of steps corresponds to changes in degrees of citizen engagement varying from non-involvement to tokenism to citizen power. As Arnstein, herself, recognised, the ladder is based on a conceptualisation that 'participation is a categorical term for power' (Collins & Ison, 2006).

According to Yang (2005), the ladder metaphor is developed in eight sections organized into three groups. The first group is "non-participatory", made up of the "manipulation" and "therapy" sections. The main characteristic of this group is the typical top-down approach with a rigid structure regarding the decision-making process. Such lack of awareness, analysis and action to include the community in the participatory process, reflects a disadvantage in the development of most urban megastructures (Yang, 2005). It is a clear representation of the power of the state over the population. In addition, the second group under the concept of "Tokenism", is made up of three sections: "inform", "consult" and "appease". The similarities of these sections are based on the inclusion of the population in the decision-making process, legitimizing participatory planning. The main positive result is a first approach to the community; however, there are no follow-ups of the development process, leaving it as a protocol task. The reflection of the aforementioned are the projects where people do not reflect empowerment. Finally, the third group "citizen control", which represents the ideal approach to a participatory implementation made up of different delegations allowing greater citizen control. For Arnstein, the last levels of this methodological ladder reflected the ideal empowerment of the community in the decision-making process (Arnstein, 1969). Allowing citizens' committees to delegate power and ensure responsibility for community development. Thus, "tactical urbanism" aligns with Arnstein's main idea of citizen control, allowing people to shape their immediate surroundings (Arnstein, 1969).

### **Tactical Urbanism**

By understanding the ideal outcome of citizen engagement in participation processes, the phenomenon of tactical urbanism aligns with a sense of citizen empowerment from a bottom-up approach, separating the rigid urban development logistics from an organic response of space ownership. Citizen engagement and participation are fundamental for establishing community resilience that enable the development of capacity to make purposive decisions about desired actions and outcomes during crisis. As a highly contested, dense urban space, cities have become epicentres for individuals and corporations that are interested in profiting from the economic benefits of the built environment at the expense of city inhabitants. With citizens in control, the urban structure no longer only accommodates neoliberal agendas, but is forced to focus on the redistribution of power to citizens.

Tactical urbanism, also known as do-it-yourself urbanism, is a low-cost, temporary appropriation of space that can facilitate a new form of collectivism and an effective mobiliser for systemic change, especially in the urban democracy (Iveson, 2013). Therefore, the built environment becomes a stage for social solidarity and facilitator for urban social movements, ultimately shaping how communities demand citizenship and adapt to emerging socio-ecological, as well as economic, challenges. Mainstreaming a community-based response to planetary crises through tactical urbanism not only challenges neoliberal forms of governance that impedes community resilience, but disrupts the politics of crisis response that continuously operates within the status quo by redistributing power to the citizens. Tactical urbanism is the opportunity to confront the city and its current order by demanding power through unsanctioned activities that question the neoliberal structured urban systems. While many governments continuously fail to address the current crisis, tactical urbanism can fill social, economic, environmental, and political gaps left by the lack of government support through grassroot design interventions. Reshaping the distressed city through a localised lens, such as the development of community gardens, public installations, pocket parks, and street art, can encourage citizens to build self-reliance and reinforce social networks by transforming capitalist logic of never-ending growth and restoring primary needs of the citizens (Latouche, 2009). The temporary appropriation of urban space does not aim to reconfigure democratic urban politics that are needed to shape a new city, but instead aims to build social capital, increase citizen control, contest the current order of the city, and establish small changes that will lead to larger scale transformations (Carlton, et al., 2017, Lara-Hernandez, et al., 2020).

Temporary or tactical urbanism has been directly linked to the facilitation of social capital by reconnecting people to the city after a crisis (Carlton & Vallance, 2017). Crisis, like natural hazards and pandemics, often cause a great migration of the population away from the urban centres, therefore urbanism can be used as a tool for recovery that reengages citizens and reactivates the life of the city. Across the world, tactical urbanism has been slowly mainstreamed into people-oriented responses to crisis with hopes of activating long term change, not only to urban governance but the entire urban structure. Citizens in cities, like Montería, Mexico City, and Milano, have activated community-led urbanism that have successfully shaped crisis recovery and the future development of their physical environments.

## **Conclusion**

The rise of planetary crisis has forced citizens to begin questioning their rights as city dwellers leading to the formulation of a collective identity and civic action to begin appropriating public space to address the needs and realities of the city (Sawhney et al., 2015). Yet, this collective turn must be based on an ecological point of view, letting go of the arrogance of manipulating nature, based on human superiority over other species. The idea of urban planning was strongly formed by a rational paradigm and by the understanding that people could create their own habitat and frame the nature around it. Therefore, the city of the future – and practice of urban planning and architecture – starts with a transition to a collective and ecologic turn that is based on a localized experience which aims to re-engage communities and fulfil individual needs, as a part of an interconnected system. Emerging (Pop-Up) cities, tactical urbanism and permaculture design act as catalysts towards a collective bottom-up design approach, which allows citizens to engage with the decision-making process in a less aggressive way about the built and natural environment. Ultimately, it encourages the establishment of a more resilient and sustainable city for future generations.

## References

Aberkane, I. (2018) *L'âge de la connaissance*, Robert Laffont.

Arnstein, S. R. (1969). A Ladder Of Citizen Participation. *Journal of the American Institute of Planners*, 215-224.

Carlton, S., & Vallance, S. (2017). The Commons of the Tragedy: Temporary Use and Social Capital in Christchurch's Earthquake-Damaged Central City. *Social Forces*, 831-850.

Collins, K., & Ison, R. (2006). Dare we jump off Arnstein's ladder? Social learning as a new policy paradigm. *PATH (Participatory Approaches in Science & Technology) Conference*. Edinburgh: The Open University.

Huberman, L. (2009) *Man's Wordly Goods: The Story of Wealth of Nations*. New York: NYU

Iveson, K. (2013). Cities within the City: Do-It-Yourself Urbanism and the Right to the City. *International Journal of Urban and Regional Research*, 941-956.

Lara-Hernandez, J. A., & Melis, A. (2020). Understanding the temporary appropriation in relationship to social sustainability. *Temporary Appropriation in Cities: Human Spatialisation in Public Spaces and Community Resilience*, 27-58.

Latouche, S. (2009) Farewell to Growth. Cambridge: Polity Press

Lefebvre, H. (1973). *Le droit à la ville*. Paris: Ed. Anthropos.

OECD. (2001). *Citizens as Partners- OECD handbook on information, consultation, and public participation in policymaking*. Paris: OEDC.

Purcell, M. (2003). Excavating Lefebvre: The right to the city and its urban politics of the inhabitants. *GeoJournal*, 99-108.

Sawhney, N., de Klerk, C., & Malhotra, S. (2015). Civic Engagement through DIY Urbanism and Collective Networked Action. *Planning Practice and Research*, 337-354.

Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity*. Cambridge: Cambridge University Press.

Yang, K. (2005). Public administrators' trust in citizens: A missing link in citizen involvement efforts. *Public Administration Review*.

## 5. What do we have to Be Careful about Public Space in the Age of Planetary Crisis?

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### A planetary crisis at different speeds

Since the 70s, environmental, social, economic crisis are increasingly frequent, so that today we can no longer consider them as exceptions (among the others, see Schön, 1971; The Foundational Economy Collective, 2018; Balducci, forthcoming). Indeed, they are rather progressively featuring a constant state, an age of planetary crisis, as this conference suggests. Latour invites even to quit using the term “crisis” as it could suggest reversibility. Indeed, he avers that

“we are not in a crisis. We can no longer say “this, too, will pass.” We’re going to have to get used to it. It’s *definitive*. [...] The imperative confronting us, therefore, is to discover a *course of treatment* – but without the illusion that a cure will come quickly” (Latour, 2017, p.13).

Before discussing some aspects related to ‘treatment’ and ‘care’ dimensions, there is a primary distinction that will be relevant to the development of this paper. Indeed, our current age of planetary crisis is a composite state, consisting of problems expanding at different speeds. Roughly speaking, some of them are ‘fast-evolving’ while others are ‘slow-evolving’ issues.

On the one hand, if we consider one by one each pandemic, each wildfire in California, each risk of shipwrecks of migrants on the Mediterranean coasts, and so forth, these are all examples of ‘fast-evolving’ issues. Comparing them to a disease, these are like a stroke, which when it arrives immediately shows its effects. These events are recognisable in approximately rapid time. Everyone –from public institutions, private bodies, the voluntary sector, practitioners, and citizens– is on the alert and contribute in responding to the event. The responses to ‘fast-evolving’ issues are mostly limited to that single issue, neglecting its interdependency with other ‘fast-evolving’ or ‘slow-evolving’ issues. At most, circumscribed answers only allow containing the situation. Keeping on with the medical metaphor, they enable recovering from a single stroke. But if interdependent relations with other issues –especially with ‘slow-evolving’ ones– are overlooked, then the next stroke will be just



around the corner. Looking for solutions that answer a single ‘fast-evolving’ issue is not enough in the age of planetary crisis.

On the other hand, climate change and progressive erosion of social cohesion are examples of ‘slow-evolving’ issues. These are similar to a long degenerative disease, whose effects at first are mild, thus often neglected. Still, if not treated in time, they worsen and become lethal. As with degenerative diseases, also for ‘slow-evolving’ issues, the risk is not to feel the emergency. Moreover, actions in response to them rarely bring results in the short term; they are a long path which is unlikely to get immediate benefits or rapid consensus.

To take care of our age of planetary crisis, I argue that at least two considerations emerge for architecture and urbanism researchers and – reflective– practitioners concerning the distinction between ‘fast-evolving’ and ‘slow-evolving’ issues. First, actions should be combined to respond not only to ‘fast-evolving’ but also –and above all– to ‘slow-evolving’ issues. Second, we ought to be aware and careful about the actions taken in response to ‘fast-evolving’ issues. Mainly about those put into practice during the initial ‘state of emergency’ and provided only to respond to a specific ‘fast-evolving’ issue. Indeed, these rapid actions can be counterproductive in the long run. I.e. single-use personal protective equipment as face masks are useful against COVID-19 but pollute the environment if not disposed of properly (Kassam, 2020).

### **What do we have to be careful about public space in the age of planetary crisis?**

Let us consider the ‘fast-evolving’ issue that is currently hitting the planet hardest: the COVID-19. Since it assumed the degree of a pandemic –in March 2020 (WHO, 2020)–, all over the world practitioners and researchers of architecture and urbanism set to work to understand how design disciplines could help in overcoming it. In this general call to action, public space has been particularly under the spotlight of design projects and speculations (Honey-Rosés et al., 2020).

A first typology of architectural and urbanism actions is composed of solutions with a broad scope, working both on the ‘fast-evolving’ issue of COVID-19 and on the main ‘slow-evolving’ issues such as climate change or social inequalities. These are actions capable of ‘gaining’ from the crisis (Davoudi, 2012; Taleb, 2012), that is to say, they use the pandemic as an opportunity to accelerate the

implementation of decisive projects already planned –at least partly– but slow to implement. A prominent example of this typology is given by the temporary cycleways that in Paris, as in Milan, Bogota, and many other cities have been rapidly built to support slow mobility as an alternative to collective public transport and private cars. In many cases, these cycleways are going to be progressively transformed from temporary to definitive, to implement urban cycle systems stably. This is the case of the city of Paris, which declared to make permanent the current 50km system of temporary *corona cycleways* to implement the current “Paris Breathe” scheme and support the next “15-minutes city” programme (Whittle, 2020).

A second typology of actions consists of immediate and specific solutions to respond to the pandemic seen as a single ‘fast-evolving’ issue. Many of these concerned the introduction of social distancing devices into public space. Among this sort of intervention, the most clumsy and rough solutions fuelled dystopian imagery, such as transparent dividers between seats, at bus stops, in squares and parks. Some other examples have reached a higher formal quality and effectiveness. However, they are more models of urban furniture than urban design projects, as in the case of the *Gastro Safe Zone* designed by Hua Hua architects and first tested in Brno’s Liberty Square in April 2020. *Gastro Safe Zone* consists of a minimum dining table unit with three fixed seats placed inside a circular perimeter indicating the radius of the safe zone where a facial mask is not required. The minimum unit can replicate according to a grid suggested by the context and measures of the physical distancing. The objective is both to stimulate a safe permanence in public space and to encourage the reopening of gastronomic businesses tried by the pandemic. In other examples of first response to the pandemic considered as a single ‘fast-evolving’ issue, the interventions echo the recent legacy of temporary and tactical urbanism interventions. That is the case of Caret Studio for *#stodistante* project in Piazza Giotto in Vicchio, a small town near Florence. For the square, Caret has used removable paint to draw a grid of squared placeholders 1.8m apart, which lends itself to playful interpretations and suggests the minimum safe distance between people.

The first section of this paper has mentioned how crucial are carefulness and vigilance on responses which are developed for a sudden ‘state of emergency’ due to a disruptive ‘fast-growing’ issue. Thus, our carefulness should recognize when quickly responses –as actions, design projects, but also policies, norms, bans, etc.– risk threatening the caring needed by major ‘slow-growing’ issues. For example, during the COVID pandemic, the various forms of stay-at-home orders put in place by regions and national governments brought out and

magnified existing economic, social, and spatial inequities (see among others Kluth, 2020; Przeworski, 2020). Let us focus on spatial inequities, so to continue the discussion on public space.

With different declinations, stay-at-home orders temporarily introduce “unprecedented restrictions in the use of public spaces worldwide” (Honey-Rosés et al., 2020). Undoubtedly, within the same urban area, region, or nation, the restrictions have been and are the same for the entire population of that geographical area, without distinction. However, not all the population is equally equipped to live in a quarantine situation. Not everyone has the same access to essential public services, public transport, and public spaces such as parks, gardens, squares, cycle paths, and accessible sports facilities close to home – actually, some do not even have a home. Indeed, also in normal condition “vulnerable groups tend to have less access to green spaces, public or private. Furthermore, green spaces in lower-income neighborhoods are often smaller, under-maintained, and less numerous than those in wealthier neighborhoods” (Honey-Rosés et al., 2020). But the pandemic has exacerbated and made these inequalities more evident.

What do we have to do to avoid answers to the ‘fast-growing’ issue of the moment which damage –temporarily or permanently, voluntarily or involuntarily– collective rights such as the equal access to public space and the right to live in a safe, healthy, and sustainable habitat? I argue we need to be vigilant and keep working on the foundational issues of urban public space in our age of planetary crisis.

A few months before the pandemic spread, within my PhD research, I began working on the definition of a ‘new topicality’ of public space. I have started from a review of the existing literature as well as case studies, and I aim to focus on the aspects that in our time –which I consider from the global economic crisis of 2008– constitute the most significant features of public spaces, their design and use.

Some of these can be defined ‘foundational’ aspects, that is to say, basic aspects which respond to fundamental human rights. Among these aspects there is *the right to access public space* –increasingly crucial because of the proliferation of privately owned public spaces–; as well as *the right not to be excluded from public space* –as new forms of exclusions are emerging, as green gentrification (Anguelovski et al., 2018); and also *the right to be free from overabundant control* in public space. Here I want to focus on the latter, dealing

with control in public spaces. I think it is crucial to be careful and vigilant about this topic, so to take care of the 'slow-evolving' progressive erosion of social cohesion, no matter what 'fast-evolving' issue distracts the public attention at that moment.

Control is not a new argument for studies on the production and management of public spaces (Németh, 2012). Control can take place in physical-aesthetic forms –which can be the most diverse, from beautified counter-terrorism measures as massive flower boxes instead of concrete blocks, to the presence of single-place benches so that no one can use them as a bed. However, control can also take place in hybrid physical and digital forms. Let's deepen this facet.

In connection to the disruptive spread of ICTs in the last fifteen years, new forms of control have emerged, based on digital and phygital (physical + digital) means of surveillance. These new forms can be grouped into two main families.

The first family gathers *locative media* –i.e. personal devices as smartphones, watches, and tablets using GPS. If, on the one hand, these technologies have an unprecedented positive influence on our lives, spaces, and networks of relationships (Farman and Frith 2017). On the other hand, location-aware technologies can also be the vehicles to unprecedented modes of surveillance connected to privacy and control –i.e. tracking of user's location and connection with other users (Gordon and de Souza e Silva, 2013). But, even if privacy policies of apps, software, and hardware are often complex to be understood, we explicitly give our consent to be tracked by location-aware technologies (Farman and Frith, 2017). We do this every day by agreeing to the rules of locative apps. In many cases, we do it without realising it, for example, by agreeing to social networks' policies, which are only apparently not locative.

The second is the family of *digital coding of discrete population* (Chadwick, 2013), that is to say, systems as facial recognition, which pervade public spaces. Unlike the locative media, no consent is required for the forms of digital coding of discrete population. Previously introduced in strategic places as airports and major train stations –especially after September 11 2001–, today devices as facial recognition cameras are also used in public spaces, mainly in privately owned public spaces (The Guardian, 2017). Their use is not only for security issues but also for collecting information on users for commercial activities surrounding public space. Chadwick avers that “by bringing together old and new forms of surveillance, novel forms of control, with their own strategic agenda, are brought to life” (2013).

To give an idea of the scale of the phenomenon, in 2019, London had 627,727 surveillance cameras (Bischoff, 2020), becoming the third-largest city in the world in terms of quantity of cameras. Further, for the next future, the Metropolitan Police of London recently announced the use of facial recognition technologies on the –public– streets of London (BBC, 2020).

In addition to direct control, there is a second level of control –on which it is more difficult to be vigilant–, Zardini calls it the control of data and manipulation of behaviour (2020). On this subject, Zuboff (2019) emphasises that the real crux of the matter is not so much the collection of unlimited data –the first level of control– but rather by who use them and how –the second level of control. This is an issue for which national and international laws are still loose, struggling to keep up with the pace of ICTs evolution. The European Community is an example, as, for many months, it has been weighing the possibility of 5-years ban on facial recognition technology, without having yet reached a decision (Stolton, 2020).

As this typology of control especially proliferates in public spaces –whether they are ‘built’ as stations or ‘open’ like streets and urban parks–, control becomes a relevant issue to be careful about for architecture and urbanism. Indeed, it concerns us as researchers and practitioners in the way we inquire and shape public space and how we interact with the stakeholders of a project.

### **Conclusions: New shared ethical responsibilities**

I have explored *the right to be free from overabundant control*, an aspect that I have called ‘foundational’ for the design, implementation, use, and management of public space. Further, when ‘fast-evolving’ issues are more evident and almost monopolise the public discussion, as practitioners and researchers, we need to remain even more aware of foundational spatial needs and rights.

As –reflective– practitioners and researchers, this is an ethical and deontological issue for us. Until very recently, we would have said that this deontological question concerned only practitioners. Now instead there is a growing conviction that practitioners are increasingly curators (Ratti and Clodel, 2015; Ecosistema Urbano, 2018) and facilitators (Boano, 2019) which feed and support (Manzini, 2015) the design process, as also other actors are involved in the design process. Among these different actors, there are researchers, other professional figures, civil servants, activists, engaged

citizens active in the field of architecture and urbanism, etc., who all together must be vigilant on these aspects.

Thus, the ethical and deontological role of the practitioner is no longer only to be personally careful, aware, and vigilant, but also to contribute to nurturing this 'collective carefulness' throughout the entire design process. Becoming a 'curator' of this collective ethical carefulness is and will be an effort that requires an inevitable shift from the current education and practice of architecture and urbanism.

## References

Anguelovski I., Connolly J. J. T., Garcia-Lamarca M., Cole H., Pearsall H. (2018) New scholarly pathways on green gentrification: What does the urban 'green turn' mean and where is it going? *Progress in Human Geography* 43(6): 1064-1086. doi: 10.1177/0309132518803799

Balducci, A. (forthcoming). Planning for Resilience. In A.Balducci, D.Chiffi, & F.Curci (Eds). *Risk and Resilience. Socio-Spatial and Environmental Challenges*. Springer.

BBC (2020, January 30). Met Police to deploy facial recognition cameras. *BBC* <https://www.bbc.com/news/uk-51237665>

Bischoff, P. (2020, July 22). Surveillance camera statistics: which cities have the most CCTV cameras? *Comparitech*. <https://www.comparitech.com/vpn-privacy/the-worlds-most-surveilled-cities/>

Boano, C. (2019). Interview in I.Inti *Pianificazione aperta: Disegnare e attivare processi di rigenerazione territoriale, in Italia* (pp. 285-287). LetteraVentidue.

Chadwick, A. (2013). *The hybrid media system: Politics and power*. Oxford University Press.

Ecosistema Urbano (2018). Urban social design, network, participation and open source city. In M.Del Signore & G.Riether (Eds.) *Urban machines: Public space in a digital era* (pp.201-208). LiST Lab.

Farman, J. & Frith, J. (2017). Location-based media. In A. de Souza e Silva (Ed). *Dialogues on Mobile Communication* (pp. 139-155). Routledge.

The Foundational Economy Collective (2018). *Foundational Economy. The Infrastructure of Everyday Life*. Manchester University Press.

The Guardian (2017, July 24). Revealed: the insidious creep of pseudo-public space in London. *The Guardian*.  
<https://www.theguardian.com/cities/2017/jul/24/revealed-pseudo-public-space-pops-london-investigation-map>

Gordon, E. & de Souza e Silva, A. (2013). *Net locality. Why location matters in a networked world*. Wiley-Blackwell.

Honey-Roses, J., Anguelovski, I., Bohigas, J., Chireh, V., Daher, C., Konijnendijk, C., ... & Nieuwenhuijsen, M. (2020). *The impact of COVID-19 on public space: A review of the emerging questions*. <https://doi.org/10.31219/osf.io/rf7xa>

Kassam, A. (2020, June 8). 'More masks than jellyfish': coronavirus waste ends up in ocean. *The Guardian*.  
<https://www.theguardian.com/environment/2020/jun/08/more-masks-than-jellyfish-coronavirus-waste-ends-up-in-ocean>

Kluth, A. (2020, April 11). This Pandemic Will Lead to Social Revolutions. *Bloomberg*. <https://www.bloomberg.com/opinion/articles/2020-04-11/coronavirus-this-pandemic-will-lead-to-social-revolutions>

Latour, B. (2017). *Facing Gaia. Eight Lectures on the New Climatic Regime*. Polity Press.

Manzini, E. (2015). *Design, when everybody designs: An introduction to design for social innovation*. MIT Press.

Németh J (2012) Controlling the commons: How public is public space? *Urban Affairs Review* 48(6): 811-835. doi: 10.1177/1078087412446445

Przeworski, A. (2020, June 10) *The virus magnifies pre-existing class differences*. <https://graduateinstitute.ch/coronavirus-information-our-community-and-visitors/covid-19-magnifier-social-inequality>

Ratti C., Clodel M. (2015). *Open source architecture*. Thames & Hudson.

Schön, D. (1971). *Beyond the stable state*. Random House.

Stolton, S. (2020, September 3). *Commission will 'not exclude' potential ban on facial recognition technology*. Euractiv.  
<https://www.euractiv.com/section/data-protection/news/commission-will-not-exclude-potential-ban-on-facial-recognition-technology/>

Whittle, N. (2020, July 16). Welcome to the 15-minute city. *Financial Times*.  
<https://www.ft.com/content/c1a53744-90d5-4560-9e3f-17ce06aba69a>

WHO. (2020, March 11). *WHO Director-General's opening remarks at the media briefing on COVID-19*. <https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>

Zardini, M. (2020). Inaspettate, prevedibili o convenzionali? In N.Bassoli (Ed.), *Lockdown architecture: L'architettura e la pandemia. Quaranta lettere per Lotus* (pp. 116-118). Editoriale Lotus

Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. PublicAffairs.



## **6. The Contributions of Architects to Post-Conflict (Re)Construction: Social Processes towards Building Peace, Case Studies from Rwanda, Colombia and Iraq**

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Wars and conflicts inevitably result in the destruction or deterioration of the built-environment and of the communities that inhabit it. A number of socially engaged architects feel that they can contribute to developing effective solutions to crisis or post-crisis situations, while most humanitarian organizations don't consider hiring architects other than for their technical skills.

In an attempt to start filling the research gap between the topic of social architecture in crisis settings and the field of peace building and postwar reconstruction, I will try to identify what specific skills can professional architects bring to the humanitarian field in order to contribute to the success of post-conflict reconstruction efforts, and what positive impacts can architecture and urban planning have on peace building processes.

First, I will review literature relevant to the topics of architecture in relation to the humanitarian field and peace building processes. Then, I will look at three different case studies involving architects in post-conflict reconstruction efforts in Rwanda, Colombia and Iraq. Next, I will put in relation theoretical concepts and empirical evidences and identify the wider contributions that architects can bring to post-conflict reconstruction projects and programs. Finally, I will highlight the need for further transdisciplinary research.

This extended abstract is a short version of my thesis, submitted for obtaining the Master's Degree in International Humanitarian Action and Conflict from Uppsala University (Lepere, 2020).

### **Review of literature**

#### *The relevancy of architects to the humanitarian field*

The social impact of architecture in post-crisis situations has been explored by several authors (Aquilino, 2011; Davis, 2015; Swete Kelly & Caldwell, 2014)

whose perspectives point out to the fact that the built-environment and the reconstruction process have influence on the social cohesion of communities in post-crisis situations, and that this influence is more likely positive when the users are involved in participatory design processes. In many instances, professional architects have proved their intention and motivation to engage in the humanitarian field and brought to light the importance of the shelter, housing and settlement sector (Aquilino, 2011; Architecture for Humanity, 2006; Charlesworth, 2016; RMIT University et al., 2019). This sector is promising in its ability to bridge the humanitarian-development-peace nexus because of its difficult but opportunistic position between immediate physical needs of sheltering affected populations and long-term goals of resilient, inclusive, safe and peaceful societies and human settlements (Balthasar, 2018; Fanning & Fullwood-Thomas, 2019; Scott-Smith, 2017) .

My review of literature suggests that architects are relevant to the humanitarian field and that their skills can contribute to the success of post-conflict reconstruction. Indeed, I have found that architects have an understanding of multiple dimensions surrounding sheltering and housing processes, including social, environmental, economic and cultural aspects. Indeed, they are trained to recognize the social dimensions of the formation of communities and interact with their clients and future users in participatory manners, involving them in design and decision-making. They examine and take into account the environmental aspects of locally available materials or the strategic location of a settlement and its connection to natural and urban surroundings. They are used to respect client's budget and find creative or practical solutions to reduce costs. Finally, architects are sensitive to cultural aspects such as the different perceptions and representations of aesthetic values and the pertinence of promoting vernacular construction techniques and local knowledge in vulnerable contexts.

#### *The impact of architecture and urban planning on peace building processes*

Reviewing literature on conflict and peacebuilding and focusing on structural and cultural peacemaking associated with conflict transformation approaches (Ramsbotham et al., 2016), I recognize that the reconstruction process brings potential for constructive growth and positive change. The influential practitioner-researcher Jean-Paul Lederach (1997) places the improvement of relationships at the center of conflict transformation. His pyramid of action for building peace is composed of three different levels of affected population

represented by different leaders and other actors, with the elite at the top and grassroots at the bottom (Lederach, 1997, p. 39).

Interpreting Lederach's theoretical perspectives, I suggest that architecture processes can contribute to conflict transformation towards a sustainable peace via the improvement of relationship between and within different leadership levels of affected population. Indeed, both humanitarian workers and professional architects who operate in post-conflict settings have a specific position that can serve as the necessary connection between grassroots and the top-level leaderships. The widely recognized importance of inclusive and participatory engagement in reconstruction projects and processes (Barakat, 2003; Sharp & Kristoffersen, 2016; Sucuoglu et al., 2016) implies that such engagement contribute to the improvement of relationships both within members of the grassroots level of society and between middle-range leaders and grassroots leaders, ultimately promoting conflict transformation towards positive peace.

However, the authors of the reviewed literature keep in mind the political nature of any reconstruction processes which can have unintended negative consequences, and thus especially in the case of external interventions in sensitive post-conflict settings.

## **Case Studies**

In this section, I will investigate the roles of architects in post-conflict settings by analyzing three practical examples of construction or reconstruction projects and programs where architects were involved. In order to allow us to isolate the architecture dimension from all other dimensions in post-conflict reconstruction, the chosen case studies deal with different scales, a variety of subjects and portray different contexts of post-conflict settings in three distant locations.

### *Butaro Hospital in Rwanda*

Rwanda has come a long way towards peace, but still wears the scars of the genocide of 1994 (UCDP, 2018c), which resulted in the death and escape of many health workers, and the destruction of health facilities across Rwanda. Built in 2011, the Butaro District Hospital provides Burera region with modern medical care and a broad range of services (Partners in Health, 2020). Behind the design and implementation process of the Butaro District Hospital is the

non-profit organization MASS Design Group. The hospital comprises several buildings placed along the terraced hillside. All the hallways are outdoor, and rooms have big openable windows in order to mitigate the transmission of airborne disease thanks to natural ventilation, bring natural light and offer splendid views over the landscape to both patient and health workers. The use of local materials such as the local volcanic rock used for the building's walls and retaining walls had several objectives: an ecological responsibility to reduce embodied carbon of the project and an economical incentive to ensure that a significant part of the construction costs were invested into the local economy. The intentionally labor-intensive practice of carving and assembling the stones did not only provide jobs to local craftsmen and carpenters but also with it the pride of contributing to a project for the common good (MASS Design Group, 2011).

### *'Social urbanism' strategy in Colombia*

With approximately 4 million inhabitants, Medellín is the second largest city in Colombia. Migrations from rural areas to cities triggered by global market dynamics and intensified by the war between the government and multiple armed groups including the Revolutionary Armed Forces of Colombia (FARC) and multiple other non-state actors (UCDP, 2018a), contributed to the creation and expansion of *comunas*, large slums on the hills surrounding the city and hosting internally displaced populations. Drug businesses and organized crime became common alternatives to unemployment and extreme levels of violence led to a deeper segregation of communities and a wider division of the city of Medellín (McGuirk, 2014). From 2004, a 'social urbanism' strategy to city planning used architecture as a tool to address the underlying causes of urban violence. This strategy became the base for the innovative urban regeneration of Medellín, now acclaimed as a success story. The concept consisted in "opening new doors", showing the communities alternative paths away from urban violence by tackling issues of inequality, security and corruption and by creating hopeful opportunities (Curry Stone Design Prize, 2011).

'Social urbanism' can be defined as "the phenomenon of architecture and public space being used towards social goals, and a type of social intervention defined by a social process" (McGuirk, 2014, p. 244). Concrete examples of projects in Medellín's *comunas* include culture and education buildings such as a cultural Center, 10 new schools, 5 library-parks, several public spaces, as well as transportation infrastructures such as a new escalator and the completion and extension of a Metrocable connecting the city center to hillside slums.

These projects were meant as a tool to tackle inequality and mitigate violence by offering citizens the possibility to reconnect. With a view to adopt a holistic approach, they were carried out by multidisciplinary teams that combined architects, urbanists, social workers, communications people, lawyers and local leaders, in dialogue with the residents of the different districts (McGuirk, 2014).

#### *Humanitarian Returnee Program in Iraq*

In 2017, the Iraqi government put an official end to years of war by declaring victory over IS in Iraq. The conflict, although still active in 2018, decreased significantly (UCDP, 2018b) and populations that had been displaced decided to return home, resulting in an increase of 1,26 million of returnees across the country, 95% of whom settled in their habitual residence (Shelter Cluster Iraq, 2019). In order to assist this population, the International Committee of the Red Cross (ICRC) launched the Pilot phase of the Durable Return Program in early 2019 in three villages near Kirkuk and Baiji.

In a personal interview, the architect, humanitarian worker and researcher Kristjana Adalgeirsdóttir (personal communication, 27 March 2020), who was employed by ICRC as a Water Habitat engineer for the Shelter Program, explains that this mission had the particularity of being a multidisciplinary pilot project encompassing a holistic approach to assistance of returnees. A special attention was put into the cooperation between different departments within the organization and the selection of households' representatives. This pilot project provided an alternative to traditional reconstruction approaches by supporting target communities in the self-reconstruction of their houses. It used a holistic multidisciplinary approach, which consisted in providing technical and economic support to households; training identified skilled labor and supporting entrepreneurship via the provision of cash assistance to the creation of small businesses such as building material shops or furniture workshops. It thus helped revitalize the local market with a view to create a long-term economic benefit for the area. With a specific attention given to vulnerable groups, it aimed to empower affected individuals not only economically but also socially and psychologically by giving people the dignity to indulge in the reconstruction of their own life instead of allowing outsiders to take over what is considered a crucial aspect of their recovery process. With an understanding of the presence of latent internal conflict and mistrust between individuals of communities that have been destroyed through the

war, the reconstruction project also provided paid job opportunities through the joint reconstruction of a community house or a school in each village.

## **Findings**

Analysing those three case studies in the light of the theoretical concepts and diverse understandings from the literature review, I have found that the reconstruction process after a war supports multiple dimensions of peace building.

Indeed, post-conflict reconstruction processes can:

1. activate the local economy
2. mend the social divide and create cohesion
3. integrate time-related psychological aspects to link immediate relief with long-term development
4. contribute to community building which serves as a positive way of initiating, establishing or reinforcing a self-sustaining peace.

The case studies further indicate that architects have relevant skills to contribute to the success of post-conflict reconstruction processes. Indeed, they are able to:

- a. analyze and take into consideration the local context and culture,
- b. involve the local communities in the reconstruction process,
- c. collaborate and operate in multidisciplinary teams,
- d. consider not only technical but also psychosociological aspects of housing processes,
- e. convey aesthetical and symbolic values combined with practical solutions.

The appropriate use of those skills have the potential to:

- i. contribute to the relevancy and sustainability of post-conflict reconstruction projects,
- ii. instill dignity and symbolizes opportunities for positive change,
- iii. bring people together, creates social bonds and supports holistic approaches to peace building.

## Conclusion

Through a theoretical review of literature on the relationship between architects and the humanitarian field and between architecture and peace building, followed by the empirical analysis of three cases studies involving architects in post-conflict (re)construction efforts, I have identified that architects have relevant skills to contribute to the success of post-conflict reconstruction processes, which in turn supports multiple dimensions of peace building processes. Indeed, architects have tools and experience to analyze and take into account the local physical, social, economic and cultural environment. Some are trained to involve the affected population in planning, design and implementation of post-conflict (re)construction in culturally relevant, conflict-sensitive and cost-effective ways, thus becoming facilitators of inclusive construction processes, promoting social cohesion and supporting the local economy. Architects have experience in working within multidisciplinary teams and in adopting holistic approaches, which is crucial to the success of reconstruction efforts. They also have a good understanding of time-related psychosocial mechanisms associated with the built-environment, its destruction and reconstruction processes, and have thus the potential to address the humanitarian-development-peace nexus. The use of those specific skills in post-conflict (re)construction contexts ultimately contributes to the creation and consolidation of sustainable peace within societies.

I observed that more attention shall be given by the humanitarian community to the reconstruction of the built-environment, and more comprehensive research in this area can help theorizing the complexity of post-conflict situations and peace building. Further research could develop methods to bridge the gap between humanitarian shelter and long-term housing. It would be useful to identify strategic ways to include architectural thinking into post-conflict efforts, as well as administrative ways to recognize the various skills of architects, in order to incorporate them within humanitarian organizations and development agencies' resources. In particular, there is a need for transdisciplinary research on the link between the social role of architects in crisis settings and the field of peace building and postwar reconstruction, a complex but passioning topic that I have tried to delineate in this research.

To my readers who wish to gather practical insights on the involvement of built-environment professionals in the humanitarian field and gain a better understanding on the role of architect and urban planner in post-conflict

reconstruction, the complete version of my master thesis is available in free access (Lepere, 2020).

## References

Adalgeirsdóttir, K. (2020, March 27). *Interview with Kristjana Adalgeirsdóttir/ Interviewed by Sabine Lepere* (S. Lepere, Interviewer) [Skype].

Aquilino, M. (2011). *Beyond shelter: Architecture for Crisis*. Metropolis books.

Architecture for Humanity. (2006). *Design Like You Give a Damn: Architectural Responses to Humanitarian Crises*. Metropolis Books.

Balthasar, D. (2018). *Critical reflection on the Innovation Forum "Building Peace? The Fragile Side of Architecture"*.

Barakat, S. (2003, December). Housing reconstruction after conflict and disaster. *Humanitarian Practice Network at ODI*, 43.

Charlesworth, E. (2016). *Architects without Frontiers: War, Reconstruction and Design Responsibility*. Architectural Press.

Curry Stone Design Prize. (2011). *2009 Curry Stone Design Grand Prize Winner Transformative Public Works*.  
<https://www.youtube.com/watch?v=RgiUMimrGgU>

Davis, I. (Ed.). (2015). *Shelter After Disaster*. (2nd ed.). OCHA and IFRC.

Fanning, E., & Fullwood-Thomas, J. (2019). The Humanitarian-Development-Peace Nexus: What does it mean for multi-mandated organizations? *Oxfam Discussion Papers*.

Lederach, J. P. (1997). *Building Peace. Sustainable Reconciliation in Divided Societies*. United States Institute of Peace Press.

Lepere, S. (2020). *The Contributions of Architects to Post-Conflict (Re)Construction: Social Processes Towards Building Peace* [Uppsala University, Disciplinary Domain of Humanities and Social Sciences, International



Humanitarian Action]. <http://www.diva-portal.org/smash/get/diva2:1448460/FULLTEXT01.pdf>

MASS Design Group. (2011). The Butaro District Hospital in Burera, Rwanda. *MASS Design Group Projects*. <https://massdesigngroup.org/work/design/butaro-district-hospital>

McGuirk, J. (2014). Chapter 7- Medellín: Social Urbanism. In *Radical Cities: Across Latin America in Search of a New Architecture* (pp. 231–257).

Partners In Health. (2020). *Rwanda A Model for Building Health Systems*. Partners In Health. <https://www.pih.org/country/rwanda>

Ramsbotham, O., Woodhouse, T., & Miall, H. (2016). Chapter 8 and 9, Postwar Reconstruction and Peacebuilding. In *Contemporary Conflict Resolution* (fourth edition, pp. 236–265).

RMIT University, UIC Barcelona, & Aalto University. (2019). *Design, Disaster and development Research Forum 2, Learning from Urban Crises: 2019*.

Scott-Smith, T. (2017, June). The humanitarian-architect divide. *Forced Migration Review, Shelter in displacement*(55), 67–68.

Sharp, D., & Kristoffersen, H. (2016). *The Nexus of Urbanization, Violence and Conflict: Linking SDG Goal 11 and 16* [Report to the UN, UNDP, UN-Habitat, and the IRC]. Global Alliance for Urban Crises.

Shelter Cluster Iraq. (2019). *Shelter Cluster, Report Iraq Jan. – Dec. 2019*.

Sucuoglu, G., Ensari, E., Breivik, H., & Sucuoglu, C. (2016). *The challenge of conflict-affected cities: Building peace through architecture and urban design*. 57.

Swete Kelly, M. J., & Caldwell, G. A. (2014). Responsible reconstruction: The architect's role. *Open House International*, 39(3).

UCDP. (2018a). *Conflict data for Columbia*. Uppsala Conflict Data Program, Country Columbia. <https://ucdp.uu.se/country/100>

UCDP. (2018b). *Conflict data for Iraq*. Uppsala Conflict Data Program, Country Iraq. <https://ucdp.uu.se/country/645>

UCDP. (2018c). *Conflict data for Rwanda*. Uppsala Conflict Data Program, Country Rwanda. <https://ucdp.uu.se/country/517>

## SESSION 2

## **7. De-Urbanisation as Paradigm and Process: The Embedded Transdisciplinarity in De-Urbanisation**

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### **Introduction**

Current models of urban development have failed to protect biodiversity and ultimately threaten human wellbeing. Ecologically, cities have altered the natural environment and ecosystems, modulated natural hydrological, energy flow, and nutrient recycling patterns through physical changes to land use patterns, fragmentation, and degraded habitats. In human health terms, rising levels of non-communicable Diseases (NCD's), alienation, loneliness, intergenerational breakdown and growing levels of inequality, discrimination and food scarcity are apparent and can be attributed at varying levels to the processes of urbanisation. Urbanisation itself be classified as a wicked problem, and has previously been described as such (Goodspeed, 2015). These problems are entrenched and embedded in complex systems. Tackling these issues therefore requires the adaptation of planning and design and health paradigms across traditionally distinct spheres of influence including, though not exhaustive; civil engineering, architecture and urbanism, ecological sciences and public health. Traditionally, the practice of these fields have been bound to norms that have not permitted a successful overlap in delivering long-term solutions. De-urbanisation can be considered as a transdisciplinary proposal that aims to address the wicked problems regarding sustainability transitions. Therefore the success of de-urbanisation hinges on successful transdisciplinary integration across multiple actors as a primary mechanism to begin to stimulate policy priorities and ultimately deliver on a more harmonious relationship. This paper is a preliminary investigation into the construct and processes underpinning the de-urbanisation perspective.

### **De-urbanisation - proposal for addressing sustainability**

De-urbanisation as a phenomenon can be understood as the process of transitioning from an urban state to a sustainable socio-ecological condition of human settlements where the multiple harms caused by urbanisation (cultural, ecological, political, ethical) on human beings, natural ecosystems and the biosphere are countered by regenerating cities, transforming them into eco-

communities and permanent habitats that creatively allow for a symbiosis of human activity with nature (Sadri & Zeybekoglu, 2018). As is apparent by the present and future urbanisation trends (Jiang & O'Neill, 2017), urban land cover is expected to increase by 1.2 million km<sup>2</sup>, nearly tripling the global urban land area circa 2000 (Seto et al., 2012). A de-urbanising transition would run counter to this forecast and as a result, is a significantly challenging endeavour, not least because it requires cooperation and coordination across multiple actors. It also addresses a number of dimensions of the urban space that are self-reinforcing, which no single intervention can successfully resolve.

Urbanisation imposes different exploitative logics on both human beings and the biosphere, which result in “an exclusive, massive, short-term, rapid, anti-natural and industrial production process” (Sadri & Zeybekoglu, 2018). Given the multidimensionality of the problem of urbanisation, a similarly complex and multifaceted process is needed to orient the human behaviour in the construction of human settlements towards strong sustainability. De-urbanisation is such a process and emerges from a transdisciplinary perspective that takes as its object of study a very specific process of transition (from urban to de-urban) and an end state (de-urbanised settlements that are neither urban nor rural). It both addresses the multiple dimensions that can make a sustainability transition possible and desirable and integrates different fields of knowledge to create a new one. We suggest that, in addition to de-urbanisation being the assemblage of the processes previously described, it also constitutes its own field of study. To this effect, de-urbanisation operates within its own internal logic and does not focus on linear causality but incorporates systems thinking to bring about a strongly sustainable form of human settlement (Bonnedahl & Heikkurinen, 2019).

### **De-urbanisation as a transdisciplinary perspective**

From a paradigmatic perspective, de-urbanisation becomes a unifying field where design and systems thinking are both modes of thought and techniques that link different aspects of sustainability, including the human domain, the infrastructure domain, and the natural ecosystems domain. The multiple fields of design (understood broadly) and systems thinking become the epistemes that frame and constitute de-urbanisation.

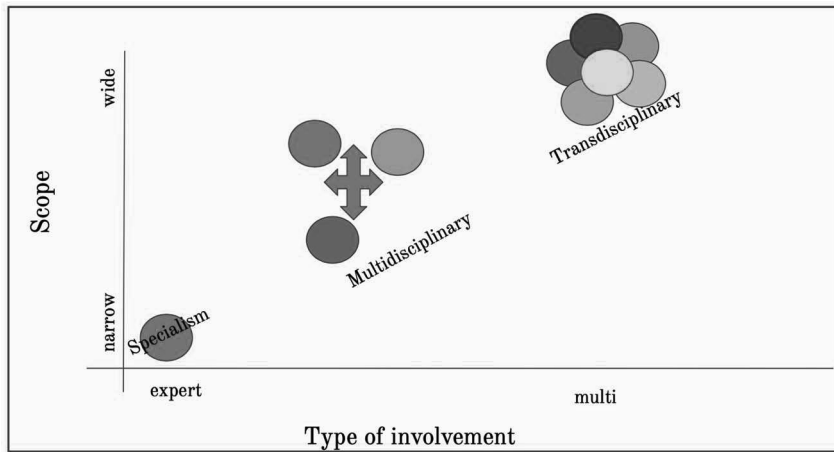


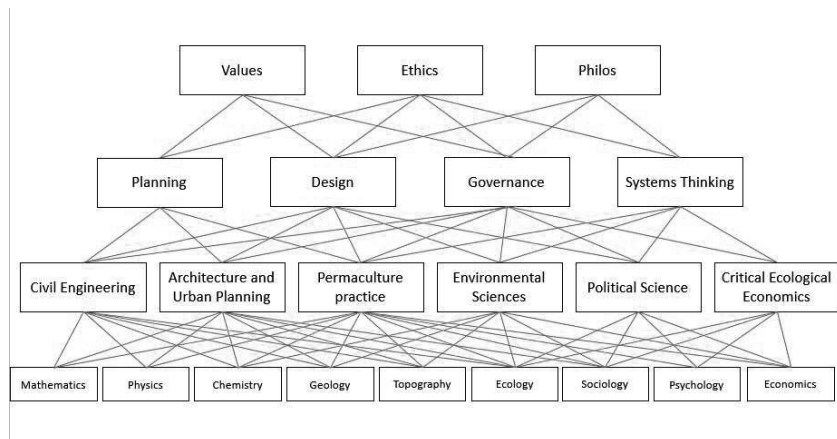
Figure 7.1: A XY graph depicting characteristics of specialism, multidisciplinary and transdisciplinary approaches to innovation. Source: Elaborated by the author

Max-Neef (2004) describes a continuum that ranges from discipline at the most discrete specialism in isolation to transdiscipline, which centres transdisciplinary at the other end of the scale as a result of a coordination between all hierarchical levels. Figure 7.1 illustrates the reorganisation of disciplines within a hierarchy. Any multiple vertical relationships including all four levels defines a transdisciplinary action. It can be described as traveling from an empirical level, towards a purposive or pragmatic level, continuing to a normative level, and finishing at a value level. We adapt Max-Neef's (2004) original figure to the field of de-urbanisation. In Figure 7.2, it can be seen that multiple disciplines inform de-urbanisation as a paradigm of its own and field of studies. Below is a brief overview of key disciplines that we perceive as having a prominent role in de-urbanising, but not limited to these alone.

Within the infrastructure domain, civil engineering and architecture are the main disciplines. Civil engineering as a discipline has expanded in recent years beyond the purely technical and has embraced the demand for integrating the needs of diverse social groups with innovative technologies in the construction of infrastructure. Moreover, it has acknowledged that infrastructure and engineering systems are influential in shaping demand for resources in a given territory and recognises the need of acting as a mediating force between nature and human activity (Bell, Chilvers, & Hillier, 2011).

Architecture and urbanism has taken a closely related approach, viewing sustainability as something that is integrated into the design of the buildings or is otherwise absent; trying to add it on later is insufficient and often fails to meet sustainability goals (Khan, Vandevyvere, & Allacker, 2013). Related to the focus on the natural ecosystems domain inherent in de-urbanisation, environmental, natural sciences and permaculture practice offer theoretical grounds and empirical evidence on the best dynamics that can facilitate significantly harmonious interaction between human beings and non-human natural ecosystems (Ferguson & Lovell, 2014; Gardner et al., 2009; Haberl et al., 2007).

Finally, political science (specifically political ecology) and critical ecological economics (which includes diverse themes ranging from alternative forms of economic organisation to proposals of degrowth) also provide a foundation for addressing the human domain (Kallis, Kerschner, & Martinez-Alier, 2012; Neumann, 2009).



*Figure 7.2: Transdisciplinarity for de-urbanisation. Reading the graph from bottom to top, the lower level refers to different basic disciplines, what exists. Disciplines in the second layer are regarded as what we can do; the agency and domain. The third layer what we want to do and at the top the duty or what we must do, duty which informs the practice. Source: Adapted from Max-Neef (2005).*

The manner in which de-urbanisation can be understood as a practice can be seen across the different operationalisation of dimensions and outcomes of de-urbanisation vis a vis urbanisation and the unsustainable problems it has created. Table 7.1 summarises these contrasts. Overall, it is clear that de-urbanisation, understood as a practice, as the phenomenon of transitioning to eco-communities, aims at constructing strongly sustainable societies where the natural ecosystems are cared for and left to thrive while also allowing human beings to benefit from them in a responsible manner. Not only do ecological restoration processes occupy a central role, but also deeply democratic political projects and cooperative economic dynamics are equally important. In this sense, de-urbanisation is closely linked to profound paradigmatic shifts, ones that both require and cultivate a deeply ecological human subjectivity.

Categories	De-urbanisation	Urbanisation
Ecology	Unification and symbiotic interaction between the human domain and the non-human natural ecosystems.	Separation of human domain and nature, commodification of human life and nature.
Economy	Democractic, cooperative worker self-directed enterprises, localised, focused on natural products, zero-waste through reintegration into production process	Capitalist, competitive, commodifying and alienating enterprises and economic dynamics. Waste generation through inorganic production that is designed to be discarded.
Politics	Forms of direct democracy and participatory decision-making processes. First-hand involvement on major issues.	Representative democracy where elected officials are in charge of decision-making.
Housing	Private rooms but shared communal spaces between different households, particularly the kitchen and the dining room.	Individualised spaces, energy-intensive and waste-producing appliances. Standardised design with some customised



	Infrastructure designed according to the climate of the region.	infrastructure to ensure comfort.
Role of the city	Deeply integrated with nature, self-sufficient, place for creating intercultural and meaningful communal life. Collaboration and solidarity are promoted.	Separated from and exploitative of nature, reliant on imports from the rural areas and international markets, alienating. Individuality and consumerism are promoted.

*Table 7.1: Outcomes of de-urbanisation and urbanisation by dimension and discipline*

### **The process of de-urbanisation: inherent challenges with transdisciplinarity**

By integrating the insights of the aforementioned fields and disciplines, we have demonstrated how de-urbanisation becomes simultaneously a field of practice and process. Nevertheless, the latter dimension of process is complex and embodies challenges which may present considerable and radical organisation to achieve. Not least is the upfront commitment to the spirit of de-urbanisation and thorough understanding of its reach. Each expert should understand that de-urbanising also entails leaving behind the dynamics of accumulation, competition and hierarchical rule characteristic of the capitalist system and the state, and creating the conditions for communal and ecological life to thrive. It demands from its researchers and practitioners to start thinking about novel ways of organising human life and strongly sustainable ways for human needs to be met while protecting the biosphere. Their mindset and expertise require a commitment to the end goals of de-urbanisation, and they need to be the first in fostering a deeply ecological human subjectivity.

To be truly transdisciplinary and democratic, the involvement of multiple internal and external stakeholders is fundamental. This principle, however, is not often realized, given that power asymmetries commonly exist among stakeholders and there are opposing interests and different levels of influence over a problem. Therefore, particular attention should be paid to the governance context (Wamsler, 2017). Two critical questions can be derived from this for the practice of de-urbanisation. First, how to involve the different internal and external stakeholders in addressing a sustainability problem? And second, how to facilitate the process of reaching a consensus among

stakeholders regarding the nature of the sustainability problem and the courses of action to be taken? There is no single answer to these questions but outlining some strategies can be useful. Futures workshops (Jungk & Müllert, 1987) with a design approach is one recommended alternative. Futures workshops are intended to help in co-constructing a desired future that has legitimacy among stakeholders. They are carried out in cooperation with other people and, in the process, empower them by helping them to identify the actions that can be taken within their level of influence and their expected impact. Though, in their original form, these workshops emphasised a bottom-up approach, for them to truly be useful for a de-urbanisation process, they need to include all social actors that both are affected and benefit by the proposal, from a business CEO to the homeless. Different workshops could be carried out, the first ones to define the problems and solution approaches according to relatively homogeneous social groups, and then a mixed workshop session where the differences in vision are negotiated and a final de-urbanisation proposal can be crafted. Another alternative would be the co-creation of a design fiction narrative. Co-creation would involve the establishment of a panel with diverse social voices representative of the city, zone or region to be de-urbanised, with technical experts in design and literary methods to guide them. The characters and the plot, while important, would be secondary to the role of the de-urbanised setting. This participatory method would enable the participants to place themselves in the setting and explore its features, which can be helpful in reorienting their subjectivity from an urban one to a deeply ecological that can thrive in the context de-urbanisation proposes.

## **Conclusion**

We have explored the construct of de-urbanisation as the culmination of transdisciplinary practices, which result in the de-urbanisation proposal as both a field in and of itself; and simultaneously the act of transitioning and processes which constitute the former. Critically, as we mobilise to halt and avert the sixth mass extinction and destructive and exploitative practices for both human and non-humans involved in activities of urbanisation, we acknowledge the de-urbanisation proposal as a solution to the current planetary health crisis we face. We highlight that its embedded transdisciplinarity provides a paradigm shift with outcomes at multiple levels to be able to catalyze a sustainable transition to a de-urbanised state. The transdisciplinary make-up involved in de-urbanisation also enables the identification of both positive and negative feedback loops and multiple leverage points (Meadows, 2009) to act on and trigger the most suitable strategic interventions. Nevertheless, we

stress that possessing the knowledge of the different disciplines involved in addressing the dimensions laid out in the table is not sufficient alone to bring forth de-urbanisation as a process. That is, collaboration among experts in the different fields of knowledge (ecology and natural ecosystems, architecture and civil engineering, economics and political science) cannot in itself produce a de-urbanisation outcome. It requires the commitment, understanding and full participation of multiple stakeholders and overcoming the inherent challenges and coordination involved in democratic and transdisciplinary practice. We believe that future work in both areas of research, civil engagement and practice across the organisation of multiple scales, which the de-urbanisation proposal operates will be required to effect demonstrative and needed sustainable change.

## References

- Bayırbağ, M. K., & Penpecioglu, M. (2017). Urban crisis: 'Limits to governance of alienation.' *Urban Studies*, 54(9), 2056–2071. <https://doi.org/10.1177/0042098015617079>
- Bell, S., Chilvers, A., & Hillier, J. (2011). The socio-technology of engineering sustainability. *Proceedings of the Institution of Civil Engineers: Engineering Sustainability*, 164(3), 177–184. <https://doi.org/10.1680/ensu.900014>
- Bonnedahl, K. J., & Heikkurinen, P. (eds.). (2019). *Strongly sustainable societies: Organising human activities on a hot and full Earth*. London: Routledge.
- Capps, K. A., Bentsen, C. N., & Ramírez, A. (2016). Poverty, urbanization, and environmental degradation: Urban streams in the developing world. *Freshwater Science*, 35(1), 429–435. <https://doi.org/10.1086/684945>
- Ferguson, R. S., & Lovell, S. T. (2014). Permaculture for agroecology: Design, movement, practice, and worldview. A review. *Agronomy for Sustainable Development*, 34(2), 251–274. <https://doi.org/10.1007/s13593-013-0181-6>
- Gardner, T. A., Barlow, J., Chazdon, R., Ewers, R. M., Harvey, C. A., Peres, C. A., & Sodhi, N. S. (2009). Prospects for tropical forest biodiversity in a human-modified world. *Ecology Letters*, 12(6), 561–582. <https://doi.org/10.1111/j.1461-0248.2009.01294.x>

Goodspeed, R. (2015). Smart cities: Moving beyond urban cybernetics to tackle wicked problems. *Cambridge Journal of Regions, Economy and Society*, 8(1), 79–92. <https://doi.org/10.1093/cjres/rsu013>

Haberl, H., Erb, K. H., Krausmann, F., Gaube, V., Bondeau, A., Plutzer, C., ... Fischer-Kowalski, M. (2007). Quantifying and mapping the human appropriation of net primary production in earth's terrestrial ecosystems. *Proceedings of the National Academy of Sciences of the United States of America*, 104(31), 12942–12947. <https://doi.org/10.1073/pnas.0704243104>

Jiang, L., & O'Neill, B. C. (2017). Global urbanization projections for the Shared Socioeconomic Pathways. *Global Environmental Change*, 42, 193–199. <https://doi.org/10.1016/j.gloenvcha.2015.03.008>

Jungk, R., & Müllert, N. R. (1987). *Future Workshops: How to create desirable futures*. London: Institute for Social Inventions.

Kallis, G., Kerschner, C., & Martinez-Alier, J. (2012). The economics of degrowth. *Ecological Economics*, 84, 172–180. <https://doi.org/10.1016/j.ecolecon.2012.08.017>

Khan, A. Z., Vandevyvere, H., & Allacker, K. (2013). Design for the Ecological age rethinking the role of sustainability in architectural education. *Journal of Architectural Education*, 67(2), 175–185. <https://doi.org/10.1080/10464883.2013.817155>

Kipfer, S. (2002). Urbanization, everyday life and the survival of capitalism: Lefebvre, Gramsci and the problematic of hegemony. *Capitalism, Nature, Socialism*, 13(2), 117–149. <https://doi.org/10.1080/10455750208565482>

Max-Neef, M. A. (2005). Foundations of transdisciplinarity. *Ecological Economics*, 53(1), 5–16. <https://doi.org/10.1016/j.ecolecon.2005.01.014>

McCauley, L. A., Jenkins, D. G., & Quintana-Ascencio, P. F. (2013). Isolated wetland loss and degradation over two decades in an increasingly urbanized landscape. *Wetlands*, 33(1), 117–127. <https://doi.org/10.1007/s13157-012-0357-x>

McPhee, C., Bliemel, M. J., & van der Bijl-Brouwer, M. (2018). Transdisciplinary Innovation. *Technology Innovation Management Review*.

Meadows, D. H. (2009). *Thinking in systems: A Primer*. London: Earthscan. <https://doi.org/10.4324/9781315558837>

Naydler, J., 2000. Goethe on Science. Floris Books, Great Britain

Neumann, R. P. (2009). Political ecology: Theorizing scale. *Progress in Human Geography*, 33(3), 398–406. <https://doi.org/10.1177/0309132508096353>

Nicolescu, B. (1998). *La transdisciplinariedad: Una nueva visión del mundo*. Paris: Ediciones Du Rocher.

Peng, J., Tian, L., Liu, Y., Zhao, M., Hu, Y., & Wu, J. (2017). Ecosystem services response to urbanization in metropolitan areas: Thresholds identification. *Science of the Total Environment*, 607–608, 706–714. <https://doi.org/10.1016/j.scitotenv.2017.06.218>

Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a General Theory of Planning. *Policy Sciences*, 4(2), 155–169.

Sadri, H., & Zeybekoglu, S. (2018). Deurbanization and the right to the deurbanized city. *ANDULI, Revista Andaluza de Ciencias Sociales*, 17, 205–219.

Seto, K. C., Güneralp, B., & Hutya, L. R. (2012). Global forecasts of urban expansion to 2030 and direct impacts on biodiversity and carbon pools. *Proceedings of the National Academy of Sciences*, 109(40), 16083–16088.

Wamsler, C. (2017). Stakeholder involvement in strategic adaptation planning: Transdisciplinarity and co-production at stake? *Environmental Science and Policy*, 75(March), 148–157. <https://doi.org/10.1016/j.envsci.2017.03.016>

Zang, S., Wu, C., Liu, H., & Na, X. (2011). Impact of urbanization on natural ecosystem service values: A comparative study. *Environmental Monitoring and Assessment*, 179(1–4), 575–588. <https://doi.org/10.1007/s10661-010-1764-1>

## 8. Towards Post-Pandemic Urban Change; Renaissance of Bicycle Networks

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### Introduction

Populated areas in cities are being considered as one of the main settings for virus transmission because of generating close human contact. Public transportation is a medium where we observe such a close contact. In order to stop spreading the virus, cities must provide new regulations to reduce the weightiness of public transportation and accordingly car dependence so that people can use alternative means of mobility. In this perspective, this study introduces an urban strategy that is based on creating more cyclist-oriented city where walking and cycling are the main achievements to reduce the density of public transport and car dependence. This is not only for stopping the spread of virus amidst of Covid-19 pandemic but also for enhancing the air quality of metropolitan regions (Harris, 2020). There are some cities that seem successfully implementing the tactic of “bicycle mobility as prioritized non-motorized mobility” at an efficient level. Some of them have been turning the existing roads into bike lanes and some have been designing new bike lanes (Schwedhelm et al, 2020). The city of Bogota, the capital of Colombia, has turned 100 km of city streets into bike lanes to limit huge numbers of people using public transport, enhance air quality and block the transmission of virus. In Mexico City, government prepared a regulation which aims to prioritize bicycle lanes over other means of transportation by quadrupling its existing bicycle network. Budapest government has a different strategy to prioritize bicycle network in the city. The government uses pop-up bike lanes to provide a safe alternative to roll around. According government of Budapest, the virus has led to a 90% drop in the number of bus passengers on some routes. Thus, such pop-up bike lanes and yellow-tape marks help citizens use bike lanes on busy bus routes and roads. In Milan, where Covid-19 pandemic hit hard, the municipality has announced ambitious scheme to reduce car use and improve bike lanes after lockdown. It is stated that 35km (22 miles) of streets will be transformed with a rapid, experimental citywide expansion of cycling and walking space to protect residents as Covid-19 restrictions are lifted (Broom, 2020). In the city of Ankara, the capital of Turkey, the municipality has designed

and started implementing 54 km of bicycle network. This will be the first bike lanes of Ankara.

### **Urban strategies**

There are three urban strategies in improving and extending bicycle networks in cities. These strategies can be applied both for the cities which already have bike lanes, cities with no bike lane at all or for those which have very short-range of bike lanes. The fundamental attempt here is to improve and extend cities' bicycle network quality to reduce the severity and weightiness of public transport, individual car use dependence, to keep pollution levels down and to stop spreading virus. The urban strategies in extending and improving cities' bicycle networks are;

- a. Increasing public awareness for bicycle-oriented mobility,
- b. Bicycle mobility as prioritized non-motorized mobility mode and
- c. Generating an efficient and accessible bicycle plan

#### *a. Increasing public awareness for bicycle-oriented mobility*

Local awareness is of vital importance to attain a strategy. Successful implementation always passes through integrated and participatory actions (Hull, O'Holleran, 2014). Municipalities should build a communicative environment to meet cyclists' demands (Difu, 2010). The better understanding of cyclists' needs and demands the better existence of healthy urban environment. Since the Covid-19 pandemic started spreading globally, many governments and municipalities prepared regulations and passed numbers of legislations to increase public awareness and encourage citizens to use more bicycles. It is clearly understood that subways, trains and buses that have a capability of moving huge numbers of people have higher risk of transmitting the virus. The actions municipalities have taken aim at increasing public awareness in reducing the number of people using such medium of transportations (OECD, 2004).

#### *b. Bicycle mobility as prioritized non-motorized mobility mode*

Pn3M (Prioritized Non-Motorized Mobility Mode) describes prioritizing cycling as a main non-motorized mobility mode in cities. Existing road and street capacity in metropolitan cities are not enough for effective cycling (Biggar, 2020). Buses, subway and other PT vehicles do not reach from one point to

another at desired time and speed. That extends citizens' waiting time inside such vehicles. Besides, their thoroughfares are mostly limited by car use. Main aim here is to increase bicycle network/corridors and enable it to be used as a main mode of non-motorized mobility. Prioritizing it over other modes of mobility will attract users instead of private car use, public transport and subway (Swarttouw, 2020).

### *c. Generating an efficient and accessible bicycle plan*

Main actions in order to generate an efficient and accessible bicycle plan involve;

- i. Road and street safety agenda
- ii. Determination of convenient routes for bicycle lanes
- iii. Construction and implementation of bicycle lanes

#### *i. Road and street safety agenda*

This action illustrates new ICT and IoT implementations to monitor and secure roads and streets by smart solutions. Today, cities suffer from abandoned, neglected and blight spots that causes problematic spaces for inhabitants to cycle. People feel endangered while cycling. Implementations of new signals and CCTV cameras to monitor such blight spots supported by lighting plan could enable people to use roads and streets safely more and more to commute by cycle.

#### *ii. Determination of convenient routes for bicycle lanes*

Cities can have different geographical and topographical conditions. Determining convenient bike route is of vital importance because it will directly affect the efficiency of its usage (Trampa, 2015). Hence, main bike routes must be implemented along roadsides and main highways that define city's main schema and orientation and also where geographical and topographical conditions generate their best slope. These axes are also the areas where most traffic congestion, public transport density exists and creates low quality air (Pucher, Buehler, 2017). In order to decrease the density here and increase sustainable and convenient commuting such roads are prioritized for bicycle routes. Hence this plan should illustrate main axis which are primarily determined bicycle routes, secondary axis and their approximate extension areas.



### *iii. Construction and implementation of bicycle lanes*

Initially, bicycle paths should be implemented and developed between major urban and suburban areas, which are connected with main highways, and roads. Then after, new lanes could be extended and constructed on connector roads of highways, urban and suburban areas. As a future step a well-developed and diffused bike network must be implemented on both sides of main roads, secondary roads and connector roads to reach every part of the city. Some cities have already a bicycle network so for such cities the main attempt in bicycle plan will be improving and extending the existing routes by;

- Turning existing car roads into bicycle lanes,
- Marking or coloring roads,
- Additional pop-up bike lanes.

### **Conclusion**

Amidst the Covid-19 pandemic, it has been shown that densely populated and hyper-connected cities can amplify the spread and transmission of infectious disease through increased human contact. This is what current pandemic has been forcing us recently to reconsider employing new set of strategies towards more resilient and sustainable urban areas. The more resilient and sustainable future lies in using this lifetime opportunity to our benefit via increasing the amount of bicycle networks to cut crowds and human-contacts in densely populated areas. The main goal is to liberate people from car dependence and crowded public transportation and transform the cities into shared open networks where citizens enjoy and breathe. Beside reducing close human contact and stopping the virus from spreading, improving and extending bike networks has another striking benefit which is enhancing the air quality. These cities, which started improving and extending their bicycle networks have some of the worst pollution and observed a temporary but dramatic drop on pollution levels during lockdowns. In Milan, motor traffic congestion has dropped by 30-75 per cent during Italy's lockdown and officials hope to use the reopening of the city as an opportunity to turn residents away from car use and public transport. Besides, in lockdown months of March and April, the concentration of the pollutant nitrogen dioxide (NO<sub>2</sub>) fell by 24 per cent in the city, compared with the preceding four weeks, according to the European Environment Agency. That is why, this is a vital attempt and an opportunity for our habitats and citizens to stop spreading the virus but also reduce traffic congestion and alternatively high levels of smog. These strategies are not only

to fight with pandemic crisis but also to present more resilient and sustainable future.

## References

Angela Hull & Craig O'Holleran (2014). Bicycle infrastructure: can good design encourage cycling? *Urban, Planning and Transport Research*, 2:1, 369-406, DOI: 10.1080/21650020.2014.955210

Biggar M. (2020) Non-motorized Transport: Walking and Cycling. In: Leal Filho W., Azul A., Brandli L., Özuyar P., Wall T. (eds) *Sustainable Cities and Communities. Encyclopedia of the UN Sustainable Development Goals*. Springer, Cham. [https://doi.org/10.1007/978-3-319-71061-7\\_1-1](https://doi.org/10.1007/978-3-319-71061-7_1-1)

Broom, D. (2020, April 24). How the COVID-19 crisis inspired this major Italian city to transform its polluted streets – for good. Retrieved from <https://www.weforum.org/agenda/2020/04/milan-covid-19-coronavirus-lockdown-reducing-car-use/>

Difu (2010) *Cycling Expertise: Campaigning for Public Awareness on Cycling*, Berlin

European Commission, (2009). *Action Plan on Urban Mobility COM (2009) 490*, Brussels.

Harris, S. (2020, June 24). COVID-19 has created more cyclists: How cities can keep them on their bikes. Retrieved from <https://theconversation.com/covid-19-has-created-more-cyclists-how-cities-can-keep-them-on-their-bikes-137545>

John Pucher & Ralph Buehler (2017). Cycling towards a more sustainable transport future, *Transport Reviews*, 37:6, 689-694, DOI: 10.1080/01441647.2017.1340234

OECD. (2004). *National Policies to Promote Cycling. Implementing Sustainable Urban Travel Policies: Moving Ahead*. European Conference of Ministers of Transport (ECMT).

Schwedhelm et al. (2020, April 17). Biking Provides a Critical Lifeline During the Coronavirus Crisis. Retrieved from <https://www.wri.org/blog/2020/04/coronavirus-biking-critical-in-cities>

Swarttouw, H. (2020, May 12). Redefining urban mobility to prioritise cycling. Retrieved from <https://www.intelligenttransport.com/transport-articles/98807/redefining-urban-mobility-to-prioritise-cycling/>

The White Paper. (2011). Roadmap to a Single European Transport Area, Towards a competitive and resource efficient transport system, COM (2011) 0144, Brussels.

The Green Paper. (2007). Towards a new culture for urban mobility, COM (2007) 551, Brussels.

Trampa, A. (2015). The plans of sustainable mobility (SUMP) and the integration weaknesses in the Greek reality. Proceedings of the 4th National Conference of Urban Planning and Regional Development, Volos, 2015.

## **9. The Urbanization Processes of Northern Istanbul in the Anthropocene Era: The Yavuz Sultan Selim Bridge and the Northern Marmara Highway**

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Istanbul in the 2000's is a striking example of urban development via mega projects. The mega projects of Northern Istanbul have a huge impact on ecological systems and urban growth patterns of the city. This paper focuses on the Yavuz Sultan Selim Bridge and the Northern Marmara Highway (YSSB-NMH), as the first of the Northern Istanbul mega projects aiming to move the transportation infrastructure and center of gravity of the city towards North, tearing up the Northern forests of Istanbul. This project, followed by the Istanbul Airport and the bidding of Kanal Istanbul is a part of the urban expansion strategy of Istanbul towards North; aiming to establish the city as a global transportation hub. In this paper, a discursive analysis of the project is given through the problematization of neoliberal urban space production mechanisms in the Anthropocene era. Two key concepts, being Ananya Roy's "informality", (2009) and Bent Flyvbjerg's "four categories of sublime" (2014) are taken into account to provide a theoretical framework.

21st century is marked by a global environmental crisis, in many ways unprecedented in the history of humanity, caused by human activities. The human effects on the earth systems have been so profound that the earth has reached to the threshold of the Holocene geological era, entering into a new one, namely Anthropocene; the age of man (Crutzen, P., 2002). More than a geological term, Anthropocene is becoming a definition for the crisis pressing humanity to address and re-define our relationship to the earth systems (Bonneuil, C. and Fressos, J.B., 2017).

Architecture and construction are two of the signifying practices of the Anthropocenic paradigm shift. In the 21st century, urban space production mechanisms are associated with unprecedented speed and scale, blurring the boundary between urban and non-urban, shifting the core of urbanization from Euro-America to peripheral geographies. These geographies set the scene for new mechanisms of urbanization, transforming from modernist policies to entrepreneurial urbanism with privatization and commodification of urban fabric.

Istanbul in the 2000's gets the lion's share of urban implemented Mega projects. The mega infrastructural projects of Northern İstanbul are notable, with regards to their colossal impact on the natural reserves and urbanization dynamics of İstanbul. Yavuz Sultan Selim Bridge and the Northern Marmara Highway (YSS -NMH) inaugurated on August 2016 is the first of the Northern İstanbul mega projects, shifting the transportation network of the city to north, while impairing the natural reserves of the city. This project was followed by İstanbul Airport (October 2018) and the bidding of Kanal İstanbul (March 2020), sharing the same agenda of moving the urban core of the city towards the northern ecological corridor.

In order to comprehend the impacts of these projects, both in city and regional scale, the significance of the Northern İstanbul forests should be discussed. Northern İstanbul ecosystem is an integrated ecological corridor of major importance, both in regional and city scale, between Black Sea and the urbanized areas of İstanbul. As a transitory threshold between East Europe and Asia Minor, Northern İstanbul region provides a unique ecosystem that connects European and Anatolian flora and fauna as well as Mediterranean and Black Sea regimes. This climatic and geographic clash results in an extraordinary richness and diversity in terms of natural habitats (TMMOB, 2010). Northern İstanbul ecosystem is claimed to be one of the 200 important ecological regions in the world and one of the 100 forests to be urgently protected in Europe (KOS, 2015).

Being the natural reserves of İstanbul, Northern İstanbul have never been densely populated in the history of the city. The urban development axis has always been towards East – West direction while growth towards North was avoided. The 1:100.000 scale İstanbul Environmental Plan lounded in 2009, regarded as the constitution of the urban development strategies of İstanbul, suggests similar urban growth principles.

The immediate impact of the execution of YSSB–NMH towards the area has been immense. Yet, the urbanization pressure the project brings to the area surpasses its immediate destructive impact. As underlined in the Environmental and Social Impact Assessment (ESIA) of the Third Bosphorus Bridge and the Connection Roads final report, the main threat to the key biodiversity areas of the region is the rapid expansion of İstanbul towards north and the YSSB-NMH is the first mega project to trigger this irrecoverable and uncontrolled in-migration movement to the area (AECOM, 2013).

Due to these reasons, the Northern İstanbul mega projects did not exist in the 2009 İstanbul Environmental Plan. Yet, against the rulings of the plan and opposition of various civil groups and organizations, the projects mentioned above were and are being carried out with top down decision-making processes, supported with neoliberal discourses of progress and grandiose, globalization, economic growth, political consolidation, technological and aesthetic superiority.

In the case of the 21th century metropolises of developing countries such as İstanbul, this narrative of progress mentioned above is backed up with a commodified informality, where boundaries of the lack of regulation, illegality and gentrification are defined by the state, as underlined by Ananya Roy (2009). When looked from the legal perspective, the construction of the 3rd Bosphorus bridge and Northern Marmara Highway is against a number of national and international laws and treaties. Yet, the execution of the project is legitimized through revisions of planning documents, bypassing laws and regulations by the government.

As informality is utilized for legitimization, sublime categories are instrumentalized with regards to the public presentation and justification of the mega projects, as stated by Flyvbjerg (2014). Regarding *technological and aesthetic sublime*, mega projects are frequently promoted through their size, scale or volume, publicized as being the tallest, biggest or longest as if the size is a valid indicator of quality. This emphasis on bigness surpasses all other issues such as ecological or social concerns, repressing essential conversations.

Mega projects are tools for political propaganda, manifestations of power and grandeur and vessels for public attention and visibility. For right wing politicians in Turkey, it is almost a tradition to erect a Bosphorus bridge as a sign of power, exhibiting a typical example of the *political sublime*. *Economic sublime* is the justification of mega projects with profitability, capital flow and economic rejuvenation. YSSB-NMH is frequently advocated to trigger economic activity, create new jobs and feed the construction sector as well as establishing İstanbul as a regional and global transportation hub, giving the city an edge with regards to the race of globalization.

In the course of the paper, firstly the theoretical framework is laid out with the discussion of neoliberal globalization and urban space production / transformation mechanisms in the Anthropocene condition. Secondly, the geographical setting, being the Northern İstanbul area and the urban growth

patterns of Istanbul starting from the second half of the 20th century with regards to the Bosphorus bridges and automobilization infrastructure is discussed. Then, a discourse analysis will be given with regards to the YSSB-NMH. In this section, face-to-face interview with the top executive officers of ICA consortium as well as published material related to the project such as newspaper articles and ICA promotion booklets are delved into. While building up the discursive analysis of the projects, the concepts of “informality” (Roy, 2009) and “sublime” (Flyvbjerg, 2014) with regards to the 21st-Century urbanization mechanisms are taken into account. Lastly, conclusive remarks are given with regards to building, dwelling and thinking in the Anthropocene era.

## References:

AECOM, (2013). Environmental and Social Impact Assessment (ESIA) of the Third Bosphorus Bridge and Connected Motorways: Final Report (AECOM-TR-R599-01-00). AECOM Turkey.  
[https://www.3kopru.com/content/pdf/14112013134958environmental\\_and\\_social\\_impact\\_assessment\\_report.pdf](https://www.3kopru.com/content/pdf/14112013134958environmental_and_social_impact_assessment_report.pdf)

Aysev, E. (August 2019) [Private interview with Serhat Soğukpınar, Gülçin Kozan, Burak Akdemir]. Garipçe, İstanbul.

Bonneuil, C. and Fressos, J.B., (2017). *The Shock of the Anthropocene*. pp.5, Verso, N.Y, 2017.

Crutzen, P., (2002). Geology of Mankind. *Nature*, 415, 3 January 2002:23.

Ellis E., Ramankutty N., (2009, March 20). *Anthropogenic Biomes*. The Encyclopedia of Earth.  
[http://ecotope.org/people/ellis/papers/ellis\\_eoe\\_anthromes\\_2007.pdf](http://ecotope.org/people/ellis/papers/ellis_eoe_anthromes_2007.pdf)

Eren, İ.Ö., (2019). Topoğrafyanın Anlamını Yeniden Düşünmek ve İstanbul Deneyimi. *Megaron*, V:14, Issue:2, pp. 199.

Flyvbjerg, B., (2012). Why Mass Media Matter, and How to Work with Them: Phronesis and Megaprojects. in Flyvbjerg, B., Landman, T, Schram, S., eds., *Real Social Science: Applied Phronesis*. (pp. 95-121). Cambridge University Press.

Flyvbjerg, B. (2014). What You Should Know about Megaprojects and Why: An Overview. *Project Management Journal*, vol. 45, no. 2, April-May, pp. 6-19

İBB. (2009) 1/100.000 Ölçekli İstanbul Çevre Düzeni Planı, İstanbul Büyükşehir Belediyesi, İmar ve Şehircilik Daire Başkanlığı Şehir Planlama Müdürlüğü. <http://www.ibb.gov.tr/tr-TR/kurumsal/Birimler/SehirPlanlamaMd/Documents/100.000%20%C3%96l%C3%A7ekli%20%C3%87evre%20D%C3%BCzeni%20Plan%C4%B1%20Sunum%20TR.pdf> (access date: 07.10.2020)

ICA. (2020). *İstanbul Yavuz Sultan Selim Bridge and Northern Ring Motorway Project*. <http://www.icholding.com.tr/EN/Insaat/ProjeDetay/27> (access date: 12.08.2020)

ICA, UDH, KGM. (2019). *Kuzey Marmara Otoyolu, İstanbul Kuzey Çevreyolu, Yavuz Sultan Selim Köprüsü*. Presentation Booklet.

ICA, (2018). *Bir Başyapıtın Yükseliş Hikayesi*. İbrahim Çeçen Vakfı Yayınları, İstanbul.

KOS, (March, 2015). *Yaşam, Doğa, Çevre, İnsan ve Hukuk Karşısında 3. Havalimanı Projesi Raporu*. Kuzey Ormanları Savunması. [https://kuzeyormanlari.org/Docs/Yasam\\_Doga\\_Cevre\\_Insan\\_ve\\_Hukuk\\_Karsi\\_sinda\\_3\\_Havalimanı\\_Projesi.pdf](https://kuzeyormanlari.org/Docs/Yasam_Doga_Cevre_Insan_ve_Hukuk_Karsi_sinda_3_Havalimanı_Projesi.pdf) (access date: 30.06.2020).

Latour, B. (2018). *Down to Earth: Politics in the New Climatic Regime*. England: Polity Press.

Lovelock, J. (2000). *Homage to Gaia: The Life of an Independent Scientist*. Oxford University Press.

Morton, T. (2013). *Hyperobjects: Philosophy and Ecology after the End of the World*. Minnesota Press.

Prosperi, D. & Oner, A.C. (2015). Spatial Impacts Of Megaprojects On The Form Of Metropolitan Regions: A Theoretical Inquiry. *Int. J. Society Systems Science*, Vol. 7, No. 1.



Roy, A. (2009). The 21st-Century Metropolis: New Geographies of Theory. *Regional Studies*, 43:6, pp. 819-830.

Serres, M. (1995). *The Natural Contract*. University of Michigan Press.

TMMOB Şehir Plancıları Odası İstanbul Şubesi. (September, 2010). *3. Köprü Projesi Değerlendirme Raporu*.  
İstanbul.[http://www.mimdap.org/images/dosya/spoist\\_3.koprurapor.pdf](http://www.mimdap.org/images/dosya/spoist_3.koprurapor.pdf)

## **10. Strategy and Planning From the Field: An Alternative Methodology**

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### **Introduction**

This study explores the possibility of alternative planning methodologies, which can overcome "the limitations" of traditional planning, basing on the experimentation of a field based approach involving local players, tested in three reported case studies.

The aim of this approach is to compensate and overcome the distance and lack of focus on specificities and differences of the standard planning system, which, as Jane Jacobs pointed out six decades ago, tends to keep a distanced perspective on the territory, prioritizing generic and global aspects, such as infrastructure and transport, to impose disruptive solutions and to disregard local impacts and specific issues, leading to abrupt transformations, shaking the environmental equilibrium.

In this era of planetary crisis, a local based approach has a stronger potential to defend heritage and environmental values. Extending the scope of the Brazilian conservationist and researcher João Campos-Silva's statement that nature protection has to be made with local communities, we may also assert it in regard to heritage, culture and the balance between man occupation and nature.

New planning methods are needed to achieve this goal of involving communities and valuing local aspects and specificities, since common planning tends to impose transformations based on centralist and distanced perceptions of reality.

### **Methodology**

As the heading suggests, planning from the field is based on performing on-site analysis, identifying values and constraints, in dialogue with local agents, devising strategies basing on that direct knowledge. This methodology is meant as a complement to the planning system, and not a replacement, since it has itself its limitations, namely in terms of a broader and comprehensive perception of the territory.

Three case studies are presented, showing distinct situations in which has been tested this ‘planning from the field’ methodology, in different stages of implementation. From these examples, is made an evaluation from which are highlighted challenges and outcomes, and drawn conclusions.

### Identity and local values

The planning that commonly leads the transformation and urbanization of our territory and environment is typically conducted with significant distance from reality and local specificities. Thought from the general to the particular, it is performed with a gradual increase of the scale, which has imbedded a certain understanding of planning priorities and of the development of the territory. This methodology, which prioritizes generic and global aspects, such as infrastructure and transport, tends to impose disruptive solutions on reality, and to disregard local impacts and specific issues, not considering the distinctive characteristics and specificities of each place, both natural and anthropic.

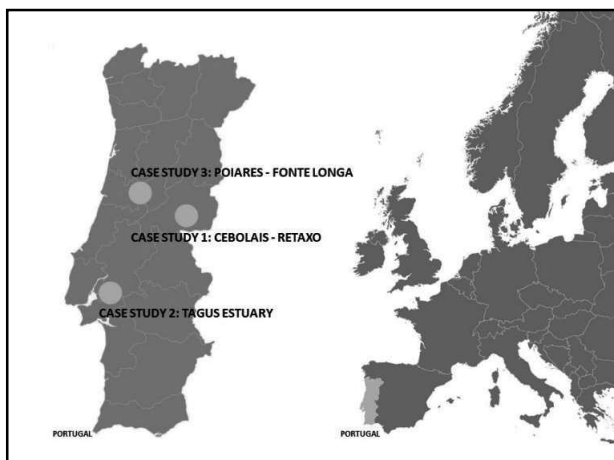


Figure 10.1: Location of the three case studies. Source: Produced by Estejo Research Project Team (Estejo R. P. Team), within the CITAD Research Center.

The proposed alternative methodology, on the contrary, is based on the knowledge of the specificities and differences of each site, of the different local values that are present but frequently unnoticed and overlooked. Local history and culture are fundamental in this analysis, as nature and environmental values or social relations. Each place has its specific values, which are part of its identity. Their identification often needs a look from the outside, which recognizes the differences and qualities that are specific to the place and its community, and their potential role at a wider spectrum.

A more focused and realistic reading of the territory, studying different typologies of landscape is the basis to create a repository of information for the recognition of its potentialities and fragilities, simultaneously identifying the various factors that are responsible for degradation situations. Complementing conventional planning, this knowledge from the site can overcome its faults and inefficiencies and create a more informed and effective planning.

This methodology is being tested at CITAD and is here shown in three case studies, from very distinct areas of the Portuguese territory and at different study stages.

In these situations, an analysis of ancestral and traditional modes of occupation has been performed in order to understand previous processes of transformation and to propose interventions that seek to restore a balance between the environment and human occupation in the face of very different situations.

Cebolais-Retaxo, the first case study, is a textile industry cluster in a rural environment in inland Portugal, near the city of Castelo Branco. An industrial pole that emerged in the 19th century and flourished in the 1950s, Cebolais de Cima and Retaxo saw a decrease in its economy since 1985, with a sharp decline in its industrial activity. Since then, it has been in economic and demographic decay, and the lack of activity conducted to urban degradation, in which abandoned industry facilities and deserted housing are part of the skyline.

A CITAD multidisciplinary team comprising the fields of Architecture, Landscape Architecture, Geography, Sociology, Museology and History studied this territory, identifying, together with the remaining population, its fragilities and potential, focusing on the idea of requalification and regeneration. The

approach based in the development of several activities and events involving the residents and people from outside, like architecture students and teachers.

The 'intrusion' of culture as an instrument for motivating change was the strategy used against desertification in Cebolais-Retaxo, investing on human involvement. A sequence of practical actions was implemented on site, with local players, the population, undergraduate and master students, and teachers: an Open Class, entitled '*Factories are Open*', a Workshop in City and Territory and a 'Creative Assault', named '*Lançarte*'. These events made possible the reutilization of some of the abandoned spaces and buildings and showed the community, most of them with a background related to these industries, the value of their history and legacy of life. Although not buildings of significant historical or architectural value, these spaces are part of their personal and collective identity and therefore important for the community, as is the culture related to the activity.

These actions also alerted local administration for the specificity of this place and the value of its past, which resulted in the project of creating a museum.

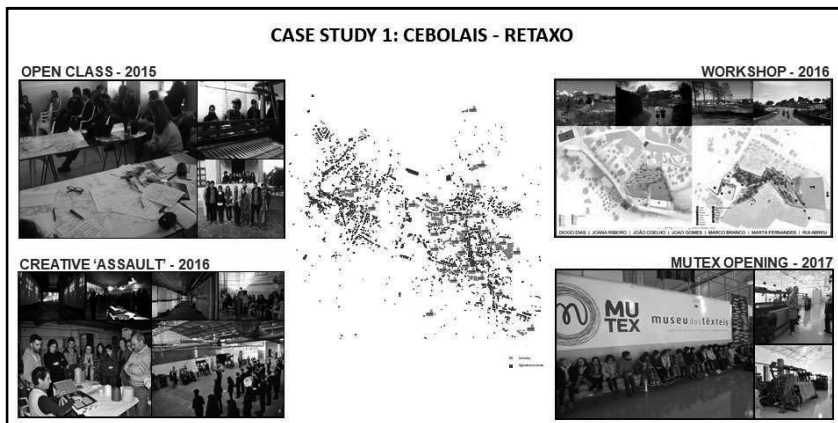


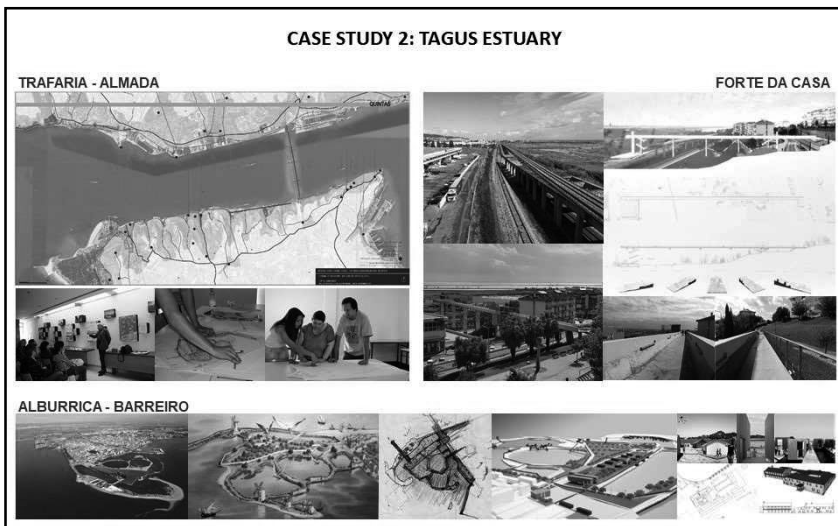
Figure 10.2: Cebolais – Retaxo case study: stages of the process. Source: Produced by Estejo Research Project Team (Estejo R. P. Team), within the CITAD Research Center.

The Mutex – Textile Museum – was the result of this intense and concentrated planning process. Occupying one of the old industrial facilities, which was rehabilitated and still exhibits its machinery, it opened to the public and

develops activities together with the population, constituting an instrument of local development and attraction in that territory.

In another case study, the Tagus Estuary, some specific sites have been the focus of study with an identical methodology, like Trafaria, Forte da Casa and Alburrica.

The estuarine territory around the Tagus is a broad and diverse landscape composed of many different spaces, which include cities like Lisbon and Almada, portuary facilities, suburban sprawl, rural areas and nature reserve. Its planning is mainly handled according to administrative limits, such as municipal borders, often with no regard to local differences and identities. The methodology followed by CITAD in Trafaria, Forte da Casa and Alburrica, identical to that of Cebolais-Retaxo, focused on the understanding of these local identities and their development potential within a complementarity network of different and specific spaces.



*Figure 10.3: Tagus estuary case study: interventions in Trafaria, Forte da Casa and Alburrica. Source: Produced by Estejo Research Project Team (Estejo R. P. Team), within the CITAD Research Center.*

The research methodology based in the realization of workshops open to the local players, analyzing these places, their dynamics and typologies of

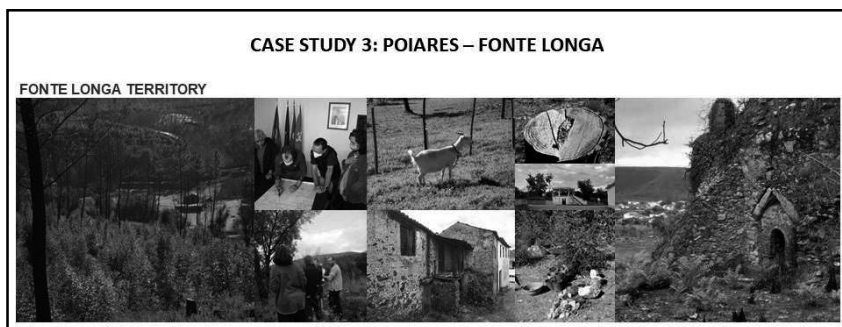
landscape, and promoting debate in the community, to, in a second stage, carry out practical work, like development proposals with design solutions, again, presented and debated with the local communities.

In Trafaria it was proposed the rehabilitation of the old asylum and penitentiary, with new purpose, being presented students' designs and ideas. Also the creation of a new cultural walk path through the south bank 'Quintas' (ancient villas) was a proposition that the municipality considered and is presently studying.

In Forte da Casa, after the identification of a site constraint consisting of a linear barrier created by the railway, it was suggested the creation of an overpass, and a design competition was held, leading to the construction that minimized the problem.

In Alburrica, the estuarine waterfront of Barreiro, were identified important local values. Man's harnessing of the natural elements, through the use of proto-industries such as tidal mills and windmills, in a balanced relation with the environment, is an important lesson from ancient human occupation, which may still today reinterpreted and be used in the definition of urban policies and strategies. The history of Quinta Braamcamp, one of the Tagus 'Quintas de Recreio' (villas used by Lisbon aristocracy), also used for the production of silk, with the planting of mulberry trees and the construction of pavilions for the creation of silkworms, and later converted to the production of cork, is also an important reference for today development, as the traditions and culture of ancient fishermen.

The unveiling of this knowledge about the history and values of Alburrica, unique in the whole estuary, planning ideas on how to occupy this bank of the estuary and other proposals presented led to the municipality's initiative to acquire the today abandoned area of Quinta Braamcamp, in a process that still awaits its completion.



*Figure 10.4: The new case study of Poiares - Fonte Longa. Source: Produced by Estejo Research Project Team (Estejo R. P. Team), within the CITAD Research Center.*

A new case study is now beginning its course, in Poiares municipality, near the city of Coimbra. In Fonte Longa major problems relate to a deserted territory, recently devastated by large scale wildfires. This case is now being studied, identifying the values, traditions and practices that form the cultural and social identity of the place and its community, in order to delineate strategies for sustainable occupation that can manage the threat of large-scale forest fires and to thwart desertification.

## Findings

Trying to overcome the difficulties of the conventional planning system, focused on large-scale issues and limited by an administrative boundary perspective, this study proposes the experimentation of complementary and alternative planning methodologies, based on cultural and social identity of the focused places and territories.

The interaction with players and population at a local level is a central part of this process, which intends to perceive and display cultural and social specificities, which can catalyze a balanced future development.

The presented experiments show some positive results, in which communities were involved in initiatives and decision-making processes, and the administration revealed openness to modulating its projects in accordance with these contributions, leading to some successful outcomes.



This indicates the potential of the methodology, although being conditioned by the responsiveness of the administration, players and other entities. The continuing of these studies may in the future enable more comprehensive conclusions and possibly achieve broader exposure and awareness, contributing to their effectiveness.

## References

Campos-Silva, João Vitor; Peres, Carlos A.. *Community-based management induces rapid recovery of a high-value tropical freshwater fishery*. Berlin: Nature Publishing Group.

Choay, Françoise (1992). *L'allégorie du patrimoine*. Paris: Seuil.

Choay, Françoise (2006). *Pour une anthropologie de l'espace*. Paris: Seuil.

Cidrais, A.; Roque, M.; Silva, F.; Silva, M. A. (2017). *Vilas Fabris de Cebolais de Cima/ Retaxo, Portugal: A intromissão da cultura como dinamizador de mudança*. In: El patrimonio industrial en el contexto de la sostenibilidad: Actas VII Congreso Cons. del Patrimonio Industrial y de la Obra Pública en España. Gijón: TICCIH-España.

Jacobs, Jane (1961). *The Death and Life of Great American Cities*. New York: Random House.

Preite, Massimo (2017). *From urban to landscape regeneration: new roles for the industrial heritage*. In: 'El patrimonio industrial en el contexto de la sostenibilidad: Actas VII Congreso Conservación del Patrimonio Industrial y de la Obra Pública en España'. Gijón: TICCIH-España.

Silva, Fátima; Seco, Rui; Matos, Isabel (2019). *Cultural landscape of Tagus Estuary: Resource for sustainable valorization strategies*. In: '22nd Council of Europe Meeting of the Workshops for the implementation of the European Landscape Convention and International Congress Water, landscape and citizenship in the face of global change: Proceedings of the International Congress'. Sevilla: EMASA.

## 11. The Incentivization of Freedom and Its Future

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Nature can be rarely tamed. Its sheer ferocity is unmatched a result of which are the ecological shifts that are termed as disasters by the humankind. In the pursuit to exercise control and to forecast the lack of it, man lost his way and gave birth to what are now known as anthropogenic disasters. These were not shifts to maintain the natural cycle but were deliberate attempts to change them. In yielding nature to enjoy the fruits of victory over it, man has indeed gone too far. Urbanization is one of the many unbridled disasters that befall man. It is a resultant of a mass amnesia that starts from the individual to the society and vice versa.

Man forgets that he is a part of nature and the only being that recognizes its existence separately from its self. It is only sensible to approach the matter with understanding the nature of man and his existence within nature. For matters pertaining to the self, the tools created by the father of psychoanalysis, Sigmund Freud, have remained effective and also effectively questionable; an inherent trait in the field of scientific discovery that may lead to contention only to yield better hypotheses. These questions were posed by the social scientist and psychoanalyst many years junior to the aforementioned theorist by the name of Erich Fromm. Before Freud, Karl Marx had written a manifesto that would prove to be an astounding economic theory that aimed to target the inoculation of societal amnesia by hammering at its seething syphons. Here too, Fromm acts as a modern critic to an old theory without questioning its efficacy, an honor exalted only to Marx.

Our approach remains fundamentally different for a number of reasons. One is solely introspective out of fear of crucifixion on the cross of scholarly psychoanalytic dialectic. The second births from the immediate need for individual and social action notwithstanding the hypercritical approach taken toward incorporating these intellectual giants' theories. The third is an attempt at viewing the world as an infant blessed with the faculties of mature cognitive abilities but with impressionable sycophancy toward rational theories. To understand the individual, the ability to idolize the self must be checked. By

idolize we do not mean to hold something in high esteem but only the recognition of its existence. From Freudian principles, the self can be divided into:

#### *The barbaric self*

In *Civilization and Its Discontents*, Freud argues that man's search for happiness within the current fabric of society is futile (Freud, 2015). Primitive man endowed with uninhibited libidinal drive was able to achieve pleasure at all times and was thus the happiest. The civilized man with aim-inhibited libido is robbed of perpetually satisfying eroticism to create friendships and bonds. To battle Eros is Thanatos or to battle the pleasure principle is the death drive. The barbaric self is the embodiment of the death drive and one that seeks the destruction of the self and everything that encapsulates the self. This exists within everyone at all times and can be triggered at potentially frustrating cues.

#### *The philosophical self*

The thinking self or the philosophical self is a direct reference from the Descartes's *Cogito Ergo Sum* or I think therefore I am (Descartes, 1968). A thinking self must exist at all times that doubts one's own existence and that in itself creates the reality of existence. Taking it further, the philosophical self also can be taken as the rational self and the imaginative self. The ability to rationalize a set of circumstances, understanding their patterns and creating rationales for those circumstances is the rational self. This can also be linked with Plato's *Allegory of The Cave* in *The Republic* (Plato, 1968), where the prisoners were only familiar with the reality that they were presented with. The ability to look beyond requires imagination. Imagination has always been awarded with the gift of creating new realities.

#### *The social self*

This encapsulates the need to build tribes, empires, federations, societies, nations and states. This occurs, with some reference to Freudian theory, due to the need to find a fellow-worker to battle the hardships presented by nature, the certain decaying of our bodies and our inability to control nature; and the strong need for identification with others of our kind (Freud, 2015).

#### *The civilized self*

The civilized self is the case for the man of today. The civilized self, demands order, cleanliness, beauty, security of past, present and future but most importantly happiness. For the civilized self, according to Freud, however, all three aforementioned domains under the social self, work together as causes for frustration and unhappiness. This existence of this self is bombarding all other selves in the twenty-first century man with its higher ideals and complicated procedures to achieving them (Freud, 2015).

### *The selfish self*

According to Freud, the identification of the self, starts with the ego and this is the most certain feeling that we have. Our ego appears to us as something autonomous and unique. Basing our theory on Freud's foundational principles as opposed to the social self where the urge for union with community is based on 'altruistic' endeavors, the selfish self is based on urges that aim to find happiness as part of the 'egoistic' drive (Freud, 2015).

This section presents a historical background on how we as prehistoric men began with the foundation and evolution of collectivist societies and how this evolution has led to a modern industrial capitalist society after the 19th century and has led to an insane world which is alienated, commercialized and in the danger of robotism.

### **The foundations and evolution of collectivism**

Ten thousand years ago, before the development of agriculture, all human societies were composed of hunters and gatherers, largely living in social units called "bands," if archaeological evidence and the hunter-gatherer societies extant in the nineteenth and twentieth centuries provide any indication. Such societies tend to be relatively egalitarian, with minimal social differentiation, division of labor, and political complexity. Division of labor that does exist tends to be based on age and sex. (*The social self*)

Bands typically consist of 25 to 50 people and were formed through kinship association. Membership is somewhat fluid, with disputes often settled by members switching to another band. Band societies, like most preliterate societies, tend to be highly cooperative. Individual ownership and notions of private property are unusual in the least complex societies. As hunter-gatherer societies evolve into more rigidly bounded and organized tribal societies, an incipient political organization may emerge, though kinship remains the

primary basis of social relations, and discrete political, religious, and technological realms are not clearly differentiated.

To the extent that a group maintains territorial ties, the territory is a property or possession of the entire community, not specific individuals. Natural abundance and increased techno-economic complexity tend to erode the egalitarianism of hunter-gatherer and tribal societies, as individualism, greater political organization (and especially the prevalence of chiefdoms), and social stratification begin to emerge. *Guns, Germs and Steel* by Jared Diamond exemplifies how factors such as geography, climate, resource base, and natural history plays a role in the formation of human societies (Diamond & Ordunio, 1999).

Taking into consideration that the agricultural productivity formed the basis for civilizations, since food surpluses permitted a proportion of the population to concentrate on alternate means of development, the existence of readily domesticated productive, nutritious plant types was crucial to the emergence of technologically complex societies around the world. (*The civilized self*)

17th Century and onwards, in his popular work 'The Social Contract,' Jean-Jacques Rousseau explored the concept of collectivism. Rousseau spoke against the notion of social distinctions in society and against the concept of self-interest alone. Instead, he claimed that any single person has a social contract with the rest of society that allows them to take the group's mutual interest into consideration (Rousseau, 1964). (*The un-selfish self*)

Thomas Hobbes also spoke in favour of the idea of a social contract in culture in the same manner as Rousseau. He grew to conclude throughout his tenure that the fundamental human essence was cruel and selfish (Hobbes, 2014). He claimed that people were motivated by self-interest, which contributed to aggression and death (*The barbaric self*) when left uncontrolled. His interpretation of the social contract, however, was that citizens in society abandon their rights to a dominant central body to stay secure. He advocated in support of an absolute ruler in civilization, claiming that the role of the king was to preserve peace and protection. In reality, he was well known for suggesting that without a strong security regime, the lives of citizens are "nasty, brutal and limited." The claims of Hobbes are perceived to be rooted in collectivism, since it basically advocates the mutual protection of humanity above the interests and freedoms of human people. As such, the greater

interest of humanity as a whole was more important than the effect it had on persons.

Collectivism grew more in the 19th century with Karl Marx's theories and writings. His writings have sparked revolutions in many nations, and are also being used today to advocate the interests of workers and other socialist ideals. His theories are also related to the industrial revolution since he observed and voiced outrage regarding the miserable working conditions of the time. 'The Communist Manifesto' has denounced capitalism for its flaws such as child labour, salary inequalities, a scarcity of the rights of employees, etc.(Marx, 2002). Marx has therefore asserted that working-class citizens would organise and jointly own and run business, so as to keep the rich owners of the time from being oppressed. This was a significant addition to the philosophy of collectivism as Marx promoted concepts of mutual interest, economic freedom and public ownership. Basically, he protested against the philosophies of the right-wing including fascism and traditional populism and wanted a classless culture founded on common values to replace it.

As a result of Marx's ideas, the ideologies of the 19<sup>th</sup> century drastically transformed to include more collectivist ideas. The communist revolution of the 20<sup>th</sup> century vowed to form the practical vision of Marx's free man and free society but failed to hold its ground. It was thwarted by the forces of the west and demonized as a threat to democracy, which was marketed as the one true form of mass freedom. After the Second World War, there were strategic attempts to intensify the mass hysteria against socialistic societies (though never rightly formed as per Marx's vision) as totalitarian states. Through the use of mass persuasion techniques built on Freud's psychoanalytical theories and laid down by Edward Bernays, Freud's nephew, capitalism is rebranded as the driving force behind democracy. This makes room for neo-liberalism to enter the realm of global politics where faux individual freedom is championed and self-actualized individuals are 'produced' (*the selfish self*).

### **Sane society**

In late 20<sup>th</sup> century, Neo-liberalist policies aim at promoting man's freedom through free sexual encounters. Sexual freedom is closely linked with free thought and expression. This seemingly looks to be the solution to Freud's civilization theory where repressed sexual energy results in discontent. If Freudian rationale is applied here, this should have had solved the problem of mass discontentment and created a sane society. Herbert Marcuse points out

this one-dimensionality as an illusion that aims to repress socio-political activity by magnifying the illusory concept freedom to sexual perversion as freedom in general (Marcuse, 2013). He believes this creates an uncritical air toward the ills of capitalistic agendas and does not solve the alienation problem proposed by Marx nor the civilization problem proposed by Freud.

Fromm is not far from this conclusion himself. In the *Sane Society*, Fromm concludes with the assertion that the choice which confronts Man is not that between capitalism and communism, but between robotism, the mindless automation of our lives, and humanism on the grounds of communitarian socialism since he describes how the structure of capitalist societies act counter to human mental wellbeing and freedom.

### **Insane society**

According to Erich Fromm in the *Sane Society*, in a given community, the mode of production establishes social ties. In his book, Fromm articulates his fierce critical assault on the major institutions— the economic, political, religious, and social arrangements—of Western society (Fromm & Anderson, 2017). The concept, which he employs as his major weapon of criticism, is alienation. A concept, which we can associate with Marx, since he has given it its classic expression. By alienation Fromm means, a mode of experience in which the person experiences himself as an alien. In a manner of speaking, the person has become estranged from himself. The alienated person is said to be out of touch, with himself, as he is out of touch with any other person. To be alienated is to lack a sense of self, and to experience oneself and others as things are experienced—"with the senses and with common sense." but without being related productively to oneself and the world outside. For Fromm, in modern society, alienation pervades the relationship of man to his work, to the things he consumes, and to the state.

However, Fromm's own prediction of robotism as a force to be reckoned with comes true in the 21st century where technology-driven consumerism, once viewed as a threat, is packaged as freedom to own and thus freedom in general. Estrangement is promoted as an illusion of the only functional reality, one that is to be embraced by all. Repressed libidinal drives are channelized into necessary 'productive' drives where a man is called productive only so if he produces the products for the capitalistic system to flourish and when he identifies one's self as a collection of the products, he is able to produce.

## Society of many selves

Fundamentally, according to Fromm, *there is no "society" in general, but only specific social structures which operate in different and ascertainable ways*. The society, under the agreeably expressed title used for a collection of people, is nothing, after all, without its constituents, the people. If Freudian theory is put into similar structure the egoistic selves of peoples with their pleasure drive urging them to attain happiness are what make up society. From here onward, we must refer to the present society in the age of social media as our point of critique without neglecting effects of the past as lessons for the future.

It is also important to mention Karl Marx's theory of 'alienation' here for better understanding. Marx believes 'alienation' is not experiencing oneself as the subject of one's own acts, as a thinking, loving person but experiencing oneself only in the things one has created (Fromm, 2001). Man creates an alien object that is not a part of him which stands as an autonomous power and because of this free conscious activity turns into alienated activity thus life is reduced to a means of life. This is the psychopathology of the industrial society that Marx fears is a result of free market capitalism. Until necessity dictates production, the symptoms of alienation shall remain. From the individual perspective, there exist in industrial society crippled men acting as mere means of production alienated from nature. In recent times, as a call to fuel the machinations of industrialization further, finance-led shift to a fully urbanized society has pushed the concept of alienation and egoistic to another level. A symbiotic relation exists here as industrial outputs fuel urban goals and urbanization fuels industrial outputs. Urban centers house crippled men living under the illusion of security and prosperity alienated from their own selves and their neighborhoods. Man is gauged as a collection of what he *has* and not what he *is*. A truly 'free' man is one who is fully united with his fellow men and nature.

The social media age takes it up a notch. The promise of 'free' representation on social media platforms boosts the pleasure drive by rewarding it with virtual esteem boosters that keep man competing for a better space in both his urban and virtual communities; each feeding off each other while boosting it further. The temporal hits to the reward system via virtual 'likes' system necessitate the dovetailing of virtual avatars into many different ones.

It is important to understand the combined efforts of the individual and society in revolutionizing civilizations to create mass freedom. Mass freedom can be



described as free individuals in a free society. Free individuals have the ability and the opportunity to do anything. Free society acts as the precursor for free individuals and vice versa. We will talk about three major revolutions, though good intentioned initially, that have masqueraded as steps toward freeing mankind but have in fact enslaved it further.

### **The Industrial Revolution**

Freeing man and giving all warmth by the mechanization of the system of production, the Industrial Revolution represented a phase of growth that turned mostly poor, agricultural communities in Europe and in America into organized, urban societies in the second half of the 18th century. Goods that had once been painstakingly handcrafted, with the implementation of modern machinery and techniques in textiles, iron making and other industries, were manufactured in large quantities on machines at factories.

In relation to this paper, the growth of cities was one of the most defining and enduring aspects of the Industrial Revolution. More than 80 percent of the populace resided in agricultural areas of pre-industrial society. When immigrants migrated from the rural areas, tiny cities became big cities. As other countries in Europe and North America developed, they started down this urbanization route. This urbanization trend persisted unabated in England in the 19th century. Amid increases in income and economic urbanization, there were often negative consequences. All in all, the neighbourhoods of the working class became grim, chaotic, filthy and polluted. The neighbourhoods of the high class stayed tidy and hygienic.

### **The urban revolution**

The freedom to own plots of land and developing on them as per your need had been a direct result of the promised illusion of freedom produced by industrialization. This multiple ownership model does not work on egalitarian grounds and is in reality a problem that is seen as another case for freedom. Henri Lefebvre's vision of an egalitarian urban society highlights the direction in which man must take his urbanistic wishes. Lefebvre proposes that society is urbanized (Lefebvre, 2003). A purely urban society should exist in the future as an effect of the domination of industrialization absorbing agriculture production. Urban Revolution according to Lefebvre is the period when questions of growth and industrialization predominate to the period when urban problem predominate and the search for solutions and modalities

unique to urban society are in effect. In whatever form, the urban revolution is relevant now more than ever.

### **The spatial revolution**

Again taking from and building upon Lefebvre's *Production of Space*, the epistemological space or mental space that he talks about is an abstract idea that with all its practical implications is rarely experienced by the senses in its entirety (Lefebvre & Nicholson-Smith, 1991). Lefebvre could not have predicted that the abstract space could transcend the confines of the mind to that of a computer screen. A new form of space has taken over that which is accepted by the senses. It is a space for the many selves to function. It is both abstract and practical. It is both immaterial and material. This is cyberspace and it is revolutionary. This space enhances the many selves that exist within and fortifies the concept of self-actualized individuals. It presents itself as a voice for many and freedom for all. They are however merely 'users' that are sated with data to extract information about their affinities toward consumer products that can be sold to them. The spatial revolution is a step toward a new branch of capitalism, surveillance capitalism.

### **The resolutions**

The dismantlement of perception management is a step toward accepting the influence of social media and challenging it on the user level. The tech companies behind these should bring into practice an ethical approach. Profiteering over peoples' emotions must be halted immediately. Data accumulation must be taxed to rewire the framework of these systems that were initially created to provide equal representation.

The race toward collectivism based on equal representation. By following the socialistic model presented by Karl Marx, formation of an egalitarian society should be aimed at. This is only possible if the entire system goes through an overhaul. Humanism should be promoted instead of robotism.

The culling of commercial centers is aimed at diminishing mass migrations of people to urban centers. These centers monopolize over capital and do not let it assimilate equally. This should be made imperative in the prevalent system and in a socialistic system.

The implementation of need-based expansion is only possible within a socialistic society based on the concepts of Marx. The prevalent system of free market capitalism would always fail to implement this. Since the human population continues to aggregate in urban centers, this increases the urban footprint with significant consequences for biodiversity, climate, and environmental resources. We will present a general framework for identifying and controlling urban expansion with the help of machine learning and discuss its impact. We believe that our recommendations will prove valuable to several different audiences such as researchers and engineers, local and national governments, and entrepreneurs.

The divorce of market from the self is the concept of viewing humans as humans and not potential moneymaking enterprises. The mass consumerism of the twenty first century needs to come to an end. This is only achievable if a truly socialistic society is formed on humanitarian grounds.

The representation of technocrats in building regulation. Free from the bureaucratic model of governance a more technocratic model should be adopted. Building regulations must not be motivated via political gain but by social and individual gain. These decisions, sensitive as they should be, must be made by architects and town planners. This should be made imperative in the prevalent system and in a socialistic system.

The shift of focus to sustainable design as the only way forward. Aesthetical architecture has enjoyed its fair share of moments. Now is the time for sustainable architecture that sustains with the environment instead of feeding off of it. This should be made imperative in the prevalent system and in a socialistic system.

The placement of restriction on multiple ownership of land. The concept of the abolishment of private property presented by Marx is vital here. Multiple ownership of land is possible only in free-market capitalism. The goal should be shifted toward state-owned land. However, if the current system must prevail, an area of land must be allotted to a household according to the number of members in it.

Permaculture is the concept of co-existence with nature. This is perhaps the only living model that should have been followed. Given the high technological demands of our societies, this looks like the way forward. This should be made imperative in the prevalent system and in a socialistic system.

Planting trees, also called afforestation, can be a means of sequestering CO<sub>2</sub> over the long term. All land that is unoccupied should be given away to nature to own it as it sees fit. This should be made imperative in the prevalent system and in a socialistic system. Here we propose how machine learning can be helpful in automating large-scale afforestation by locating appropriate planting sites and analyzing trends based on location. This should be made imperative in the prevalent system and in a socialistic system.

The decompression of pressure on construction industry's role in creating employment in times of economic crisis. This has been the model followed by the first world in the 90's and has crept into the third world now masking itself as a savior. This should be made imperative in the prevalent system and in a socialistic system.

A system that favors a few and disserves the many must have questionable governing framework. The taxation of billionaires and tax relief for low-income strata peoples should manage to maintain economic parity. This needs to be done if the current capitalistic system must prevail.

## **References**

Diamond, J. M., & Ordunio, D. (1999). *Guns, germs, and steel: Books on Tape*.

Freud, S. (2015). *Civilization and its discontents: Broadview Press*.

Fromm, E. (2001). *Beyond the chains of illusion: My encounter with Marx and Freud (Vol. 780): A&C Black*.

Fromm, E., & Anderson, L. A. (2017). *The sane society: Routledge*.

Lefebvre, H. (2003). *The urban revolution: U of Minnesota Press*.

Lefebvre, H., & Nicholson-Smith, D. (1991). *The production of space (Vol. 142): Oxford Blackwell*.

Marcuse, H. (2013). *One-dimensional man: Studies in the ideology of advanced industrial society: Routledge*.

Rousseau, J.-J. (1964). *The social contract (1762). In: Londres*.

Descartes, R. (1968). Discourse on Method and the Meditations. Penguin UK.

Plato, & Bloom, A. (1968). The Republic. New York: Basic Books.

Marx, K., & Engels, F. (2002). The communist manifesto. Penguin.

Hobbes, T. (1914). Leviathan. JM Dent.

## **12. An Analysis of Children's Perceptions on the Concept of *Neighbourhood* through Their Own Paintings**

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A neighborhood that encloses many types of buildings cannot only be grasped with its geometrical, physical, and quantitative attributes such as the parcel area, street network, and the number of households but it is also comprehended through the time flowing (Moore, 1985). Thus, a neighborhood deserves to be defined as the setting where neighbors come together, memories are accumulated, events of happiness, sadness, and pain are shared (Bachelard, 2014). In this sense, the neighborhood is an environment where a certain culture of living is transferred from family to family, and from generation to generation. In this sense, it is inevitable for children to perceive this culture of living and sense of neighborhood since they are the reflections of the environment they are born, grow up, and pursue their living according to environmental and behavior theories (Downs and Stea, 1973; Norberg-Schulz, 1988; Piaget and Inhelder, 1967).

However, it must be admitted that fluctuating environmental conditions and the capital-oriented policies being implemented especially since the 80s have been continuously changing not only the small-scale neighborhoods but also the metropolitan-scale cities (Keyder, 2005). This change not only leads to the alteration of the concept of the *neighborhood*, whether in the countryside or in the city but also makes changes in the perceptual processes of children who are growing up in this new world order.

This study examines the changes of the perceptual processes of children about the concept of *neighborhood* through paintings of them accepted in a painting contest themed of 'my neighborhood' which is held by the Istanbul Metropolitan Branch of the Chamber of Architects in 2018 opened for primary and secondary school students (Url-1). All of the pictures that participated in the contest are analyzed through chi-square tests whether there are significant correlations between dependent variables such as (1) the focus on a utopian or dystopian city, representations of (2) public space, (3) inclusive design parameters, (4) emphasis on green areas, (5) mix-use functions, and the independent variables such as (a) gender and (b) grade level.

When the pictures in the contest are examined, it is noticed that there are various positive and negative assessments of children's perception about the concepts of the city and the neighborhood. Indeed, it can be understood that these evaluations are reflected in the colors that children use in their pictures. Although it is not certain whether the children's paintings reflect the neighborhood they live in or they yearn for, it is evident from the specific building names they write on some of the buildings that some children try to describe where they live. Besides, some children seem to portray the neighborhoods they live in as a dense environment consisting of high-rise buildings. It is observed that black, gray and cold colors are dominated in these pictures, and the human expressions used are often found to be negative.

Additionally, it is noticed that some of the paintings emphasize a kind of contrast in a way that they express both the past happy state of the neighborhood and the present troubled state of the neighborhood. The positive depictions in these pictures are comprised of a colorful and vivid urban life represented by low-rise buildings, green areas, recreational facilities and people with happy faces from various age groups in peaceful communication with each other while the negative depictions are comprised of a dull and tedious urban life represented by high-rise buildings, large urban blocks, lacking greeneries.

Some of the children, on the other hand, have depicted the concept of neighborhood through an utterly optimistic way. In these paintings, it is noticed that green areas with playgrounds and parks, vivid street lives with children playing ball and hopscotch are used extensively. Furthermore, despite the fact that there is an increase in the amount of gated communities in cities like Istanbul, many of these pictures appear to be dominated by a mixed-use neighborhood with commercial units on the lower floors of the housing estates. Moreover, some pictures emphasize the presence of a bike path in the urban life, and disabled people use the city in a peaceful way without any help from others. Following these arguments, the topics –dependent variables– found worth to be investigated within these pictures are shown below:

- the focus on a utopian or a dystopian city,
- representation of public space,
- representation of inclusive design parameters,
- representation of emphasis on green areas,
- representation of mix-use functions.

The contest, in which 163 pictures are evaluated, is mainly attended by girls (number of girls: 119, number of boys: 44). When the distribution of participants according to grade levels is analyzed, it is observed that the highest attendance is from students at Level 4 and the lowest attendance is from students at Level 8. Gender and grade level are the independent variables of the study.

The results of the study showed that representations of *utopian city*, *public space* and *green areas* are high, while representations of *inclusive design parameters* and *mix-use urban functions* are low.

The results of the chi-square tests (Table 1) show that the only significant correlation is between *gender* and the *representation of the focus on a utopian or dystopian city* ( $\chi^2=14.113$ ,  $p=.00<.05$ ). When the distribution of the representations of utopian neighborhood is examined, it is revealed that utopian city representations are statistically higher in girls.

Besides, a very close statistical correlation is also found ( $\chi^2=3.698$ ,  $p=.054>.05$ ) between *gender* and *representation of emphasis on green areas* (Table 1). When the distribution of the representations of utopian neighborhood is examined, it is revealed that the representations of green area are statistically higher in girls.

INDEPENDENT VARIABLE	DEPENDENT VARIABLE	PEARSON CHI-SQUARE VALUE	p	significance
Gender ;	the focus on a utopian or dystopian city	14.113	0.000 <	0.05 significant
Gender ;	representation of public space	2.557	0.110 >	0.05 insignificant
Gender ;	representation of inclusive design parameters	1.090	0.297 >	0.05 insignificant



Gender	;	representation of emphasis on green areas	3.698	0.054	>	0.05	almost significant
Gender	;	representation of mix-use functions	0.989	0.320	>	0.05	insignificant
Grade level	;	the focus on a utopian or dystopian city	8.120	0.322	>	0.05	insignificant
Grade level	;	representation of public space	8.763	0.270	>	0.05	insignificant
Grade level	;	representation of inclusive design parameters	11.490	0.119	>	0.05	insignificant
Grade level	;	representation of emphasis on green areas	5.796	0.564	>	0.05	insignificant
Grade level	;	representation of mix-use functions	5.883	0.553	>	0.05	insignificant

Table 12.1: Chi-square test results

In conclusion, it is comprehended through these pictures that physical and sociological changes in cities closely affect the children's cognitive processes. Thus, it is possible to say that there is either a positive or a negative change in children's cognition about the concept of *neighborhood*, although it is not clear whether these children live in the environment they represent through these pictures.

## References

Bachelard, G. (2014). *The poetics of space*. Penguin Classics.

Downs, R. M. and Stea, D. (1973). Cognitive maps and spatial behavior: Process and products. In M. Dodge, R. Kitchin, and C. Perkins (Eds.), *The Map Reader: Theories of Mapping Practice and Cartographic Representation*, (p.312-317). London: John Wiley & Sons.

Keyder, C. (2005). Globalisation and social exclusion in Istanbul, *International Journal of Urban and Regional Research*, 29(1), pp. 124–134.

Moore, G.T. (1985). Environment and behavior research in North America: History, developments, and unresolved issues. *Handbook of environmental psychology*, 39, 1359-1410.

Norberg-Schulz, C. (1988). *Architecture: meaning and place: selected essays*. New York: Rizzoli International Publications.

Piaget, J., Inhelder, B., (1967). *The Child's Conception of Space*, New York, USA: The Norton Library.

Url-1                <http://www.mimarist.org/sener-ozler-cocuk-ve-mimarlik-resim-yarismasi-xii-mahallem/>

## SESSION 3

### 13. Sustainability and Smartness during a Pandemic Scenario

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#### Introduction

According to the United Nations, a smart sustainable city is an innovative city that uses information and communication technologies (ICTs) and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social, cultural, and environmental aspects. The analysis of main trends of a smart city allows identify its' closeness to sustainable development goals.

The expression "smart city" has been applied to two different kinds of "domains". The "hard" domain suggests it's relation to aspects such as buildings energy grids, natural resources, water management, waste management, mobility, and logistics, where information and communication technologies can play a decisive role in systems operation (Neirotti *et al.*, 2014). In contrast, the term has also been applied to "soft domains" such as, education, culture, policy innovations, social inclusion, and government (Albino *et al.*, 2015).

Searching for a definition, Yigitcanlar *et al.* (2019) conducted a systematic review of literature relating to urban sustainability. Almost one third of the reviewed papers include some degree of criticism on the heavy technocentricity of the smart city notion, highlighting that cities must reap the benefits of the appropriate technology opportunities without obsessing with them. The research also revealed the importance to relate smart cities and the Sustainable Development Goals defined by United Nations as part of 2030 Agenda.

Bouzguenda *et al.* (2019) highlighted the importance of citizen participation towards a smart and social sustainable city, considering this aspect as a key factor for smart cities. Yahia *et al.* (2019) addresses the concept of "collaborative governance", proposing not only an individual approach, but also the necessity to create an organizational structure of a smart and

sustainable collaborative network, including citizens, government agencies and other stakeholders. Authors highlighted sustainability as a key factor for smart cities.

New York City administration has been investing on the use of digital technologies to benefit city's operation. In this sense, on 2019 a comprehensive plan for the construction of a more sustainable and resilient city has been launched. The OneNYC 2050 plan (2019) presents a strategy with goals that range from democracy, inclusive economy and healthy lives, to efficient mobility and modern infrastructure.

Through the assumption that a smart city should be able to respond properly to the demands of an emergency situation, such as a pandemic, a case study has been conducted in New York City during 2020 coronavirus outbreak. This research was based on the analysis of information officially released to New Yorkers. Those messages revealed the priorities and fragilities during a challenging scenario.

### **Indicators for smart, sustainable and resilient cities**

Smart cities are a global phenomenon, as occurs all over the world, and a local phenomenon, because each city is unique, and has different problems, which demand specific solutions (Dameri *et al.*, 2019). The authors defend four dimensions to be considered by smart cities' governments: Land – the territory of the city; Infrastructure – the facilities supporting urban life; People – the citizens and also the populations who work, study and visit the city; and Government – including the public administration.

Gassman *et al.* (2019) established six dimensions that incorporate those aspects in a different way considering: Smart Environment - minimizing the ecological footprint of a city without compromising quality of life; Smart living - Increase quality of life; Smart Economy - increasing city's competitiveness; Smart Mobility - improving transportation services and urban mobility; Smart Government – considering new concepts for the decision-making process, participation and urban governance; and Smart People – improving individuals' ability to develop their full potential, allowing the a high level engagement and social participation.

Discussions around what to expect from a smart city result in conferences and meetings that highlight at least five aspects (trends) for a smart city: Digital

Transformation, Urban Environment, Mobility, Governance and Finance, and Inclusive and sharing cities. It is worth noticing that all 17 SDG's can benefit from the smart cities' trends, as presented on Figure 13.1.

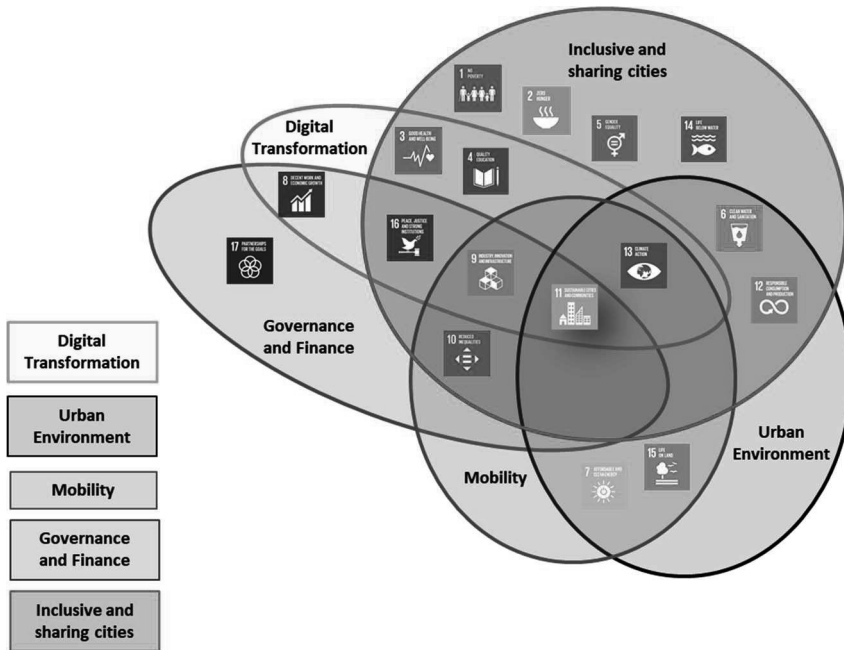


Figure 13.1: Relating smart cities trends and SDG'S goals. Source: Elaborated by the author.

Huovila *et al.* (2019) pointed out seven international indicators and standards that are relevant to establish city's strategies considering sustainability:

- ISO 37120 – sustainable development of communities – indicators for city services and quality of life;
- ISO 37122 – sustainable development of communities – indicators for Smart Cities;
- ETSI TS 103 463 key performance indicators for sustainable digital multiservice cities;
- ITU-T Y.4901/L.1601 key performance indicator related to the use of information and communication technology in smart sustainable cities;

- ITU-T Y.4902/L.1602 – key performance indicators related to the sustainability impacts of information and communication technology in smart sustainable cities;
- ITU-T Y.4903/L.1603 key performance indicators for smart sustainable cities to access the achievement of sustainable development goals;
- SUSTAINABLE DEVELOPMENT GOAL 11 + monitoring framework (United Nations)

To these standards, we can add ISO 37123 Sustainable cities and communities – Indicators for resilient cities – published on 2019. The three ISO standards consider the same groups of 19 aspects to present indicators: economy, education, energy, environment and climate change, finance, governance health housing, population and social condition, recreation, safety, solid waste, sport and culture, telecommunication, transportation, Urban/local agriculture and food security, Urban planning, wastewater and Water. However, the number of indicators/aspect varies depending on the scope of standard.

These standards, plans and indicators must orient local governments towards the definition of public policies aiming the strengthening of actions to support citizens during challenging scenarios.

### **Smart cities and the first pandemic of 21<sup>st</sup> century**

In 2020, the theory related to the eminence of a new pandemic has been proved, and the world did not respond rapidly to the coronavirus spread. The consequences of the outbreak have impacts on different aspects.

According to World Health Organization, the first report of the new disease occurred on 31st December 2019, on Wuhan city, on China. The information was of “cases of pneumonia of unknown etiology”. On January 3rd 2020 a new report from Wuhan to WHO by authorities, as following: "As of 8:00 on January 3, 2020, a total of 44 patients with unexplained diagnosis of viral pneumonia were found, of which 11 were critically ill, and the vital signs of the remaining patients were generally stable. At present, all cases are being treated in isolation at medical institutions in Wuhan. 121 close contacts have been tracked for medical observation.” (Wuhan, 2020)

Almost three months since the first announce of a new disease, the number of cases increased exponentially all over the world. It is worth mentioning that until March 24th, Italy and China were the countries with the highest number of cases, but U.S. surpassed all numbers after March 25th.

## **Case study: New York City**

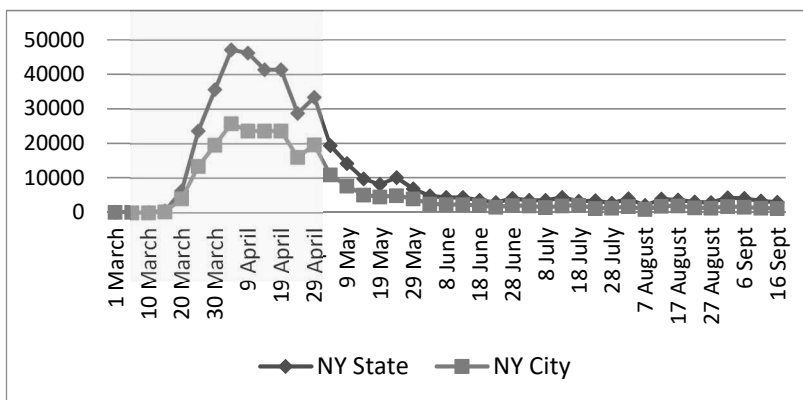
There are still some doubts about who was the first case of COVID-19 in United States. First reports indicate it has been a 35-year-old man that returned from Wuhan to Washington State. The local and state health departments were immediately notified (HOLSHUE *et al.*, 2020) In New York City, the first case was a woman who came from Iran on February and later tested positive for coronavirus. (GOODMAN, 2020)

On March 13rd the Federal Government of United States declared "state of emergency". Mass testing started and the number of infected increased rapidly. And on March 23rd Governor Andrew Cuomo declared "New York on PAUSE", and established diverse restrictions. Those measures had been publicized by television, newspapers, websites, blogs, and through social media (Facebook, Instagram, Twitter).

The spread of COVID-19 did not occur uniformly throughout the US. The discrepancy among different geographic areas of the US across states and even among and within cities was significant. There were also large differences in testing, infection rates and mortality across different socio-demographic population characteristics.

Since the first days of the outbreak, New York City registered the highest number of cases, and until now (September 2020) the city remains the most affected worldwide. Graphic 13.1 presents COVID 19 cases in New York State and New York City from March to September 2020, highlighting the worst period of the pandemic, from 12 March to 29 April.





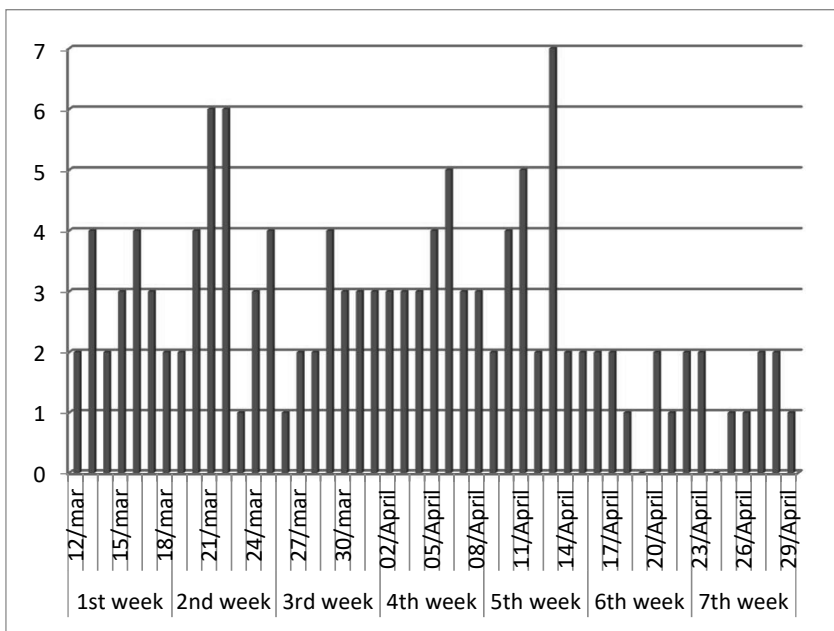
*Graphic 13.1: Cases COVID 19: New York City x New York State highlighting the worst period of pandemic on 2020. Source: Elaborated by author. Data from New York Times and Gov. Cuomo Press Release.*

As New York is considered a “smart city” (e.g., Smart City Index 2020, Top 50 Smart Cities Government), it is worth noting actions taken by local government to orient citizens during the pandemic to identify the priorities. It is also interesting note the relation among local government initiatives and the sustainable development goals, to infer which goals are the most important during a challenging scenario.

In addition to the information published on the city's official website (Notify NYC), during the pandemic a text message (SMS) service was created exclusively to update citizens about COVID-19. Using cell phones, New Yorkers could register their numbers to receive SMS updates related to the situation. The option for quick messaging services sent by cell phone has been proved as extremely relevant and strategic, since such messages do not depend on the internet (e.g. do not depend on the initiative to access a site, or answer a call)

## Results

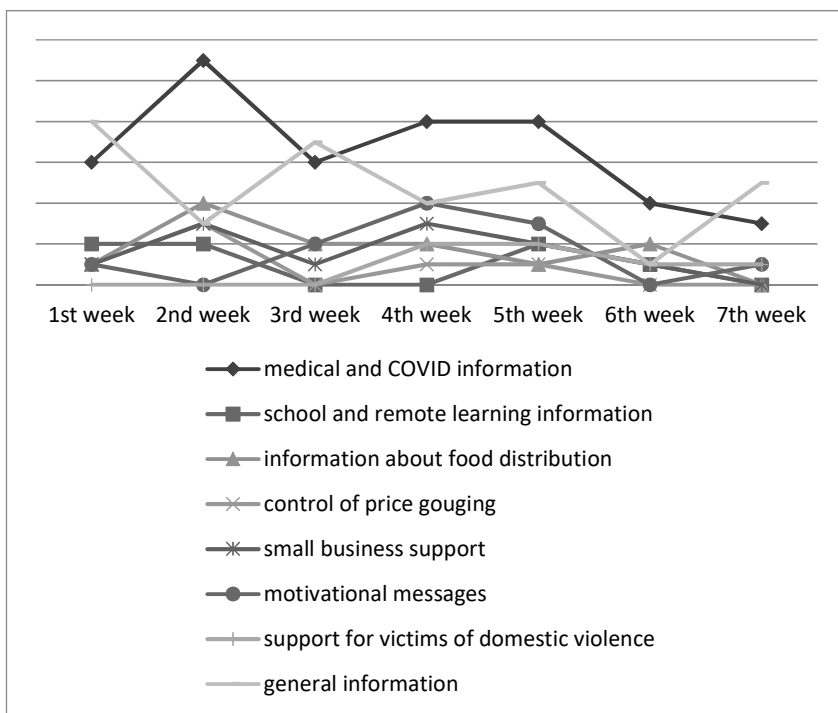
During the first period of coronavirus outbreak, after the “National emergency” declaration – from March 12 to April 29 – 133 (one hundred thirty-three) SMS have been received and analyzed. Two messages have been sent as an "COVID eminent alert" (the first on March 17th and the second on April 3rd). (Graphic 13.2)



*Graphic 13.2: SMS frequency from 12th March to 29th April 2020 (total 133 messages). Source: Elaborated by the author.*

The analysis revealed that messages sent by SMS did not ended on themselves, as they had the purpose to inform citizens about phone numbers and internet websites where data related to each subject could be better explored. In this sense, the research revealed that these SMS messages summarized all information about government actions amid COVID 19, in order to orient and facilitate New Yorkers' lives during the worst period of pandemic.

Through the analysis of messages content, eight categories have been identified: [1] medical and COVID information; [2] remote learning and school information; [3] food distribution; [4] control of price gouging; [5] small business support; [6] motivational messages; [7] support for victims of domestic violence; and [8] general information. (Graphic 13.3)



*Graphic 13.3: SMS categories from 12th March to 29th April 2020. Source: Elaborated by the author.*

As expected, most messages were related to COVID information (group 1), followed by general information (group 8). Messages related to food distribution, motivational messages and small business support add up to 25%. Messages related to information about school (group 2) were few, because, after the beginning of the pandemic, measures were taken to rapidly migrate to remote learning.

SMS categories also indicate the importance of investments on basic sustainable development goals as an important strategy for strengthening resilience of cities. Messages were related particularly to five goals: Goal 1 – End poverty in all its forms everywhere (SMS about food distribution, control of price gouging and support to small businesses and employees); Goal 2 – Zero hunger (SMS about food distribution and control of price gouging); Goal 3 – Ensure healthy lives and promote well-being for all at all ages (SMS about COVID 19, motivational messages, support for victims of domestic violence);

Goal 4 – Quality education (SMS about school and remote learning); and Goal 5 – Achieve gender equality and empower all women and girls (SMS support for victims of domestic violence). Messages related to the support to small business also are related to Goal 8 – promote inclusive and sustainable economic growth, employment and decent work for all – as it is also important to prepare the city for the period post-pandemic.

New Yorkers took very seriously the advice to stay home and stop COVID dissemination. After two months of COVID 19 outbreak, Manhattan busiest streets and Avenues had no resemblance to what they were, as registered on photos 13.2 and 13.3.



*Figure 13.2: 5<sup>th</sup> Avenue/NYC Thursday May 14, 11AM. Source: The author*



*Figure 13.3: 5<sup>th</sup> Avenue/NYC Thursday May 14, 11AM. Source: The author*

## **Final considerations**

Digital technologies, characteristic of smart cities, present great potential to support actions in exceptional cases, as occurred during 2020 pandemic. The obligation to turn all learning process through digital platforms had led professors, parents and students to deal with e-learning tools. Despite the future of education could not depend only on digital platforms, new alternatives emerged, and can be useful in future endeavors. Telehealth has also increased during the outbreak, revealing new applications to technology.

During the worst period of pandemic, New York City faced the increase of unemployment rate. Among the alternatives to reduce negative impacts of the crisis, small business support and the financial support for the unemployed were crucial. The concern with buying in bulk and price gouging were also a consequence of the pandemic. Government acted vigorously against establishments that tried to explore population through high prices of personal

hygiene items. The rapid communications through digital messages sent by social media have helped to identify these irregularities.

Messages informing population about no need to buy in bulk have been sent, and were essential to avoid shortage in the city. It has been noticed a large number of messages with motivational content. Those messages increased particularly during the third week of confinement, in addition to the support for victims of domestic violence.

Measures adopted by the New York City local government have yielded positive results, and the number of new cases in May and June decreased significantly, which allowed, on the 8th of June, the beginning of phase 1 of the reopening, and the partial return of economic activities.

The analysis of New York City actions brings lessons to be considered by other cities. Government priority must lie in its ability to support population in any circumstances (including in crisis scenarios) and public policies must support the accomplishment of basic SDG's as a strategy to strengthen resilience on cities.

## **Acknowledgments**

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## **References**

- Albino, V. Berardi, U., Dangelico, R.M. (2015) Smart Cities: Definitions, Dimensions, Performance, and Initiatives. *Journal of Urban Technology*. 22 (1), 3–21 [dx.doi.org/10.1080/10630732.2014.942092](https://doi.org/10.1080/10630732.2014.942092)
- Bouzguenda, I., Alalouch, c., Fava, N.,(2019) Towards smart sustainable cities: a review of the role digital citizen participation could play in advancing social sustainability. *Sustainable Cities and Society*, 50, 1-15 [dx.doi.org/10.1016/j.scs.2019.101627](https://doi.org/10.1016/j.scs.2019.101627)

Dameri, R. P., Benevolo, C., Veglianti, E., Li, Y. (2019) Understanding smart cities as a global strategy: A comparison between Italy and China. *Technological Forecasting & Social Change* 142 p. 26-41

Gassmann, O. Böhm, J. Palmié, M. (2019) *Smart cities: introducing digital innovation to cities*. Emerald Publishing Limited

Goodman, D. (2020) How Delays and Unheeded Warnings Hindered New York's Virus Fight. *New York Times*, April 8, 2020 <https://www.nytimes.com/2020/04/08/nyregion/new-york-coronavirus-response-delays.html>

Holshue, M. L. et al. (2020) First Case of 2019 Novel Coronavirus in the United States. *The New England Journal of Medicine*. *N Engl J Med*, 382, 929-36. DOI: 10.1056/NEJMoa2001191

Huovila A., Bosch, P., Airaksinen, M. (2019), Comparative analysis of standardized indicators for Smart sustainable cities: What indicators and standards to use and when? *Cities* 89 141–153 <https://doi.org/10.1016/j.cities.2019.01.029>

ISO (International Standardization Organization) ISO 37120:2018 Sustainable development of communities — Indicators for city services and quality of life.

ISO (International Standardization Organization) ISO 37122:2019 Sustainable development of communities — Indicators for smart cities.

ISO (International Standardization Organization) ISO 37123:2019 Sustainable development of communities — Indicators for resilient cities.

Neirotti, P., Marco, A. de, Caglian, A. C., Mangano, G., Scorrano, F. (2014) Current trends in Smart City initiatives: Some stylised facts. *Cities*. 38, 25–36 <http://dx.doi.org/10.1016/j.cities.2013.12.010>

OneNYC 2050 Building a strong and fair city. <http://onenyc.cityofnewyork.us/>

Smart City Index 2020. <https://www.imd.org/smart-city-observatory/smart-city-index/>

Top 50 Smart Cities Government.  
<https://www.smartcitygovt.com/introduction>

United Nations Economic and Social Council The UNECE–ITU Smart Sustainable Cities Indicators. ECE/HBP/2015/4  
[http://www.unece.org/fileadmin/DAM/hlm/projects/SMART\\_CITIES/ECE\\_HBP\\_2015\\_4.pdf](http://www.unece.org/fileadmin/DAM/hlm/projects/SMART_CITIES/ECE_HBP_2015_4.pdf)

Wuhan Municipal Health Commission. (n.d.) Briefing on the pneumonia epidemic situation 3 January 2020  
<http://wjw.wuhan.gov.cn/front/web/showDetail/2020010309017>

Yahia, N. B., Eljaoued, W., Saoud, N. B. B., Colomo-Palacios, R. (2019) Towards sustainable collaborative networks for smart cities co-governance. *Int. Journal of Inf. Management*, online, 22, 102037, <https://doi.org/10.1016/j.ijinfomgt.2019.11.005>

Yigitcanlar, T., Kamruzzaman, Md., Foth, M., Sabatini-Marques, J. Costa, E. da , Ioppollo, G. (2019) Can cities become smart without being sustainable? A systematic review of the literature. *Sustainable Cities and Society*, 45, 348-365 <http://dx.doi.org/10.1016/j.scs.2018.11.033>

#### **14. A Reading on New Social Praxis and Its Possible Effects on Built Environment in the Post-Pandemic Era through the Brave New World Text**

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Today, the COVID-19 has become a situation with the time and process it covers rather than being a crisis event, and as in every new situation, human beings had to adapt to this. As a qualifier of the current situation, the COVID-19 pandemic has changed temporary and permanent social praxis with its process and urgent demand for adaptation, and also brought many new concepts to our daily life. However, while we were adapted to the existence of this new situation and the process continued as we were yet to adapt to this new situation, and the process was still ongoing, the concept of post-pandemic as an emphasis on the temporality of the current situation and accordingly the new normal concept started to be discussed. Thinking beyond this pandemic, while the event itself becomes a situation and the process continues, proves that the pandemic is actually seen as a temporary situation.

Now, there is a global crisis in another 'Modern' world. This virus, which has become a part of our daily life, now necessarily appears as an urgent issue on the agenda of the whole world, along with the awareness of the need for urgent solutions to social issues. In this context, considering the pandemic and post-pandemic processes, urgent adaptation becomes necessary. In this context, while making assessments on pandemic and the post-pandemic process, the fact that the new or the transformed has taken place as a result of the necessity for an urgent adaptation should be taken into consideration.

#### **Impacts of Covid-19 on Architecture**

While architecture has been provided with some temporary solutions with the pandemic process, it has also shown us the changing human habits with these temporary solutions. The COVID-19 pandemic is not a crisis that happens and fades out of nowhere. The fact that Covid-19 pandemic is not a crisis that has come out of nowhere and faded out likewise, but one that has started, went on for a long time, and probably will lose its effect very slowly shows us that socio-cultural praxes shall also follow the changing habits. As a changing praxis of society, the desire to be increasingly sterile has severely limited the interpersonal physical contact and personal contact with other elements. Re-



organized physical contact has led us to adapt our entire physical environment on an ever-expanding scale, pointing out that possible radical changes will be required in the future.

Since the announcement of the pandemic, in this period when everything from economy to social policies, from management styles to production relations was discussed and transformed, the understanding of architecture and urbanization has had an important place. Since architecture exists both as a cause and a consequence of social praxis, it is seen at the local point of this entire transformation and sits on the agenda of the discussion. The crisis period that develops instantaneously, and the results of the sensational effects left on the lower and upper layers of the current social structure have become a factor that directs the society to transformation.

COVID-19 has chosen cities and megacities as contagion areas. Because, with the development of urbanization, easy and fast transportation, connections between countries have accelerated the spread of COVID. Another reason for this is that the second structural transformation of neoliberal economic policies is the direct living spaces of people. Instead of accepting nature as a whole entity and living in harmony with it, our natural resources have been turned into the primary source of capital accumulation. While there is an intense immigration wave to developing cities, it is seen that the distinction between the rural and the urban has begun to disappear. Ecological integrity is beginning to disintegrate due to uncontrolled settlements. Having a population above the saturation level, this pain in megacities played a major role in its further spread. As a result of this, the public sphere in social mechanisms and the regions that bear the density of the city have lost their function over time, the concept of space has begun to fragment, evolve and transform (Aynur Uçkaç, 2010).

### **Evaluation of the current situation within the concepts of Utopia and Dystopia**

Today's political projects' desire to be totalitarian and their socially imposing idealization, and capitalism's lead to a global disaster with its entropy was an inevitable end. These utopian projects of which we have seen different models in the past, as the ones which have born locally and globally, were an effort to become a universal idea. However, it could not be said that this desire to be a universal idea has yielded a positive result. . In this context, it is likely that utopia will evolve into a phenomenon rather than an existential quest, which is a political project or an anthropological drive. As a consequence, the concept

of dystopia has emerged as a result of the understanding of utopia that lives by the existence of individual who has that idea and is closed to innovations in the long term. Dystopia, which is about the negativities of current situation such as deterioration, natural disasters, anxiety for future and longing for the past, is seen to be a concept triggered by the existence of utopia. In the wake of this narrative, it is aimed to explain the current pandemic and post-pandemic situation through the book *Brave New World* and to analyze the concept of dystopia through the concepts of the book.

### **Re-reading the pandemic process through "*Brave New World*"**

Although this book, which accepts Henry Ford's invention of the production line as a milestone, is written and constructed with utopian influences in theory, it is thought that a dystopian atmosphere prevails in practice and in language of expression. This book, in which the practices of perfectionism and totalitarian ideology which constitute the backbone of Thomas More's utopianism idea has been discussed in a different manner, underlies the utopian political project, and the events in it take place in London which is one of the most important metropolises of the world. Concepts such as art, aesthetic concern, cultural diversity, family, literature, philosophy, and religion are not desired in the fiction in which the management system is provided by a council of the world state and its inspectors and the effects of super-modernity are seen. On the contrary, the fiction that prioritizes the maintenance of a totalitarian regime is built on the concepts of stability, community and identity in order to realize this ideological hegemony of world statist. Elements such as art and science that cause the disruption of social balance and that are likely to create diversity in society are prohibited (A. Huxley, *Brave New World*, 1932).

In the narrative of the book, there is a very strong caste system in the main backbone of the authority in order to sustain the artificial society established with the Fordist mentality. Having emerged due to the differentiation of the necessity of labour force, the caste system creates an understanding of order where every newborn is conditioned to the caste they are within, and where there is no free will as the sovereignty of the individual is not desired.

This society, devoid of feeling and awareness of free will, consists only of individuals serving to spin the wheel of the system. In this new artificial world where a single focused authority and its utopia are aimed to be realized, it is undesirable for the individuals to be isolated from the society to which they

belong, and consequently to be alone. In brief, an authoritarian system whose socio-cultural framework that will support the production-consumption cycle in society is predetermined and limited by the founder of the system.

In the light of the abovementioned issues, it is aimed to explain the current situation and predict the future of the transforming and changing physical environment, therefore architecture, during the pandemic and post-pandemic periods, and to analyse the book *Brave New World* through three main concepts that constitute its structure (community, identity, stability) in order to obtain architectural outputs.

### *Stability*

Managing the pandemic process, or more broadly a crisis, has been a centralized effort for ages. This method is preferred in order to make quick decisions and take immediate action in the events of crisis.

Hence, the method of dealing with crisis for us is a superior hand or mind in the form of *deus-ex machina*. Each crisis increases the strength of the existing single centered superior hand. Because the legitimacy of an existing power, or the lower field and dose of the superior hand is validated by society in these very moments - the moments of crisis. This is both a reason for stability and a result of the desire for stability.

There are two important aspects in which we will need stability. Willingness to accept the accuracy causes us to legitimize the stability of power in order to make quick decisions in a crisis. Another point is that we approve the legitimacy of power, not the situation, in order to avoid facing a secondary power problem in times of crisis and to ensure that the crisis is recovered as soon as possible. Another reason for the occurrence of this situation is that the real and correct source of information about the existing crisis is the government in power, and that it has the right to manipulate the information and data in order to establish stability.

Even if it is assumed that the legitimacy of power shortens the duration of the current crisis, it seems likely that various post-crisis problems are likely. It can be said that every right gained by the rulership is a power; the expansion of the jurisdiction of the existing single focused power means that this power activity gained in the post-crisis period will continue, given the principle of non-fixed of acquired rights.

As seen in the book *Brave New World*, while the utopia of the World Controllers and Mustafa Mond who adopt the approach of Fordism and have almost unlimited single-focused power is realized, the people who have not encountered an alternative to this in their life do not have a good or bad judgement about this system and order. However, the view that this system and order is dystopian is prevalent among reader, which is an eye that looks at *Brave New World* universe from outside. Therefore, in this period of crisis, post-pandemic and subsequent periods, which expand the legitimacy and jurisdiction of the totalitarian power, it is likely that individual powers will assume the role of 'social engineer' and create a suitable environment for imposing their utopias on the people. The social memory, which has collapsed in time, will now passively participate in the new system and order, and it will become unable to question the quality of existing order.

### *Identity*

The current pandemic is the name of a transforming system that we call the new normal today. When the new normal continues in the post-pandemic period, the 'new' suffix from the beginning will be just normal and we will stop putting the word normal in front like every normalizing thing.

The sustainability of a system that has been transformed a subsequently altered and completely reconstructed as in the *Brave New World* is linked to identicalness. This identicalness includes relatively more or less similarity, without allowing for thoughts contrary to the main principles adopted. The whole of the new normal principles that we are voicing during the pandemic process today is the desire to create identicalness that will ensure that they are not contrary to the newly created understanding of protection. This pandemic takes place in the understanding we call 'public health' and is a set of common practices that lead to a more sterile life in order to protect individuals and social life from contamination. These practices are both operational in the context of the individual, in the context of the physical environment and its reorganization, and the reconstruction of social relations, making many new practices common to people, making them somewhat identical. In the current situation, which we consider as extraordinary, the principle of identicalness appears before us as a result of power, and after the pandemic as a cause of power. Everything stays stable in an environment where there is no descent.

With the broadening of the social gap between the body and the brain labour force by capitalism, the upper-middle class have started to settle in city centers

in terms of urban internal and external relations, whereas the labourer and the underclass have been pushed to the suburban. However, with the pandemic, this relationship is reversed; the upper-middle class living in big cities moved out of cities and urban centers, while the lower segment remained in the city centers. As a new layer of this internal vs. external context, the home environment becomes the place where the upper segment, namely the brain workforce, meets all their needs of protection and works in the period of the pandemic, but the home-workplace duality still exists for the lower segment whose capital is their physical power.

As can be seen, the life thus rearranged with the motive of being protected and sterile, both socially and physically separated people and ensured that there were common lifestyles within these differences. This process, which is mostly combined in the socio-economic denominator, ensures communitisation in the future making people identical.

### *Community*

By management systems, 'Life fits into the home', since the motto was introduced, the compulsory lifestyle based on staying home is a sign of a new process for people in the pandemic period we live in. The house (shelter) which is one of the basic concepts of the architectural literature is now transforming into a more productive and multifunctional phenomenon. In this process, reconsidering the development of urban space is now inevitable, as is creating a threshold for architecture as a tool that shapes the future. With the changing home concept, potential new uses of the house have begun to be reprogrammed within the framework of health (Selin Gürdere Akdur, 2020).

Since the phenomenon we define as home is essentially a component of private life, the unity of private and public brings new spatial decisions together. With the effect of neoliberalism, it is inevitable for the concept of housing to turn into a commodity with intensive production. Therefore, the house is no longer just a stop or accommodation point where we sleep, get up in the morning and go to work or school, but suddenly becomes a space of process that includes the world. The house is transformed into a living space on the one hand and multi-production space on the other. This situation reveals the differentiating home concept for the upper and middle class, new production relations and timeless interaction order with the effect of digital. Home-office workers and non-home-office workers can be observed as an

example in pandemic and post-pandemic period (Dr. Sapna Papu, Braced for Impact: Architectural Praxis in a Post-Pandemic Society, 2020).

Community is the result of single or multifocal identicalnesses, and the evidence of the partnership of identicals. However, principle of community, which plays an important role in maintaining loyalty, which is the ultimate way of ensuring stability, can work through a single community or multiple communities. Even though one seems unicentric and the other multifocused, this is an illusion. The community either divides society into groups with common characteristics and keeps them loyal to a thought, lifestyle and understanding, or it ensures their loyalty by simultaneously subjecting the whole society to a body of beliefs and rituals. This can be done with religion, for the whole society, or, if we think through communities, with groups that contain features and unifying elements of different socio-economic classes.

## **Conclusion**

Today, we are experiencing the architectural adaptations and changes brought about by the pandemic. These are shaped as direct consequences of the pandemic. However, indirect factors that are not easily noticed are converting human life day by day; realizing this evolution and making predictions about what we may encounter is very important for us today. As a result of the totalitarian forces being agitated by both a world health crisis and the economic crises that have a direct effect, they become stronger, their influence and authority increase, and as a result of the health crisis dividing us into classes for socio-economic reasons, they become more manageable units by governments. The city and architecture of our future are evolving into a physical environment in which segmented people can be more easily governed, while these different groups become increasingly alienated from each other and cannot use each other's space. Thus, the concept of space evolves into a different commodity and the concept of time perceived by the users, with the disappearance and digitalization of the interaction boundaries, creates the concept of time-space. Besides, with the separation of our experience in the context of both architecture and the city into a number of procedural uses and processes, it pushes us towards a predictable and procedural life that does not allow anything extraordinary to happen, thereby clandestinely increasing the power of the ruling power.

Although the social memory which does not easily give up its habits protects us from the current health crisis with the new habits it gains today, it seems

very likely that our altered lifestyle and our physical environment which we have transformed will take us to a point where we cannot reach each other anymore, when our new order of life which is shaped by our habits will cease to be the new normal and become a future that represents our ordinary state. However, the changing structured environment is likely to reveal feelings such as rethinking the social components that trigger social and individual problems, and as a result of the triggering factors, such as future anxiety, warning to deterioration, and longing for the past. Our life, shaped by the laws of contamination where physical contact is minimized, will alienate, marginalize and isolate us in the future while protecting us today.

## References

Abhijit Banerjee, Rohini Pande, Michael Walton. 2012. *(Working Paper) Delhi's SlumDwellers: Deprivation, Preferences and Political Engagement among the Urban Poor*. International Growth Centre, LSE.

Chatterjee, Partha. 2013. *Lineages of Political Society: Studies in Postcolonial Democracy*. Columbia University Press.

Aldous Huxley, *Brave New World*, ISBN 978-9756092165

Prashad, Vijay. 2020. "A Socialist Cry for Civilisational Change: COVID-19 and the Failure of Neo-liberalism." *Economic and Political Weekly Engage* 55 (16).

Trancik, Roger. 1986. *Finding Lost Space: Theories of Urban Design*. John Wiley & Sons.

Emma Newburger. (2020). "Air Pollution Falls as Coronavirus Slows Travel, but Scientists Warn of Longer-Term Threat to Climate Change Progress." cnbc, 22 March. <https://www.cnn.com/2020/03/21/air-pollution-falls-as-coronavirus-slows-travel-but-it-forms-a-new-threat.html>

Sapna Papu, Shreyasi Pai. 2020. *Braced for Impact: Architectural Praxis in a Post-Pandemic Society*. BMS School of Architecture, Bangalore.

Tezcan Karakuş Canan. 2020. *Pandemic, city, place, life and future*. <https://gazeteduvar.com.tr/forum/2020/05/08/pandemi-kent-mekan-yasam-ve-gelecek>

Evren Başbuğ. 2020. *Architecture after pandemic.*  
<https://yapidergisi.com/pandemi-sonrasi-mimarlik/>

Ezio Manzini. (2020). "Covid-19 and Social Innovation: Contactless Sociability and Hybrid Communities of Place." <https://www.desisnetwork.org/2020/04/07/covid-19-and-social-innovation-contactless-sociability-and-hybrid-communities-of-place/>

Selin Gürdere Akdur. 2020. *Coronavirus in the Social Design Pandemic.*  
<https://xxi.com.tr/i/koronavirus-pandemisinde-sosyal-tasarim>



## **15. The Pandemic Reveal: American Housing Policy 1920 - 2020, and its Lasting Impact on the Black Community**

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### **Overview**

The Covid19 outbreak in America in the spring of 2020 has disproportionately impacted the black community in America, exposing long-standing vulnerabilities. This impact has shed a long-overdue light on the connection between wealth, health, housing, and race in America. The epidemic itself did not create the disproportions of this disaster; housing policy installed and uncorrected over generations of American history did.

### **Past housing policy issues**

November 2, 1920, by a landslide popular vote of 60 percent, Warren G Harding was elected president of the United States. Following the red summer of 1919, and leading up to the Tulsa, Oklahoma Riots of 1921, he entered office in a time of great civil unrest as the Great World War was coming to an end. As war veterans returned, American cities would struggle to find housing and job solutions.

In 1922, The Department of Commerce issued the Standard State Zoning Enabling Act. The SZEa discusses grant power, legislative rights of local districts, and the procedures for establishing and amending zoning regulations.

During the 1920s and up until the 1960s, roughly 7 million African Americans migrated from the southern portion of the U.S. to the northern cities, mainly New York City, Chicago, Detroit, Boston, and Cleveland. These Americans migrated, leaving for new higher-paying industrial jobs. They also moved to escape the Jim Crow systems of the south. But the northern cities relegated the new residents to specific sections of town like the south. These boundaries were defined and policed with physical force, restrictive covenants, and private deed restrictions.

The U.S. Federal Housing Administration (FHA) was established in 1934. This department practiced a "redlining policy." This practice outlined areas that can receive government-backed mortgage financing for homeownership. These areas strategically did not include African American communities.

Simultaneously, the FHA provided incentives for builders who created homes in approved communities that prevented sales to African American home purchasers. This program encouraged and sustained segregated suburban communities across America. In the coming decades, Americans would build the most significant source of wealth known in human history, primarily attributed to single-family homeownership. African American families did not enjoy this wealth creation event.

In 1962, President John F Kennedy issued an executive order mandating the end of race-based discrimination in housing funded by federal agencies. It was not until the Fair Housing Rights Act of 1968 that the federal government created enforceable action. This act prohibited discrimination concerning the sale, rental, and financing of housing based on race, religion, national origin, or sex. This bill passed quickly, just days after the assassination of Rev Dr. Martin Luther King Jr and the resulting race riots in major cities across America.

### **Current housing policy issues**

Current housing policies do not adequately provide incentives that encourage homeownership to all Americans. African American communities were previously purposely castigated through redlining. In those same communities, health conditions have deteriorated from generations of underinvestment and harmful land-use practices.

The U.S. Housing and Urban Development (HUD) was created in 1968 by Lyndon Johnson to develop and execute housing policies on behalf of the federal government. Although FHA predates HUD, FHA is now a component of HUD. FHA is focused primarily on low-down-payment loan programs for individual borrowers. HUD administers many programs, including multifamily housing loans and, most notably, subsidizing Public Housing.

Many African Americans who live in government-subsidized housing find themselves in unhealthy housing accommodations without the financial means, encouragement, or assistance needed to leave. Their homes are affordable but do not lead to homeownership and will not build wealth for their future generations. Over the years, the quality of these buildings has declined significantly.

Research has shown that decades of segregated communities has led to residents having vulnerable health conditions. In these communities, living

close to high volume roads increases rates of respiratory diseases such as asthma. These communities have less access to health promotion tools such as parks, recreation, and grocers selling fresh produce. Community residents' health is negatively affected by the proliferation of liquor stores, convenience stores, and fast-food outlets.

### **New housing policy solutions**

This paper considers the extent to which financial incentives encourage communities to improve diverse residency and homeownership, undoing decades of FHA harm. It contends to offer new solutions to inspire cities/states to meet and exceed diversity goals providing redress for the housing inequalities faced by minority communities for generations.

#### *FHA loan program*

FHA must provide a new loan program for African Americans. This population was excluded from the incredible wealth creation of the mid 19th century. A robust homeownership education program must be implemented to ensure initial and ongoing success. FHA should create a zero-interest loan program, with a preference for those directly impacted by past transgression acts. Priority also for current public housing residents.

#### *HUD community reinvestment*

HUD must reinvest into its current buildings and communities to stimulate diversity. HUD should increase income restrictions and rental limits that are adjusted relative to the new higher-income residents. The execution should be similar to New York State rent stabilization laws; existing residents will have adequate protections, but also new market-rate housing units can coexist in those buildings. This increase in revenue will create much-needed cash to fund repairs and redevelopment projects. 50% of all staff should live in the community or nearby. Employees who live in that community will ensure quality care, maintenance, and a sense of community for the properties.

#### *Reduce density and demolish unsafe buildings*

HUD must redevelop existing buildings into high performing structures. They must demolish buildings that are unsafe and unhealthy. Many public buildings

are well beyond their usefulness. The rents in those buildings cannot support the needed repairs. Creating safe living conditions in enormous low-income towers has been problematic for decades. HUD must simultaneously work on new local community-based low-density housing solutions.

Tenants in existing buildings should receive the option to obtain tenants based vouchers, giving them the mobility to move to better housing. Those vouchers should pay rents at 130% of the fair market value; this will encourage landlords to accept those applicants in high volumes.

## **Conclusion**

In closing, the segregation problem was created and upheld by the U.S. local, state, and federal governments. This paper proposes that these government entities now actively engage in the correction. Quality housing is the bedrock of a healthy community, along with stable employment and access to excellent education. This pandemic should create a moment of reflection. The public and private parties must make our communities more robust and more resilient for everyone.

## **References**

Rothstein, Richard (2017) *The Color of Law: A Forgotten History of How Our Government Segregated America*, Liveright; Illustrated Edition

## **16. House Types, Settlement Patterns, Infrastructure and Physical Distancing Measures during the COVID-19 Pandemic**

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## **Introduction**

Klaus (2020) claims that “Disease shapes cities.” and that the corona virus is an opportunity to study the relationship between design and public health. While COVID-19 is not as deadly as other viruses, yet it transmits more easily and

comes at a time when the interconnectedness of the world has meant its spread has been fast and destructive.

The pandemic has exposed that the persistent spatial, economic and social inequalities and the stark discrepancies in many parts of the world, and the differences in the capacity to deal with “distress, disruptions and economic shocks.” (Valodia and Francis, 2020); the further exposure of the systemic dysfunction may be seen as an opportunity to implement fundamental change (Harding, 2020).

Diverse mitigating measures to further reduce the spread of the virus are being put in place. Countries all over the world have faced a sporadic rise in cases of both infections and deaths. Globally, studies show that as of September 2020, the spread of COVID-19 had reached 213 countries, with 28,488,844 confirmed cases and 916,296 deaths recorded (WHO, 2020). In Nigeria, 55, 829 cases and 1,075 deaths (NCDC, 2020) have been recorded during this period. Similar to other pandemics, particularly the plague (Poland and Dennis, 1998) and Spanish flu in 1918 (Wilton, 1993), human mobility aids the transmission which therefore necessitated the adoption of strict interventions such as: social distancing (Stein, 2020), isolation, and quarantine (Mizumoto and Chowell, 2020; Lau, Khosrawipour, Kocbach, Mikolajczyk, Schbert, Bania and Khosrawipour, 2020). These measures have been found to be successful over time to significantly reduce the spread and flattening the curve. This has become necessary as till date, no approved vaccine has been developed to control the spread of this infectious disease.

### **Stay/shelter at home directives and the consequences**

The crisis brings to light the impossibility for large proportions of populations to follow the requirements for reducing the chances for infection, specifically isolation and frequent hand washing; the former is difficult because of overcrowding in poor areas and informal settlements and the latter difficult because of the costs it adds to the expenses of already struggling families. In Karachi, it is estimated that an 8-person household would need an extra 2.8 cubic meters of water for hand washing – costing around around 7.5 dollars per month (Karachi Urban Lab, 2020). This is excessive in a country where the average income is 112.5 dollars (CEIC, n.d.). Valodia and Francis (2020) explain how the poorest households in South Africa have on average five members and a monthly income of 136 dollars; much of this income being lost due to the shutdown. The authors compare this to the wealthier segments of the

population in South Africa who have on average two people per home with a monthly income of about 1993 dollars. The shutdown means that these wealthier households will continue to earn an income and many will save money during this time. (Valodia and Francis, 2020).

The vulnerabilities of particular poor communities' means that the first line of defence in the fight against the virus should be in the contexts of extreme urban poverty and overcrowding – contexts that many times go underserved, unrecognised and undocumented. How can we increase the resilience of people living in these kinds of urban conditions? Resilience under these conditions will mean devising strategies to help communities cope with the socio-economic changes that will inevitably happen because of the virus, the shutdowns and the life changes that will happen at community and family levels. Other vulnerabilities due to natural disasters and climate change will continue – placing many urban populations in precarious situations. Indeed, the interconnectedness of health and climate has been powerfully argued even before this current crisis broke out (Dhaliwal, 2019).

Numerous studies have tried to explain the concept of social distancing which is used interchangeably as physical distancing, and how it relates to the COVID-19 pandemic. For instance, Musinguzi and Asamoah (2020) defined social distancing to be a deliberate effort designed to reduce the spread of contagious diseases by closing partly or wholly, social activities. Again, Sen-Crowe, McKenney and Elkbuli, (2020), put social distancing simply as the practice of increasing the space between people thereby lessening the chance of spreading illness. Similarly, social distancing is designed to reduce physical contact between people who may either be infectious or are yet to be identified (Wilder-Smith and Freedman, 2020; Rosman, et al, 2020). Other social distancing measures adopted include travel bans and lockdown (Zhang, Jiang, Yuan, Tao, 2020), the prohibition of gatherings, curfews (European Centre for Disease Prevention and control, 2020) and also closure of schools, places of worship, markets and reduction in social interaction (Vrugt, Bickmann and Wittkowski, 2020).

Globally, the coronavirus pandemic is gradually transforming human relationships and there is strong evidence that social distancing has a significant effect on mental wellbeing as people over time have had to deal with depression and anxiety (Hawryluck, Gold, Robinson, Pogorski, Galea, and Styra, 2020; Jeong, Yim and Song, 2020; Faris 2020; Rubin and Wessely 2020). From a social perspective, both individual, as well as community-wide actions

have been taken. Individual actions refer to working remotely, avoiding public transportation and also staying at home while community-wide actions, on the other hand, relates to closure of public spaces (Sen-Crowe et al, 2020). Also, studies reveal that during social distancing, people are confined, separated from loved ones, deprived of personal liberties and equally have routine altered (Bai et al, 2004). These in turn according to Venkatesh and Edirappuli, (2020) can influence frustration, boredom, and potential depression. In terms of household size, it is observed that the impact of social distancing will be unevenly felt (Long, 2020). People who stay alone are disadvantaged and emotionally deprived. This is however different with those who live in nuclear households as studies show that they enjoy physical presence with family (Baldassar 2008, Bowlby 2011). As a result, social distancing has brought about human mixing patterns and other related forms of human mobility restrictions in the face of this pandemic. Social distancing in informal settlements is very difficult to achieve. This is partly due to issues relating to neighborhood structure and pattern. Also, there exists no proper record of houses and households living in such neighbourhoods. This makes it different from developed countries where there is proper documentation of citizens. In Cape Town, South Africa for example, the study of Gibson and Rush, (2020) reveals that a threat to personal as well as neighborhood hygiene is bound to sprout as a result of the lack of social distancing. This is because houses are not equipped with basic infrastructure with the lockdown preventing access to community toilets for example. Homes are also overcrowded making it uncomfortable. This, therefore, begs the question, is social distancing and lockdown adaptable to African countries? The physical distancing and stay/shelter at home orders have been enforced, it is, therefore, important to investigate the housing environment where people live. The house types and ownership status, settlement density and access to services are essential in maintaining physical distancing through which issues about Covid-19 can be assessed.

The global COVID-19 pandemic with its numerous consequences induces so many effects on societal and residential lifestyle. Social life and interactions are reduced and many households experience drastic shifts and changes in their use of spaces. Household spaces recorded reduction in productivity, efficiency, requirements, and management thereby leading to further increases in stress (Altena, et al 2020). The individual and societal behavioural changes are practicable means of fighting the impacts of COVID-19 pandemic. Controlling the spread of the Covid-19 necessitated some human behavioural changes in limiting the occurrences, impacts and ruthlessness of the diseases (Ainsworth, et al 2020). However, the

conventional spatial configurations of homes, cultural differences within homes, financial difficulties and households are responsible for limiting behavioural changes (Atchison, et al 2020; Ainsworth, et al 2020).

This study therefore considers these factors in combination and how they offer opportunities or constraints in maintaining the physical distancing and hygiene levels needed to curb the spread of the virus. The current health crisis therefore calls for an improvement in the design and development of household's spaces and the entire built environment such that will increase the potency of the built environment against infectious diseases (Chang, 2020). Curtailing the spatial impacts of Covid-19 and "preventing households spreading" requires not only the design of isolation centres but also the development of an all encompassing design solutions for all "building types and urban physical spaces" (Saadat, Rawtani & Hussain, 2020).

## **Methodology**

Four residential communities in the core of Akure Nigeria were purposively selected based on their perceived high level of poverty as documented in previous studies of urban poverty. (Ayoola, 2015). The four purposively selected communities are, Araromi, Oja Oshodi, Odo-Ikoyi and Isolo. The sample size was based on the number of existing buildings in the area and questionnaire administration was distributed to one person per household and a household per building. Out of a total population of about 784 residential buildings, the sample size for the study is 211, which was generated using the sample size calculator with a confidence level of 95%. A systematic random technique was used to select the houses that were studied and heads of households in each house were the basic focus of questionnaire administration. Since the study area was majorly a poor residential neighbourhood and homogenous by nature, the first house was randomly selected in each neighbourhood, and subsequent selection of every fourth building along the line of movement.

The structured questionnaire was used to obtain information on the demographic characteristics of the respondent, physical distancing measures, house types and ownership status, settlement patterns, level and adequacy of infrastructure and the changes people created in their home spaces to reduce the transmission and delay the spread of COVID-19. The data collected was subjected to descriptive and inferential analyses using the statistical package



for the Social Sciences (SPSS) to evaluate the relationship between preventive measures and house types

## **Results and discussions**

### *House types and characteristics*

Four main house types were found evident in the neighbourhood under survey. The most dominant house type in the neighbourhood is the rooming apartment (also referred to as face me I face you in Nigeria), which constitute 77.7% of the houses. Other house types are flats-bungalow (9%), storey buildings (10.9%) and bungalow-single family unit (2.4%). The majority of the respondents (51.7%) are renters while (39.8%) are homeowners, 1.9% live rent free and 6.6% live in family houses without rent. More than half of the houses (60.7%) have between 5-6 rooms, while (28.4%) have 3-4 rooms and (11.4%) of the houses have higher numbers of rooms. More than half of the houses (50.7%) were occupied by an average of 4-5 households and (49.8%) of houses are inhabited by an average of 16-20 people. The houses are generally characterised by overcrowding. A cursory look at the houses in terms of services, suggested that most houses (79.1%) have pit latrines and (18.5%) have water closet while others do not have any form of toilets at all or use the bucket latrine. The toilets (66.4%) are majorly shared among households with no regular source of water supply. The major source of water in the neighbourhood is well and (78.2%) of the house rely on this manually operated well as their major source of water supply.

### *Personal behavioural responses*

The respondents answer to questions about behavioural changes, within and or around the house during the Covid-19 pandemic. Across the neighbourhoods (98.1%) of the respondents confirmed they altered their behaviour to reduce the risk of contracting the virus. Some of the responses mostly reported by the respondents were based on health concern. The highest category (80.1%) of respondents made these changes based on health concern and fear of contracting the virus while (18.1%) made changes based on financial constraints and other social issues. Some of the behavioural changes adopted by respondents are personal hygiene (98.1%), extra house cleaning (76.1%), social distancing (73%), wearing of mask (90.5%), restrictions to visitors (74.9%), restriction on social interactions (76.3%), change in functional use of space (23.7%) and isolation (1.4%). Some of the respondents

also made few adjustments to their household composition by sending away a member of their household (12.3%) and (16.1%) of the respondents had reasons to bring in someone into their house during the pandemic.

### **Awareness and knowledge preventive measures against the spread of COVID-19**

Questions pertaining to knowledge and awareness of the virus and preventive measures to stop community transmission of the virus were asked. Respondents (99.6%) are generally aware of the outbreak of the coronavirus (COVID-19). Additionally, the respondents were asked which of the control measures put in place by the government was well accepted and adhered to in their community. Wearing of facemask in public received the highest level of acceptance (67.8%) followed by social distancing (9.5%), curfew (7.6%) and lockdown (4.3%). Other safety measures such as isolation and physical distancing received lower level of acceptance and adherence. This low level of acceptance could be linked to the fact that residents in the neighbourhood largely have no place to isolate, low level of education and a high concentration of poverty in the neighbourhood. However, about half of the respondents (51.6%) agreed that the control measures put in place by the government has indeed been effective in curtailing the spread of the virus in their neighbourhoods.

### *Household coping strategies and survival mechanism*

Respondents were asked how they coped with life amidst the pandemic and the several survival mechanism adopted by various households. A high percentage of the respondents (69.7%) had reasons to visit the neighbourhood market to get their daily needs during the lockdown period while (27%) of the respondents have already stocked up food items and other essentials. Also, 39.8% of the respondents claimed they go out at least once a week while 19.4% and 17.5% of the respondents go out daily and every other day respectively during the lockdown. The survey revealed that the market (55.5%) and work (22.8%) are the two most visited places. Also, 5.7% of the respondents go out to visit friends and 11.8% go out for recreational purposes.

Respondents received support either from friends, relatives, social group/religious institutions and government during the pandemic. Support from family members (36%) and friends (30.8%) ranked highest, followed by religious institutions and social groups (27.5%). It is however worthy of note

that only 3.8% of the respondents received support from government despite the fact that the poor are the most hit economically by the pandemic. The type of support received differs among the respondents, about a third of the respondents (31.8%) received support in terms of cash while (56.9%) of the respondents received food items, others received internet/service access (5.9%) and drugs (0.9%).

The implication of the result is that social capital is beneficial during a pandemic. However most household have experienced disruption in their economic enterprises, as a result of the pandemic and respondents have resulted into coping mechanism and trade-offs. Coping strategies adopted by households includes, reduction in non-food consumption (91.9%), reduction in food consumption (71.1%), credited purchases (16.6%), borrowed from friends and family (21.3%), sale of personal property (11.4%), and engaged in additional income generating activity (28.4%), while others resulted into drawing from their personal savings (86.3%). All the coping mechanism embarked on by the respondents may turn out to have severe consequences on their survival after the pandemic

#### *House types and safety precaution measures*

Several safety measures were practised by the respondents within the house, 98.1% practiced personal hygiene (hand washing and body washing), extra house cleaning (77.3%), physical distancing (33.2%), masking (67.8%), isolation (6.2%), restriction on movement (14.7%), restriction on social interactions (83.9%) and change in functional use of space (36.5%). Irrespective of the house types, the practice of personal hygiene and extra house cleaning was found highest in all the house types. Physical distancing was well practiced in all the house types except rooming apartment (9.1%). Wearing of mask within the house was common in rooming apartment (92.9%) compared to all other house types, while isolation was not part of the safety measures practiced in rooming apartments compared to other house types. Restriction of movement and social interaction was higher in all the house types except in bungalow-single family unit. Change in functional use of space was common to all the house types but found higher in rooming apartment (42.4%). The implication of the result is that there were slight variations in the precautionary measures adopted in each of the house types.

The spearman's Rho correlation was used to test for significant relationship between house types and safety precaution measures. Table 1 indicates that

there is a significant relationship between five of the safety precaution variables while three variables have no significant relationship with the house types. The significant variables as shown in the table below were physical distancing ( $p < 0.0005$ ), masking ( $p < 0.0005$ ), isolation ( $p < 0.0005$ ), restrictions on social interactions ( $p < 0.0005$ ) and change in functional use of space ( $p < 0.0005$ ). Safety precaution measures such as personal hygiene, extra house cleaning and restriction of movement have no significant relationship with house types in the study area.

The result of findings conform with Atchison et al., (2020), Schellenberg & Fonberg, (2020) who opined that dwelling types are important in maintaining safety measures and the “stay/shelter at home” order may raise other challenges such as maintaining physical distancing in multi-unit buildings where lobbies and other housing facilities are shared. In some cases, the extent of “home” is unclear where people have to leave the confines of their living space to access water or share amenities and where many families share the same living space.

			Types of house	Remarks
Spearman's rho	personal hygiene	Correlation Coefficient	-.083	Not significant
		Sig. (2-tailed)	.228	
		N	211	
	extra house cleaning	Correlation Coefficient	-.020	Not significant
		Sig. (2-tailed)	.768	
		N	211	
	Physical distancing	Correlation Coefficient	-.833**	Significant
		Sig. (2-tailed)	.000	
		N	211	
	Masking	Correlation Coefficient	.870**	Significant
		Sig. (2-tailed)	.000	
		N	211	

Isolation	Correlation Coefficient	-.365**	Significant
	Sig. (2-tailed)	.000	
	N	211	
restriction on movement	Correlation Coefficient	-.055	Not significant
	Sig. (2-tailed)	.424	
	N	211	
restriction on social interactions	Correlation Coefficient	.331**	Significant
	Sig. (2-tailed)	.000	
	N	211	
change in functional use of space	Correlation Coefficient	.201**	Significant
	Sig. (2-tailed)	.003	
	N	211	

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Table 16.1: Relationship between house types and preventive measures

## **Summary and conclusion**

In terms of house types and its characteristics, four main house types were considered dominant in the study area: rooming apartment (77.7%), flats-bungalow (9%), multi-storey buildings (10.9%) and bungalow-single family unit (2.4%).

In terms of tenure, the majority of the respondents are renters (51.7%) while (39.8%) are homeowners and, in terms of size, more than half of the houses (60.7%) have between 5-6 rooms. Most of the houses (50.7%) were occupied by an average of 4-5 households and (49.8%) inhabited by an average of 16-20 people. Services were poor in the houses with the majority of the houses using pit latrines (79.1%) and many households sharing toilets (66.4%). Water supply was also considered poor with 78.2% of the houses relying on manually operated wells without direct supply to the houses

Respondents are generally aware of the outbreak of the virus (99.6%) and wearing of masks (67.8%) is the most practiced safety measure. Most of the respondents received support mainly from family (36%) and friends (30.8%), in the form of food items (56.9%) and cash (31.8%). Several coping mechanisms such as reduction in food and non-food consumption were adopted by the respondents to mitigate the consequences of the pandemic.

Majority (98.1%) of the respondents confirmed they altered their behaviour to reduce the risk of contracting the virus. Ability to self-isolate was low across the neighbourhoods, as most respondents have no space to isolate.

This study confirmed a significant relationship between house types and some of the preventive measures. The study concluded that house type have significant influence on the practice of safety measures. Willingness to comply with certain preventive measures was generally low in poor residential neighbourhoods. It is concluded that government must also give more support for households to mitigate the social and economic challenges experienced by the poor during the pandemic. Policy makers and government need a better understanding of the impact of the pandemic on the living environments in many communities with a view of informing better responses to curtail the spread of the virus in different settlements, house types and income group.

## **References**

Ainsworth, B., Miller, S., Denilson-Day, J., Stuart, B., Groot, J., Rice, K., Bostock, J., Yang Hu, X., Morton, K., Towler, L., Moore, M., Wilcox, M., Chadborn, T., Gold, N., Amlot, R., Little, P., Yardley L. (2020). Current infection control behaviour patterns in the U.K and how they can be improved by 'Germ Defence' an online behavioural intervention to reduce the spread of COVID-19 in the home. Retrieved June 23rd from medRxiv. <https://doi.org/10.1101/2020.06.22.20137406>

Altena, E, Baglioni, C, Espie, CA, et al. (2020). Dealing with sleep problems during home confinement due to the COVID-19 outbreak: Practical recommendations from a task force of the European CBT-I Academy. *Journal of Sleep Research*. Epub ahead of print 4 April 2020. DOI: 10.1111/jsr.13052.

Atchison, C. J, Bowman, L., Vrinten, C., Redd, R., Pristera, P., Eaton, J.W., Ward, H. (2020). Perceptions and behavioural responses of the general public during the COVID-19 pandemic: a cross-sectional survey of UK adults. Retrieved on 20<sup>th</sup> August, 2020 MedRxiv: <https://doi.org/10.1101/2020.04.01.20050039>.

Ayoola, H. A. (2015). Urban poverty in the core residential neighbourhoods of Akure (Unpublished Doctor of Philosophy Thesis), Obafemi Awolowo University, Ile-Ife.

Bai Y, Lin C-C, Lin C-Y, Chen J-Y, Chue C-M, Chou P (2020). Survey of stress reactions among health care workers involved with the SARS outbreak.

Baldassar, L. (2008). Missing Kin and Longing to Be Together: Emotions and the Construction of Co-Presence in Transnational Relationships. *Journal of Intercultural Studies* 29, no. 3: 247-266. <https://doi.org/10.1080/07256860802169196>.

Barnett-Howell, Z. and Mobarak, A. H. (2020). The benefits and costs of social distancing in rich and poor countries.

Bowlby, S. (2011). Friendship, Co-Presence and Care: Neglected Spaces. *Social and Cultural Geography* 12, no. 6: 605-622. <https://doi.org/10.1080/14649365.2011.601264>



Chung, C.K.L., Xu, J., and Zhang, M. (2020). Geographies of Covid-19: how space and virus shape each other, *Asian Geographer* .  
<https://doi.org/10.1080/10225706.2020.1767423>

Dhaliwal, M., 2019, *Climate and health: finding common cause, in United Nations Development Programme, available at <https://www.undp.org/content/undp/en/home/blog/2019/climate-and-health--finding-common-cause.html>, accessed 05.04.2020, 21.21*

European Centre for Disease Prevention and Control (2020, March 23). Considerations relating to social distancing measures in response to COVID-19 – second update.

Stockholm: ECDC. Retrieved from  
<https://www.ecdc.europa.eu/sites/default/files/documents/covid-19-social-distancingmeasuresg-guide-second-update.pdf>

Faris, D. (2020). Coronavirus' Looming Psychological Crisis. *The Week*, 19 March 2020, <https://theweek.com/articles/903343/coronavirus-looming-psychological-crisis> [Accessed 15 April, 2020].

Gibson, L. and Rush, D. (2020). Novel Coronavirus n Cape Town Informal Settlements: Feasibility of using Informal Dwelling Outlines to Identify High Risk Areas for COVID-19 Transmission from a Social Distancing Perspective. *JMIR Public Health and Surveillance*. 6(2). 1-9. doi: 10.2196/18844

Hawryluck, L., Gold, W., Robinson, S., Pogorski, S., Galea, S., and Styra, R. (2004). SARS control and psychological effects of quarantine, Toronto, Canada. *Emerging Infectious Diseases* 10(7):1206-1212

Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., ...& Cheng, Z. (2020). "Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China". *The lancet*, 395 (10223), Pp 497-506.

Jeong H, Yim HW, Song Y-J. (2020). Mental health status of people isolated due to Middle East Respiratory Syndrome. *Epidemiol Health*

Karachi Urban Lab, 2020, Why the COVID-19 crisis is an urban crisis, co-authored by Adam Abdullah, Maheen Arif, Soha Macktoom, Arsam Saleem,

Muhammed Toheed, Dr Nausheen H Anwar, Dr Gulnaz Anjum and Dr Amiera Sawas, in Dawn Prism 2nd April 2020, available at <https://www.dawn.com/news/1544933>, accessed 05.04.2020, 15.38

Klaus, I., 2020, Pandemics are also an urban planning problem, in City Lab 6 March 2020, available at <https://www.citylab.com/design/2020/03/coronavirus-urban-planning-global-cities-infectious-disease/607603/>, accessed 31.03.2020, 16.45

Lau, H., Khosrawipour, V., Kocbach, P., Mikolajczyk, A., Schbert, J., Bania, J., and Khosrawipour, T. (2020). The positive impact of lockdown in Wuhan on containing the COVID-19 outbreak in China. *Journal of Travel Medicine*, 27(33).

Long, N. J. (2020) From social distancing to social containment: reimagining sociality for the coronavirus pandemic. *Medicine Anthropology Theory*. ISSN 2405-691X (Submitted)

Mizumoto, K., and Chowell, G. (2020). Transmission potential of the novel coronavirus (COVID-19) onboard the diamond princess cruises ship, 2020. *Infectious Disease Modelling*, Vol.5, pg. 264-270.

Musinguzi, G. and Asamoah, B. O. (2020). The science of social distancing and total lockdown : Does it work? Whom does it benefit. *Electronic Journal of General Medicine*. 17(6). 1-3. <https://doi.org/10.29333/ejgm/7895>

Nigeria Centre for Disease Control (2020). Infection prevention and control recommendations during health care provision for suspected and confirmed cases of COVID-19. Retrieved on Sept. 9, 2020 from [www.covid19.ncdc.gov.ng](http://www.covid19.ncdc.gov.ng)

Poland, J. D., and Dennis, D. T. (1998). "Plague" *Bacterial Infections of Humans*. 545-558.

Ren, L. L., Wang, Y. M., Wu, Z. Q., Xiang, Z. C., Guo, L., Xu, T., ... & Li, H. (2020). "Identification of a novel coronavirus causing severe pneumonia in human: a descriptive study", *Chinese medical journal*.

Rubin, G.J. and Wessely, S. (2020). Coronavirus: The psychological effects of quarantining a city. *The BMJ Opinion*, 24 January 2020.

<https://blogs.bmj.com/bmj/2020/01/24/coronavirus-the-psychological-effects-ofquarantining-a-city/> [accessed 15 April 2020].

Saadat, S., Rawtani, D., Hussain, C.M. (2020). Environmental perspective of COVID-19, *Science of the Total Environment*, Vol.728.

Schellenberg, G. &Fronberg, J. (2020). Housing characteristics and staying at home during the COVID-19 pandemic. *Statcan Covid-19 :Data to Insights for a better Canada*. Retrieved from: [www150.statcan.gc.ca](http://www150.statcan.gc.ca)

Sen-Crowe, B., McKenney, M., Elkbuli, A. (2020). Social distancing during the COVID-19 pandemic: Staying home save lives. *American Journal of Emergency Medicine*. DOI: <https://doi.org/10.1016/j.ajem.2020.03.063>

Stein, R. (2020), "COVID-19 and rationally layered social distancing" *International Journal of Clinical Practice*. In press. e13501.

UN-Habitat, (2020). Housing is both a prevention and cure for COVID-19. Retrieved on 14<sup>th</sup> May, 2020. [www.reliefweb.int](http://www.reliefweb.int).

Venkatesh, A, and Edirappuli, S. (2020). Social distancing in covid-19: what are the mental health implications? *BMJ*. doi: 10.1136/bmj.m1379

Vrugt, M., Bickmann, J. and Wittkowski, R. (2020). Effects of social distancing and isolation on epidemic spreading: a dynamic density functional theory model. [www.arxiv.org](http://www.arxiv.org)

Wilder-Smith, A. and Freedman, D. O. (2020). Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. *Journal of Travel Medicine*. 1-4. doi: 10.1093/jtm/taaa020

Wilton, P. (1993). "Spanish flu outdid WW1 in number of lives claimed." *Canadian Medical Association Journal*. 148: 2036-2037

World Health Organization (2020). Modes of transmission of virus causing COVID-19; Implications for IPC precaution recommendations. *Scientific brief*, 29<sup>th</sup> March, 2020.

Zhang, Y., Jiang, B., Yuan, J., and Tao, Y. (2020). The impact of social distancing and epicentre lockdown on the COVID-19 epidemic in mainland China. A data-driven SEIQR model study. Retrieved on 20<sup>th</sup> August, 2020. [www.medrxiv.org](http://www.medrxiv.org)

*Valodia, I. and Francis, D., 2020, South Africa needs to mitigate the worst of its inequalities in tackling coronavirus, in the Conversation, 5th April 2020, available at <https://theconversation.com/south-africa-needs-to-mitigate-the-worst-of-its-inequalities-in-tackling-coronavirus-135564>, accessed 05.04.2020, 21.13*

## 17. The Crisis of Place-Based Labour at the Crossroads of Planetary Gentrification and the COVID-19 Pandemic

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### Introduction: Place-based labour



*Figure 17.1: In the workplace of İsmail Usta, first craftsman making ballet shoes for the state.*

*Photograph: Fahri Aksirt. Source: Aykaç and Aksirt, 2018.*

In June 2018, Fahri Aksirt and I interviewed İsmail Usta for a local digital platform. İsmail Usta is a well-known craftsman for professional and amateur

dancers; he is the first ballet shoe master of “modern” Turkey, working for eighteen years at the State Opera and Ballet in Ankara, since the establishment of the institution. He taught his craftsmanship to apprentices during those years. He continued making particularly dance shoes after his retirement. We met him in Hacıbayram, a renewed district where he opened a workshop place before serving as a governmental official. In Hacıbayram’s renewed environment, the workshop place was in a private two-storied building; the interior remained old and neglected; in contrast, the exterior was renovated. Although our main intention was to document İsmail Usta’s practice as place-based labour, we questioned how the urban renewal process had affected the workshop and practice of İsmail Usta. İsmail Usta explained that he had been a tenant there. He had the chance to buy the workshop before the renovation started, but he could not have bought the property; because of the lack of money. The property prices increased too much within the urban renewal process, and even the monthly rent became unaffordable. He might have to leave the workshop. İsmail Usta was not hopeless, saying, “It does not matter to me; my job is placeless; I could make shoes at home and sell it online.” However, he narrated his practice as a place-making practice, bounded in space. He regularly met customers in his workshop, having tea with them, visiting their wedding ceremonies, following up their dance careers and personal life stories. He had been invited to the musicals, opera, and ballet. Therefore, the exchange between him and the costumers produced the use-value of the places, Hacıbayram, and his workplace. His narration reveals that place-based labour is place-making practice and it establishes sociospatial relations of communities. As İsmail Usta briefly narrated, some workplaces remained empty after the urban renewal; many have been used only as stock areas in Hacıbayram. Hence the urban renewal led to forcibly displacement of labour and a particular kind of gentrification.

Since 2018, I have developed an interest in place-based labour as a place-making practice. And within COVID-19 pandemic I have started to think on the issue at a more complex and larger scale. From this micro-narrative of gentrification, I want to shift the issue to “planetary gentrification.” I will first attempt to focus on the conceptualisation of planetary gentrification in order to reframe place-based labour through globally produced modes of human flow, speedy production processes, precarious working conditions and unemployment. The narratives of İsmail Usta represents place-based labour as a place-making practise, making a community and producing the value and history of a place. In addition to the narrative of İsmail Usta, I will also point out to the translocal character of place-based labour considering migrant labour and diverse urban histories. Finally, I will argue that we should promote

place-based labour that faces the gentrification, displacement and domination of new spaces for emerging mobilities.

### **Planetary gentrification: Emerging mobilities and urban actors between migrant and tourist**

The idea of planetary crisis is a multi-faceted and contested topic particularly highlighted after the global financial crisis of 2008. Work and labour relations are implicit in the planetary crisis with multiple dimensions such as new mobilities, uneven spatial distribution of labour in the cities, displacement of labour, unemployment, and the rise of precarious labour on the one hand; community struggles, informalities, and new socio-economic linkages on the other. In the interdependent processes of urban transformation and transformation of labour, conflicts, unities, and contradictions emerge between various urban agents both in and beyond the locale because humans are as mobile as ever. “Planetary gentrification” (Lees et al., 2016) and “transnational urbanism” (Smith, 1999, 2001, 2005) are conceptualisations that particularly emerged in the twenty-first century to frame significantly increased mobilities on multiple scales.

New mobilities beyond the borders of nation-states create worldwide spatial trends reflecting the interconnected transformation of space and labour relations. In addition to food chains, chain markets, and chain third generation cafes, so-called “hipster design” may be an appropriate example. Hipster design regularly occupies emptied factories or workshops or the abandoned industrial zones of the city, which have fallen into disuse because of changes in industrial production. It usually appropriates the materials of industrial factories, turning them into decorative design objects and generating a particular kind of aesthetics. In a way, it turns the transformation itself into a commodity, totalising diverse cultures of labour with “new-generation” cafes. Although the production of goods has gained speed and mobility and its place is not only actual places but also virtual spaces, hipster design ironically markets handmade/homemade design objects, household enterprises, and traditional slow food (Aykaç, 2020).

Such trends generate the socio-spatial culture of flexible and fragmented types of work between cities and nations for the middle class, who could be mobile. Therefore, these trends dominate and displace, and gentrify, place-based labour and its place-making practices. Massey (1995) underlines that “globalisation in the wider sense of the global construction of the local is by no

means new,” but “the intensity and the direction of the flows” is “different” in our era (1995: 184). The dynamics of geographical places—as spaces of social, spatial, and economic relations cut by time (Massey, 1994)—have been reproduced by emerging transnational mobilities. Conceptualisations such as “tourism” and “gentrification” remain uncritical and limited considering the scale of the production relations (Lees et al., 2016: 20). Moreover, those flows are not only in one direction, from the “West” to the “East” or the “South” to the “North” (Lees et al, 2016: 22), or vice versa, as migration studies discuss (Hayes, 2020).

Among the emerging mobilities, leisure-oriented and lifestyle mobilities are used to capture mainly higher-income middle classes relocating after retirement. Lifestyle migrants choose to move abroad in order to pursue a desired life, taking advantage of the climate, culture, history, and heritage of the receiving cities (Huete et al., 2013; Hayes, 2015, 2020). Student mobility programmes also led to the mobility of youth, such as the ERASMUS programme (Malet Calvo, 2018). The transnational professionals called “expats” create their own cultures and networks in the receiving cities, sometimes turning into enclaved expat communities. Ephemeral residents who are flexible in terms of leisure-work separation and do not conduct their work in a stable workplace constitute another particular mobility, intensely choosing to use housing platforms such as Airbnb (Alexandri and Janoschka, 2020). Moreover, the rise of temporal international job contracts, research fellowships particularly for early career scholars who have to deal with the publishing world of academia to find secure jobs, and other academics-in-residence programs have led to another group of ephemeral residents as precarious academics.

### **Cities, districts, and place-based labour**

Virtual platforms for leisure, virtual shopping, and workplaces hold remarkable importance in the transnational transformation of space and labour relations. However, actual geographical places and communities have been surrounded by these kinds of new mobilities and emerging spatial cultures of production in terms of planetary gentrification. Places are reproduced materially and symbolically in order to generate rent as an inseparable part of benefiting from the emerging forms of mobility. Indeed, places may have already had a “translocal” character because of histories of migration and migrants as mostly cheap labourers of the globalising economy. However, this translocal character could also be gentrified within planetary gentrification. For example, the



Exarcheia neighbourhood of Athens in Greece has been symbolically reproduced and gentrified through its historically translocal character, which has established political, social, and spatial linkages beyond local-to-local relations (Aykaç, 2018). Those linkages have been radically damaged under the processes of planetary gentrification since the late 2000s and especially the 2010s. As a consequence, former residents have had to move out and place-based labourers such as artisans and pedlars (either recorded or unrecorded workers) have been replaced, particularly by trendy new cafes.

Massey (1994) underlines that there are continuities and disjunctures of “a place as a radical envelope of space and time.” I argue that place-based labour constitutes a continuum in the making of a place in contrast to the temporalities of new gentrified spaces for transnational mobilities. Because place-based labour does not only produce commercial value; it is also a place-making practice in the reproduction of the use value of urban space, which is historically a value for the “place as space” (Massey, 1995). Place-based labour could possibly become one of the most significant concerns of urban politics developed in the post-pandemic era.

Alexandri and Janoschka (2020) discuss the need for a focus on gentrification at the world scale following the COVID-19 pandemic. During the pandemic lockdown, mobilities were first stopped and then considerably decreased with some restrictions between nation-states. This health crisis is accepted as a planetary disaster, which has produced a negative effect on work and labour relations. It is accepted as the largest effect on the political economy of the world since the Second World War. The International Labour Organization (ILO) republished their report about COVID-19’s impact on work and labour relations in June 2020. This report emphasises that there were many closures of workplaces, “even in countries where required workplace closures are not currently widespread, many businesses remain unable to restore operations to full capacity” (ILO, 2020: 3). To deal with these trajectories, nation-states including Turkey implemented various policies regarding closures, unemployment, and poverty in the short term during the pandemic. Place-based could be a centre for liveable cities in the future.

## **Implications**

Work and labour are inseparable and multi-scalar matters of urbanism. Whether recorded or unrecorded, or without the market dichotomy of informal and formal work, the history of work and labour is the history of urban

space. On the thresholds of the work and labour relations emerging due to the pandemic, work and labour should be discussed within the framework of the critical issue of planetary gentrification in the post-pandemic era. There will be an urgent need to develop long-term policies to cope with upcoming poverty, unemployment, and precariousness. In this paper, I attempted to highlight three features; the translocal character, community linkages and place-making practices of place-based labour. Those features could be analysed and empowered as a part of urban politics. Not the widespread demands of new mobilities in between migration and tourism -which could be for a smaller elite in the post-pandemic era- but rather place-based labour should be the central focus in the upcoming urban policy-making processes. Finally, I would like to end with problematics that could be at the top of major urban problematics in the post-pandemic era: How diverse actors of place-based labour could be radically included in urban policies? How could a transnational act be organized against the negative effects of planetary gentrification among labor for diverse communities?

## References

Aykaç, G., and Aksirt, F. (2018, June 25). Dans, Emek, Ankara: İsmail Usta'nın Hacibayram'daki Ayakkabı Atölyesi. *Zıtlar Mecmuası*.  
<https://zitlarmecmuasi.com/dans-emek-ankara-ismail-ustanin-hacibayramdaki-ayakkabi-atolyesi/>

Aykaç, G. (2018, September 22). Exarcheia Mahallesi ve Yerelleşme: Anarşist Mekân Üretiminin Kendinden Menkul Direnci Üzerine. *Manifold*.  
<https://manifold.press/exarcheia-mahallesi-ve-yerellesme>

Aykaç, G. (2020). *Diverse Landscapes, Diverse Works: Reframing the Urban Transformation of Çiğir through Muhtars, Houseworkers, the Usta, and the Kabadayı* [Unpublished doctoral dissertation]. Middle East Technical University.

Alexandri, G., & Janoschka, M. (2020). 'Post-pandemic' transnational gentrifications: A critical outlook. *Urban Studies*, 004209802094645. <https://doi.org/10.1177/0042098020946453>

Blokland, T. (2009). Celebrating Local Histories and Defining Neighbourhood Communities: Place-making in a Gentrified Neighbourhood. *Urban Studies*, 46(8), 1593–1610. <https://doi.org/10.1177/0042098009105499>

Hayes, M. (2015). Introduction: The Emerging Lifestyle Migration Industry and Geographies of Transnationalism, Mobility and Displacement in Latin America. *Journal of Latin American Geography*, 14(1), 7–18. <https://doi.org/10.1353/lag.2015.0006>

Hayes, M. (2020). The coloniality of UNESCO's heritage urban landscapes: Heritage process and transnational gentrification in Cuenca, Ecuador. *Urban Studies*, 004209801988844. <https://doi.org/10.1177/0042098019888441>

Huete, R., Mantecón, A., & Estévez, J. (2013). Challenges in Lifestyle Migration Research: Reflections and Findings about the Spanish Crisis. *Mobilities*, 8(3), 331–348. <https://doi.org/10.1080/17450101.2013.814236>

International Labour Organization (ILO). 2020. *ILO Monitor: COVID-19 and the world of work. Fifth edition Updated estimates and analysis*.

Lees, L., Shin, H. B., and López–Morales, E. (2016). *Planetary Gentrification*. Polity Press.

Malet Calvo, D. (2018). Understanding International Students beyond Studentification: A New Class of Transnational Urban Consumers. The Example of Erasmus Students in Lisbon (Portugal). *Urban Studies* 55(10), 2142–58. <https://doi.org/10.1177/0042098017708089>.

Massey, D. (1994). Introduction to Part I: Space and social relations. In D. Massey (Eds.), *Space, Place, and Gender* (pp. 19–24). University of Minnesota Press.

Massey, D. (1995). Places and Their Pasts. *History Workshop Journal*, 39(1), 182–192. <https://doi.org/10.1093/hwj/39.1.182>

Smith, M. P. (1999). Transnationalism and the City. In R. Beauregard & E. Body-Gendrot (Eds.), *The Urban Moment: Cosmopolitan Essays on the Late 20th Century City* (pp. 119–139). Sage Publications.

Smith, M. P. (2001). *Transnational Urbanism: Locating Globalization*. Blackwell.

Smith, M. P. (2005). Transnational Urbanism Revisited. *Journal of Ethnic and Migration Studies*, 31(2), 235–244.

## **18. How Evolution of Virtual Workplaces during Pandemic Affected Urban Planning and Zoning**

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### **Introduction**

The Coronavirus crisis has targeted various aspects of our life such as social, economic aspects and even positive impacts on the environment. Undoubtedly, the world economy is facing a challenging era right now due to the current crisis about covid-19. Based on United Nations industrial development organization that surveyed on the Socio-economic impacts of the COVID-19 crisis, in the worst-case scenario, global GDP will contract by up to 1 percent. The International Monetary Fund (IMF) updated its global growth projections and stressed that the global economy is expected to experience its worst recession since the Great Depression. All these facts about the current economy might sound really disappointing.

However, in the future this will lead to a great experience for greater changes to present more innovative solutions to cope with the existing situation. The theory that I want to present is relevant to the economy sectors need for smarter work places that would be really helpful for crisis such as this. As most offices are promoting remote working and social distancing. This induces countries to work on strengthening the digital infrastructure of the cities which can lead to implementation of smart cities which once was not really a priority by the local authorities.

### **Home based work**

The moto of the contemporary world is Globalization that has promoted the idea of Home Based Work (HBW)'s. Closing the borders during Pandemic is the main solution for governments to control the crisis that focuses on the nationalism instead of expanding the economy globally. This had a negative impact on the economy of countries; However Home Based Work was a new trend that made a lot of companies survive in time of crisis.

Working remotely from home and communicating virtually can invigorate the globalization behind the physical closed borders. Which can result in a win-win

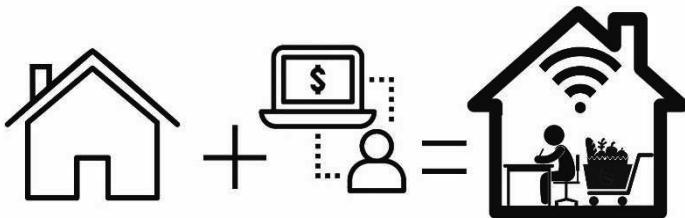
situation for all countries. A lot of companies turned this crisis into an opportunity and made profit even though their employees had to work remotely. These companies were the winners of this situation since they had the flexibility and the ability to cope with changes promptly. So this proves that if we want to make this change permanent, how our cities will be affected.

## Theories

The obvious lesson from watching the response to this pandemic globally reveals that cities around the world need to take a step into the 21st century by accepting a new reality and finding ways to function during them. Two complementary focal points that can be pivotal for dealing with crisis in cities are spatial organization and having the ability to convert zones.

The main permanent solution that now designers are looking for, will affect our urban environment. Based on the lack of proper treatment or vaccine for this disease, we need to broaden our horizon and present durable answer that can be implemented in the design of our cities not only for this crisis, but also for other contagious illnesses, which might be widespread in future. With the benefits that it had on the environment or the unity of families due to spending more time together. This is going to change our work habits in small scale and also the face of our cities in larger scale precisely in planning or zoning.

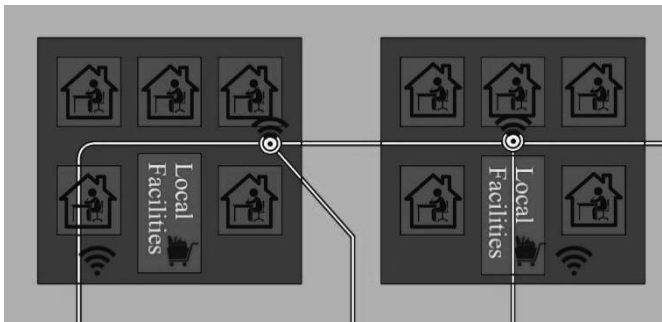
In small scale if we consider home our safe haven, this safety will be threatened if it could not supply our basic goods for residents in time of pandemic such as this. Combining the work area in our safe haven allow us to earn an income and through online shopping decrease the chance of being infected. This makes our home a self-sufficient unit that can survive for almost ever.



*Diagram 18.1: Self-sufficient Home unit (Small scale). Source: Author*

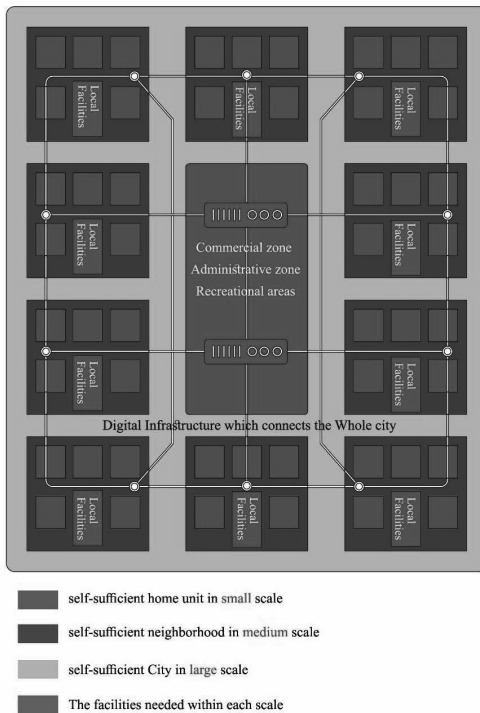
This solution can also work for during less critical times of the pandemic and even post pandemic as well. Traditionally people felt the need for two different types of places: the living place and the working place and also fixed hours of work during weekdays. In recent years, the number of freelancers has increased and to the public they had the luxury to spend their time as they wish without scarifying their moneymaking business. A few companies also tried to adjust to the idea of working from home. Many other companies resisted toward change and resumed their work based on traditional offices and 9 to 5 jobs. However, after this crisis even these companies tried to adjust since the human nature gets back to its survival instincts and work must go on.

In medium scale, the neighborhood will also be self-sufficient which in time of spread of the virus to other adjacent neighborhoods, it could protect itself from any further spread to the house units.



*Diagram 18.2: Self-sufficient neighborhood (Medium scale). Source: Author*

In larger scale, the city, which consists of various neighborhoods, can have more open areas to be used for recreational reason and be safe at the same time by applying distancing design to them. In time of pandemic, each unit and each neighborhood can function independently through strengthening the digital infrastructure (this is where smart cities can be helpful during crisis. And after pandemic we can still use the vehicular pathways moderately with less congestion or traffic with more pedestrian and bicycle lines.



*Diagram 18.3: How urban zoning will change if more offices try to switch to work from home (virtual offices). Source: Author*

## Workplaces evolution in urban context

Now that we know how the small-scale effects impact urban design, we can discuss the physical elements that has the tangible effects on our urban areas that can be felt.

Throughout history, disease outbreaks have forced us for new innovations in urban design. For instance, fighting cholera epidemics in the 1800s necessitated the building of new plumbing and sewer systems and the devising of new zoning laws to prevent overcrowding. As the new coronavirus calls the need for broader changes across our economy, such as widespread paid sick leave, it might also influence how cities and buildings are going to change in near future.

1. Contactless/Digital economy
2. Using technology for manufacture
3. Functional zoning of cities will change: As the demand for working remotely increase, the administrative zone of the city will be more deserted. And the land can be used for other needs that will be priority.
4. Population movement toward natural & rural areas: As the functional zoning will change, dense populated areas will spread toward less contaminated areas to maintain social distance and peaceful life.
5. Changes in the pattern of urban sprawl

Density will decrease in city centers as people spread to the other areas. Probably this may affect the pattern of cities with wider spaces among them.

### **Impacts on attributes of urban context**

The administrative zones in urban contexts are mostly deserted during night. By reducing these zones through spreading them to residence areas (by creating home based work), these areas can be used for other practical uses. The built environment will decrease and the public open spaces among them can be utilized for enhancing the residents' wellbeing by introducing vegetation. Especially during the night, these areas will be lively if we invite people for entertainment with wider space designs to perform social distancing and keeping the citizens safe.

The undeniable impacts on the environment such as global warming, noise pollution, air pollution or any other environmental problem relevant to that. The energy, which is wasted daily for commuting or electricity in offices, will reduce. The air pollution and noise pollution will decrease, as we will have no congestion in roads and highways. New bicycle lanes can be introduced in neighborhood areas (for purchasing essential needs from public facilities in neighborhood) to promote the idea of sustainability. This can result in more human scale areas with pedestrian or bicycle friendly cities with less highways to invite more cars in the city.

Introducing more flexibility in urban context such as in plaza public areas or any other use, which is needed in time of crisis by the approach of healthcare. Through flexibility in urban areas, we encounter them as living organisms just like human beings to have the ability to change their perspective in time of need.



In time of pandemic public open spaces are significant informative nodes in cities. With the availability of large screens and other augmented methods in the public place, there is an opportunity to transform public places into the main nodes in the city where people can see relevant information such as prevention measures, safety procedures, guidelines, regulations, etc. The informative characteristic of public places could represent the effective role of public places for public interests and uses.

However, weak digital infrastructure has a negative effect on online working and some business might respond inefficiently. So cities need to improve the infrastructure of our cities that this will result in creating smart cities in near future.

## **Conclusions**

In the contemporary civilization, there are many occupations and jobs, which essentially need to be done away from the place of home. However, there are lots of jobs which can efficiently be done at home. And doing these at home as HBW ensures less cost on energy, transport, labor and even requires less time. In such context the HBW is no more a possibility, it is an effective solution where its acceptance and expansion depends upon the attitude of the Government and the common people. Human beings are able to withstand this pandemic, as they are adaptive creatures and are capable of coping with difficult situations as this.

Evolution of the work places is an incident that happened a while ago, however designers only considered its impact on the small scales and from the physical aspect of it. But by the unprecedented effect of pandemic on various aspects of our life, this evolution accelerated and it reformed into a more virtual kind. This change also impacted the medium scale and larger scales of our urban environments in long term that forced authorities to change their plans for future developments.

Adjusting to the idea of work from home will benefit us and at the same time have few negative impacts. But the negativity of those factors can be solved by finding new ways to solve them such as the distancing design which is the current trend now. The birth of social media and other relevant applications eased the quarantine time and the workflow for us and made us think through it as something permanent. That can help us live and work more efficiently and have smarter sustainable cities.

In quarantine or the recovery time residents of cities learned valuable lessons like how we can experience slower pace of life or ease the pressure on urban areas or the environment to let them also recover because of our constant exploitation of them. It taught us how to lead a more balance life by changing our attitudes and lifestyle and being more minimal and focus less on consumerism.

## References

Samuelsson, Karl, Stephan Barthel, Johan Colding, Gloria Macassa, and Matteo Giusti. 2020. "Urban Nature as a Source of Resilience During Social Distancing Amidst the Coronavirus Pandemic." Chicago, OSF Preprints. April 17. doi:10.31219/osf.io/3wx5a.

Litman, Todd, 2020, Pandemic-Resilient Community Planning Practical Ways to Help Communities Prepare for, Respond to, and Recover from Pandemics and Other Economic, Social and Environmental Shocks, Victoria Transport Policy Institute.

Cheshmehzangi, Ali, 2020, 10 Adaptive Measures for Public Places to face the COVID 19 Pandemic Outbreak The University of Nottingham Ningbo China, City and society.

<https://www.undp.org/content/undp/en/home/coronavirus/socio-economic-impact-of-covid-19.html>

<https://www.wired.com/story/coronavirus-covid-19-urban-planning-health/>

<https://www.gensler.com/research-insight/blog/how-should-office-buildings-change-in-a-post-pandemic-world>

## **19. Seeking Potentials in the New Cultural & Material Reality of the COVID-19 Pandemic: A Critical Appraisal from the Lenses of *New Babylon***

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### **Introduction: Other places & distances**

According to Lewis Mumford (1922), we as humans often tend to live in more than one reality at a given moment – inhabiting places besides the so-called material present we currently and physically occupy. What lies beyond and accompanies our current surroundings are the many philosophies, beliefs, ideas and imaginary projections that for long ages occupied our minds, and, in doing so, affected our behaviors and shaped our lives within the same present world. One of these effects traversing across realities, and which could particularly be accorded with one of these mental products, namely with utopias, is to be found in a certain chance and purpose devoted to critical reflection and change – all but concerning the existing state of affairs (Hammer, 2017; Sontag, 2007). While Mumford (1922) stresses this partially-introspective agenda with a special categorization called “utopias of reconstruction”(p. 15) – offering a way as to how to look at these mental products; Le Guin (2004), a prominent creator of such locales, notes that thinking of utopian places and telling their stories serve as a critical and humanly practice to challenge the notion of a singular reality, and to imagine other alternatives to the world lies before our eyes.

In all, heeding to the way in which these imaginary places are viewed above, one could see utopias as places not necessarily distant, disconnected nor impossible; and instead as the cultivators of possibility and discussion oriented towards our very present. One main reason for this is that they are innately born out of this very world, and are often made from its very pieces – offering critical distances and perspectives to their origins in return (Eagleton, 2015; Miéville, 2016). In fact, such virtues are not only of utopias, but can also be found in the making of many imaginary lands and tales. One could see a similar type of reflective effect and far-reaching connections in many works of literature, namely in those of fiction, where we could see how these impossible locales could exert such critical outlooks and foster the further possible.

What lies in the heart of many fictional narratives is a preliminary distancing of the reader – sided with a set of commons embedded, which helps bridging

those distances afterwards (Matar, 2017). Basically, in these foreign places, we find shared parts and instances that allow us to form some sort of imaginary bridges with these locations, which then allow us to find new vantages to see our current setting in the light of an alternative one (Aviv, 2016; Matar, 2017). It is by these commons and momentary distances, also found in many utopian projections, we obtain chances to observe our present from a new location – a mostly-intellectual reward, perhaps, something that Marcel Proust (2000) once underlined as the act of reading ourselves in other places. And, after such introspective and distanced reading of our reality, we could then start contemplating about our very own world and speculate about its possible reconstruction as Mumford (1922) insists.

Following upon these inherent links and intellectual gains, this paper attempts to lay out a critical appraisal of the reality and the planetary crises we currently inhabit, now even more enhanced with the global COVID-19 pandemic, with the help of a seemingly-distant counterpart. Seeking both our fallibilities and hidden potentials in the midst of our existing surroundings – material and cultural; the twofold reading here proceeds with revisiting a particular past once imagined, or a utopian future for that matter: Constant Nieuwenhuys' *New Babylon*. In effect, this imaginary world of the past, a widely-known legacy of planet-sized planning and also of long cultural impact (Careri, 2005), then becomes of a critical gloss to contemplate upon the immediate present – and vice versa.

If being intentionally optimistic at times, just as Constant had often been in his personal readings half a century ago (Constant, 1998c; Siegal, 2016), the paper finds its foremost cue and connection in a somewhat spontaneously-forming culture and a new societal model shaping at the moment – thanks to our new work schedules and home-centered lifestyle – one that was once narrated in the guise of a new society which was independent of location and ordinary clocks (Constant, 1998b, 1999). Through such similarities and the momentary bridges they offer, the twofold assessment presented in this work will try to offer a critical and cultural rundown of our worldly belongings, as well as a timely measurement to another planetary alternative.

### **Choosing a utopia on the side of another**

Speaking of reasons for visiting this particular utopia amongst many imaginary worlds that occupied our minds throughout history, there are several factors in play. One of them is to be found in the very spirit and already-instrumental

agenda of Constant's work – a rather mental facet which has been often concealed or neglected amidst its aesthetic and technical ones (Constant, 1998a), yet for many times stressed by its creator: "...New Babylon is not a town-planning project, but rather a way of thinking, of imagining, of looking on things and on life" (Constant, 1999, p. a9). In another essay, it is claimed that the project was an "experimental thought and play model" – a multiplicity-inducing entity to be played and experimented with, for us to speculate on during the making of "a new and different culture" (Wigley, 1998, p. 62) in its open-ended design. Addressing this highly-instrumental and present-oriented crux of this dreamland, McDonough (2008) comparably notes that New Babylon was compiled as a sort of virtual object from the very problematics of the existing world – those of the real, and for a particular purpose of addressing them.

Another scholar who worked on the subject for many years, Mark Wigley (1998), points out the discussion-centered and tactical agenda employed by Constant – given the project's countless yet always-obscured sightings and blurry staging for almost two decades, which were to engender more of a particular mental atmosphere than a showcasing of an actual architectural work. In those highly-transient occasions and as well in his texts, Constant, rather than depicting the entirety of his physical devising, sought debate and desire about other possibilities beyond the existing – including places that might lie beyond even further than New Babylon itself (Wigley, 1999). His world, like many utopias in spirit, did not exactly point out a singular or finalized destination, but worked as an agency for many and other departures from the current reality.

While all these already bestow Constant's utopia a highly-reconstructive degree in Mumford's categorization (1922), another ground for our choosing, somewhat parallel to the notes above, is to be found right where we tend to link this imaginary world to – that is, within the provinces of our very present. In a way that is comparable to what Walter Benjamin (2007) recalls in his famous essay, *The Storyteller*, the momentary bridges we seek for our own critical readings – the timely connections between a particular past and present – tend to appear by themselves in some daily instances, if not in all of them. That we could see in our rapidly-changing surroundings some pieces of New Babylon, and by that we can obtain several critical distances and look back to our current selves – however partially and for certain intervals. And this is where we might briefly leave Constant's world and start looking into this side of our bridges, and see where these connections came to reveal themselves.

Peculiarly, besides what stands on the opposite side, the parts of our current surroundings that correspond with the stories of New Babylon can be said to be somewhat utopian as well. And, this time, other than some drawings, maps and passages that are emblematic of its transmissions, now the utopia is delivered in the form of direct life-bits – where we experience many rapid changes and unfamiliar settings firsthand, in the course of what many sources now call the “new normal” of the COVID-19 pandemic (Liang, 2020). What we currently observe surely is a strange territory – yet not confined in an imaginary island like in Thomas More’s famous version (2009), but rather something we encounter daily in the current material world.

### **The Shuffle: Empty cities, overloaded homes, disappearing clocks**

To give you a sense of these changes and their range, almost like a setting of a fiction novel, much of our communal spaces now appear as nearly deserted – with virtually no one seen in the streets, offices, schools or busses. Other than those who have to work physically and are less fortunate in keeping their jobs during the crisis (Beck et al., 2020), several members of the society are confined into their dwellings – attending daily deeds such as work, education and shopping from their living rooms and computer screens. Seemingly, much of what normally used to transpire in the city are now relocated to a singular space and require an internet connection. The main reason for this displacement and a home-centered life is the measures of social distancing and isolation, instructed by many governments and health institutions, in order to prevent the spread of the virus (CDC, 2020; Parker-Pope, 2020).

Accompanying this much visible absence in the cityscape, and a result of that, is an over-presence and an eventual overloading of the house – much with the activities and cycles of the former. Yet, in any new condition such as this, a relocation does not necessarily mean a direct translation – but more a reprogramming. Comprising the novel instances we deem somewhat utopian in themselves and find resemblance with another utopian scheme, there occurs considerable changes in the very life and space of our homes – along with what constitutes such, otherwise private, entities. For instance, while the ordinary space of the house turns into a multi-functional venue whose physical limits are being tested (Shortt & Izak, 2020); the new full-time dwellers of the house encounter several novel conditions in person – mostly materializing in the form of changing habits, altered psychologies, and, significantly, a distorted perception of time (Pardes, 2020; Rocheleau, 2020).

In this new normal, the established boundaries between common concepts and routines, such as the differentiation of day and night or ordinary stretches of when to work and not, become much blurred (Joho, 2020). Thanks to our tools of online communication and virtual platforms, many can attend work- or school-related affairs without having to be in the same physical space or even in the same timeline – where, as a result, such activities appear to be performed more individually and asynchronously as well. This somewhat accidental allocation and rearrangement of material conditions and worldly concepts then yields a situation in which some of us are relatively freed from our physical locations and common timetables, and, if rather unconsciously, become able to experiment with new ways and patterns of using our time (Lightman, 2020).

One may actually liken this sudden shifting of cultural and material pieces, some of which seem to disappear altogether, to a shuffling act – just like in a card game. In this shuffle, courtesy of the pandemic, we are faced with a new situation, as in a new hand dealt yet from the same cards, where our previously-established conceptions and habits are reassembled and thus redefined – resulting in some substantial changes both in a practical and mental level. Referring to situations like this, and using a highly similar vocabulary, the renowned sociologist Latour (2005) talks about the associations between things and concepts that make up our knowledge and perception of the world, which are then forced to reassemble and change in their associative networks whenever a novel concept or event comes into the scene. The pandemic and the changes it gives rise to – both on a personal, collective, practical and unconscious level – might just be a perfect example of such instances.

Meanwhile, as a result of our rather humanly needs, the ways in which we take part in social acts and simply come together are taking up new forms and venues as well – namely being relocated to virtual mediums at an ever-accelerating pace. Now, you can attend a birthday party in a faraway location or join a yoga class online, run into many live streams of your friends and favorite celebrities in the middle of the night, and read about how the weekend has lost its meaning and that mornings now can be perfect for a cocktail hour (Arnold, 2020; Gebel, 2020; Leskin, 2020; Rodell, 2020; Tiffany 2020). Coupled with the disruption of ordinary work, leisure and sleep schedules, and with the lack of physical contact; this heightened online presence, increased use of virtual means and shifting everyday intervals together cause a setting where, more than ever, we tend to take part in leisurely activities and social affairs

that seem to transcend the limits of our geographic locations and local time. Resultingly, as another episode of the shuffle, we are more likely to run into one other, more frequently and regardless of where the sun is, and in more unexpected occasions in any given hour.

### **Conclusion: An asynchronous life and a new nomadism**

Speaking of a rather asynchronous society that is independent of locations and clocks, and meeting in relatively spontaneous instances, we might now cross our bridge and recall some fables from Constant's side. In the world that occupied his mind for two decades, such activities, mainly regarded as both creative and social, were to take over our entire lifespan – transpiring inside a network of vast structures above ground, called the *sectors* (Wigley, 1998). On the part of a maximized free time and the much crucial question of what to do with it – thanks to automation, and through high-speed transportation and technical means; the citizens of New Babylon could indulge in acts according to their wishes and transient interactions with one other in this expansive social space – altering both their environments, moods and locations at will (Constant, 1999; McDonough, 2008).

Interestingly enough, and as another resemblance calls for a momentary bridge and twofold comparison, on the side of these physical amenities and expanses, which were as well to free us from the constraints of planetary cycles given their huge size (Constant, 1998b); Constant also talks about a global telecommunication system that is “both decentralized and public” (p. 162). Those means would be a natural necessity during this ceaseless and collective movement, and be utilized for the rather playful and all-leisure proceedings of New Babylon – as an extra layer added upon the physical space. Looking back at our present reality, what we see is similar situation – if only for some of the population and happening rather virtually. Now, through our asynchronized timetables and digital means, it appears more possible to interact with each other and attend leisurely activities in unconventional hours and unforeseen settings – some of which, in the form of live streams and temporary posts, can be seen as the digital versions of New Babylon's temporary *décor*s and personal ambiances (Constant, 1998b, 1999).

In another interesting comparison, while the conventional house unit disappears in New Babylon's all-nomadic life along with the ordinary concept of concentrated town and cities (Constant, 1998b); in our new reality, they become somewhat central entities during the limited use of the outside world,



charged with even more functions and physical presence – all the while of becoming increasingly connected and independent of their locations. Here, we see a new type of house per se, one that appears more fluid and nomadic for these new encounters and virtual extensions, forming temporary synchronicities with many and far locations – despite its limited physical extents and fixed location concerning its users.

Well, one can actually find even more similarities and tend to draw other comparisons with the faraway planet of Constant and its numerous pieces delivered in many formats over the years. Whereas, the crucial point here, other than paralleling with the life in New Babylon at some instances and somewhat unconsciously, is whether we possess the capacity to imagine other possibilities and bridge our distances on a mental scale through those similarities. It is again about enriching the discussion concerning our present and where we might lead further from there.

On that note, what critically reveals in our revisit is that, again despite its unfamiliar and distanced facets, most of what Constant imagined as a cultural and different entity had its parts in the existing reality. Namely, like in our own analogy of shuffling parts amidst the new reality of the pandemic, his planet-sized proposal was mainly of a rather strategic rearrangement of worldly pieces, both of cultural and material sorts, which we already own in the existing milieu – like available technology or general concept of time and space – which he consciously reprogrammed and reassembled for a different lifestyle, as well as for inciting the possibility of discussing it (Constant, 2006; Wigley, 1998).

Regarding that discussion, even though we seem to be adjusting to our new rearrangements out of vital and humanly necessities, some of our new practices we've covered in this paper critically point to our current capacity of quickly adapting to a new state of affairs, and of experimenting with new ways of living after all. For that, in a world that is already accustomed to change and reshuffle itself with each global event (Wright, 2020), and one that is currently being distanced from its normal state on a daily basis; it is important to near a distant alternative such as New Babylon to our current location. Much because, while we seem to be distancing from our previous world with each new input like Latour (2005) insists; without knowing, we might just be nearing to an imaginary one, if partially, at the very same time.

## References

Arnold, A. (2020, April 1). A Cocktail at 9.30 A.M.? Sure, Why Not. *The Cut*. Retrieved from <https://www.thecut.com>

Aviv, R. (2016, July 18). The Philosopher of Feelings. *The New Yorker*. Retrieved from <https://www.newyorker.com>

Beck, V., Fuertes, V., Kamerāde, D., Lyonette, C., & Warren, T. (2020). Working Lives. In M. Parker (Ed.), *Life After COVID-19: The Other Side of Crisis* (pp. 53-62). Bristol, UK: Bristol University Press. Retrieved from <https://www.jstor.org/stable/j.ctv1574pp5.9>

Benjamin, W. (2007) The Storyteller: Reflections on the Works of Nikolai Leskov. In H. Arendt (Ed.) & H. Zohn (Trans.), *Illuminations* (pp. 83-109). New York, NY: Schocken Books. (Original work published 1933)

Careri, F. (2005, October 25). Constant and New Babylon's roots. *Domus*. Retrieved from <https://www.domusweb.it>

CDC. (2020, July 15). Social Distancing. Retrieved from <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html>

Constant. (1998a). New Babylon – Ten Years On. In M. Wigley (Ed.), *Constant's New Babylon: The Hyper-Architecture of Desire* (pp. 232-236). Rotterdam, Netherlands: 010 Publishers. (Original work published 1980)

Constant. (1998b). New Babylon: Outline of a Culture. In M. Wigley (Ed.), *Constant's New Babylon: The Hyper-Architecture of Desire* (pp. 160-165). Rotterdam, Netherlands: 010 Publishers. (Original work published 1974)

Constant. (1998c). On Traveling. In M. Wigley (Ed.), *Constant's New Babylon: The Hyper-Architecture of Desire* (pp. 200-201). Rotterdam, Netherlands: 010 Publishers. (Original work published 1969)

Constant. (1999). Lecture Given at the Institute of Contemporary Art, London. In M. Wigley (Ed.), *Another City for Another Life: Constant's New Babylon: Drawing Papers 3* (pp. a9-a13). New York, NY: The Drawing Center. (Original work published 1963)

Constant. (2006). Another City for Another Life. In K. Knabb (Ed. & Trans.), *Situationist International Anthology*. Retrieved from <http://www.bopsecrets.org/SI/3.constant.htm> (Original work published 1959)

Eagleton, T. (2015, October 16). Utopias, Past and Present: Why Thomas More Remains Astonishingly Radical. *The Guardian*. Retrieved from <https://www.guardian.com>

Gebel, M. (2020, March 21). As coronavirus pushes millions inside, everyone is streaming on Instagram Live. *Digital Trends*. Retrieved from <https://www.digitaltrends.com/>

Hammer, E. (2017, June 26). A Utopia for a Dystopian Age. *The New York Times*. Retrieved from <https://www.nytimes.com/>

Joho, J. (2020, May 8). How the pandemic will change our relationship to time forever. *Mashable*. Retrieved from <https://mashable.com/>

Latour, B. (2005). *Reassembling the Social: An Introduction to Actor-Network-Theory*. New York, NY: Oxford University Press.

Le Guin, U. K. (2004). *The Wave in the Mind: Talks and Essays on the Writer, the Reader and the Imagination*. Boston, MA: Shambhala Publications. Retrieved from <https://books.google.com>

Leskin, P. (2020, April 16). Instagram Live usage jumped 70% last month. A psychologist says it's because 'people are not designed to be isolated'. *Business Insider*. Retrieved from <https://www.businessinsider.com/>

Liang, L. (2020, March 9). How Covid-19 led to a nationwide work-from-home experiment. *BBC Worklife*. Retrieved from <https://www.bbc.com>

Lightman, A. (2020, April 1). The Virus Is a Reminder of Something Lost Long Ago. *The Atlantic*. Retrieved from <https://www.theatlantic.com>

Matar, H. (2017, March 16). Books Can Take You Places Donald Trump Doesn't Want You to Go. *The New York Times*. Retrieved from <https://www.nytimes.com/>

McDonough, T. (2008). Metastructure: Experimental Utopia and Traumatic Memory in Constant's New Babylon. *Grey Room*, 33, 84-95.

Miéville, C. (2016). Close to the Shore. In T. More, U. K. Le Guin, & C. Miéville, *Utopia* (pp. 12-22). Retrieved from <https://www.versobooks.com>

More, T. (2009). *Utopia* (P. Turner, Trans.). London, UK: Penguin Books. (Original work published 1516)

Mumford, L. (1922). *The Story of Utopias*. New York, NY: Boni and Liverlight.

Pardes, A. (2020, August 5). There Are No Hours or Days in Coronatime. *Wired*. Retrieved from <https://www.wired.com>

Parker-Pope, T. (2020, April 11). What You Can Do About Coronavirus Right Now. *The New York Times*. Retrieved from <https://www.nytimes.com/>

Proust, M. (2000). *Time Regained: In Search of Lost Time, Vol. VI*. (A. Mayor & T. Kilmartin, Trans.). New York, NY: Modern Library. (Original work published 1927)

Rocheleau, J. (2020, May 27). A Monday Is a Tuesday Is a Sunday as COVID-19 Disrupts Internal Clocks. *Scientific American*. Retrieved from <https://www.scientificamerican.com/>

Rodell, B. (2020, April 2). How Australians Seek Connection in Isolation. *The New York Times*. Retrieved from <https://www.nytimes.com/>

Shortt, H., & Izak, M. (2020). The Contested Home. In M. Parker (Ed.), *Life After COVID-19: The Other Side of Crisis* (pp. 43-52). Bristol, UK: Bristol University Press. Retrieved from <https://www.jstor.org/stable/j.ctv1574pp5.8>

Siegal, N. (2016, September 8). Exploring the Transition in Constant's Work. *The New York Times*. Retrieved from <https://www.nytimes.com/>

Sontag, S. (2007). At the Same Time: The Novelist and Moral Reasoning – The Nadine Gordimer Lecture. In P. Dilonardo & A. Jump (Eds.), *At the Same Time: Essays and Speeches* (pp. 232-253). New York, NY: Farrar, Straus and Giroux. Retrieved from <https://books.google.com>

Tiffany, K. (2020, March 17). You Have a Moral Responsibility to Post Your Boring Life on Instagram. *The Atlantic*. Retrieved from <https://www.theatlantic.com>

Wright, L. (2020, July 13). How Pandemics Wreak Havoc—and Open Minds. *The New Yorker*. Retrieved from <https://www.newyorker.com>

Wigley, M. (1998). The Hyper-Architecture of Desire. In M. Wigley (Ed.), *Constant's New Babylon: The Hyper-Architecture of Desire* (pp. 8-71). Rotterdam, Netherlands: 010 Publishers.

Wigley, M. (1999). Paper, Scissors, Blur. In M. Wigley (Ed.), *Another City for Another Life: Constant's New Babylon: Drawing Papers 3* (pp. 9-31). New York, NY: The Drawing Center.

## SESSION 4

## **20. How can Architects Serve the Climate Crisis? Presenting a Design-Led Solution to the Wicked Problem**

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### **Introduction**

First and foremost, we are problem solvers. We design and have a passion that lures us into all-nighters (without the overtime), but fundamentally, we have a nagging question inside us when we see a problem: *'How can I fix this?'*

The climate crisis is deemed as a 'Wicked Problem'. Wicked Problems are challenging dilemmas that seem impossible to resolve due to the complex nature of the topic at hand (Sun, et al, 2016). Examples of obstacles are varying research results, solutions that only seem to create a plethora of new problems, and a lack of clarity on who should act to solve said problem (Brown et al, 2010). Vision and innovation are two of the tools used to solve such a quandary, both of which architects are highly proficient (Hocking, 2011). The architect's role has been changing since the likes of Latham and Egan took a stab at reinvention, and even though these reports changed the construction industry significantly, we still find ourselves as relevant as ever on the front line (especially, alas, when something goes wrong). Architects have trained for a long time to gain entry into this profession, and our skills and training are relentlessly thorough. We need to endorse *design* to solve this wicked problem.

### **Urbanisation**

According to UKGBC (UK Green Building Council), the built environment contributes nearly half of the UK's carbon emissions. We are a concrete jungle generation. The world's population has more than quadrupled since 1950, more than half of us are living in an urban environment now, and *Our World in Data* projects that by 2050, more than two thirds of us will migrate to urbanity. This dense way of living is a relatively new concept for cities and a challenge that architects must step up to. We must ask the question: What type of urbanism will prevail?

Firstly, we need to move beyond the 'check list' approach to environmentalism. Let's lose the greenwashing and genuinely assess the materials and

procurement methods we select, refining our knowledge continuously through CPD's on the topic. Keeping up with new data and books such as engineer Bruce King's *'The New Carbon Architecture: Building To Cool The Climate'* (New Society Publishers, 2017) will help to boost knowledge and mindfulness in our industry. This was further argued by Simon Sturgis, the former chair of the RIBA sustainability group, who was cited in the Architects Journal (2020) emphasising that we can tackle embodied carbon for free in the construction industry, we only have to educate ourselves.

## **Communication and education**

Another issue with climate change is the lack of communication around the topic. Apart from a niche group of activists, the general public are aware there is 'something happening' but cannot grasp that we will be directly affected, and soon. Architects can use their visionary skills to help people imagine the future, to see it as something tangible that will actually happen in the not so distant future. Promoting the future consequences and obstacles of climate change, (unpredictable weather, flooding, droughts, bush fires, supply - demand conflicts, etc.) will show people how our world will change. This manifestation will probe the problem, opening up the platform to multidisciplinary responses and collaborations. Communication of the problem will lend itself to education, ensuring the younger population grow to be pioneers of the new normal.

Cranes, wrecking balls, and excessive construction noise alludes a sense of economic growth in a city. However, business products specialist Emma Gilroy's article in *Recycling Waste World* identified that the construction industry accounts for 60% of all materials used, while generating a third of all waste. Wastefulness is contributing to the crisis, and when we are approached by a client who wants to destroy and build from scratch, we must assess the genuine needs of the project. Considering retrofit before demolishing can make a difference to our carbon footprint. Creative ways to reuse our existing built structures can also make sense in terms of time and money. Urban Splash project Chimney Pot Park in Salford is an exceptional prototype for remodeling traditional terraced housing to deliver contemporary living. Alas, one example does not prove the rule. There are complex problems when retrofitting, such as foundation and structural inspections, low standard builds and insulation problems. This may be one of the challenging aspects to get right, however it is clear the industry is waking up to the trend, with the coveted Mies van der Rohe Award presented to renovation projects for two years in a row.



## In practice

Of course, an obstacle we must all overcome, how can we convince the client to spend money to make money? The statistics on implementing more carbon neutral materials and green space into buildings are astounding. More recently, the biophilia hypothesis has been integrated into architecture and urban design, enhancing the performance and welfare of people. Biophilic design improves both physiological, emotional and mental health, which is particularly imperative as people spend an average of 90% of the day indoors according to the Environmental Protection Agency (National Human Activity Pattern Survey, 2001). There is a growing appreciation for frequent connection with nature from architects and designers in an increasingly urban environment, which can be seen in the form of green roofs and sponge gardens. Both are significantly aiding stormwater reduction by employing plants for absorption of rainwater. Green roofs are especially alluring as they can utilise unused space without opposing with public space. These steps will make buildings and cities cooler, the air cleaner and most significantly the storm drains clearer. Biophilic urbanism not only helps with curing climate change, but it contributes to increased worker productivity, reduced crime rates in neighbourhoods, and even has physical health benefits (Beatley et al, 2013). Furthermore, (and here's where the 'client's buy-in' comes) the value of the building will typically rise meaning increased property value along with amplified employee attraction. Singapore has been coined a model archetype of a biophilic city, with a typical commercial building donating around 80% of itself to greenspace for the user (Building and Construction Authority, 2018). As a condensed, continuously growing city, Singapore government has invested significant funds into parks and nature space, all linked through 200km of 'park connectors'. This approach seeks to balance the scales to cope with a growing population. Tree planting, community gardens, green roofs and green walls are all contributing to the scheme.

## Conclusion

Ultimately, we need to do anything we can, as even a small move in the right direction by our profession will make a difference. The issue with a Wicked Problem is that we see the huge scale of the issue and then decide it is too large to attempt to tackle it. As Hocking (2008) described, "The discipline of Design had a part to play in the creation of the materialistic culture of *more* which has contributed to the looming crisis we now face. Design now has a role to play in transforming our *culture of life* towards something more sustainable."

Therefore it can be argued that architects can effectively challenge a Wicked Problem with a design based solution, to attempt to design a pathway through the maze of the climate crisis.

## References

Akbari, H. (2002). Shade trees reduce building energy use and CO2 emissions from power plants. *Environmental Pollution* 116, Supplement 1: S119-S126 [11 SEP]

Beatley, T., Newman, P. (2013) *Sustainability Journal: Biophilic Cities are Sustainable, Resilient Cities*.

Brown, V.A., Harris, J.A., Russel, J.Y., (2010). *Tackling Wicked Problems Through the Transdisciplinary Imagination*. First edn. London: Routledge.

Building and Construction Authority. (2018). About BCA Green Mark Scheme [online] Available at: [https://www.bca.gov.sg/greenmark/green\\_mark\\_buildings.html](https://www.bca.gov.sg/greenmark/green_mark_buildings.html) [Accessed September 2020]

Gilroy, E., (2016), *Recycling Waste World*. [online] Available at: <https://www.recyclingwasteworld.co.uk> [Accessed September 2020]

Hawken, P., (2017). *Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming*. First edn. New York: Penguin Books.

Hocking, V., (2008). *Co-Designing A Sustainable Culture of Life: designing research methods for sustainable change*. First Edn. Italy: Allemandi Conference Press.

Hocking, V. (2011). *Designing Sustainable Urban Futures: Presenting a Designed Methodology for Sustainability Research*.

Hurst, W. (2020) *The Architects Journal: UK Climate Change Assembly Accused of Neglecting Construction*. [online] Available at: <https://www.architectsjournal.co.uk/news/uk-climate-change-assembly-accused-of-neglecting-construction> [Accessed September 2020]

Incropera, F. P., (2016) Climate Change: A Wicked Problem. First edn. Cambridge: Cambridge University Press.

Klepeis, N., Nelson, W., Ott, W. et al. (2001). The National Human Activity Pattern Survey (NHAPS): a resource for assessing exposure to environmental pollutants. *J Expo Sci Environ Epidemiol* **11**, 231–252

King, B. (2017). *The New Carbon Architecture: Building to Cool the Climate*. First edn. Canada: New Society Publishers.

Lim, C.J., and Liu Ed. (2010). *Smart-Cities and Eco-Warriors*. First edn. London: Routledge.

Sun, J., and Yang, K. (2016). *The Wicked Problem of Climate Change: A New Approach Based on Social Mess and Fragmentation*. Beijing: School of Government, Peking University

UKGBC: [online] Accessible at: <https://www.ukgbc.org/climate-change/> [Accessed September 2020]

Our World in Data [online] <https://ourworldindata.org> [Accessed September 2020]

## 21. Using Case Studies to Explore the Concept of Buildings-as-Energy-Service

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This contribution describes a case study analysis of organisation and projects associated with micro-grids of network power distribution, the term used to describe the physical network used in the short-radius transfer of electrical power. The task centres around the identification of a selection of projects that can contribute to creating and sustaining complex inter-transdisciplinary networks of knowledge that are required to design, implement and manage the concept of Buildings-as-Energy-Service.

This contribution is a part of a broader exploration on Active Buildings (Clarke et al., 2020) as components of a distributed renewable and interactive energy system (DRIES) (Sibilla & Kurul, 2018). DRIES are defined as small units, directly connected with the place of consumption and assembled in a sequence of nodes (i.e. active buildings) in order to organize a micro-energy network. Interactivity is a new property of these systems, which describes their capacity to manage energy and information flows in real-time to optimize energy production, storage, consumption and cost.

The introduction of DRIES requires a significant shift in the scale of and engineering for energy supply (Adil et al., 2016). In addition, changes in business models or energy supply and generation, as well as social behaviour, are expected as a result of a shift away from centralised energy supply (Abdelkafi, N. & Täuscher, 2016). These conventional energy networks are characterised by large generation units and fixed transfer and distribution devices that require long-term planning and sophisticated multi-layer commercial arrangements. In contrast to these extensive industrial activities, alternative systems are distributed around smaller domestic or local-area scale producers and consumers where power does not have to be transmitted over long distances. In contrast to their relatively small reach, these systems require new methods for finance, design, installation and management. DRIES

comprises micro-resources and micro-consumers, who collectively cut out the powerful middle layer of energy resellers.

The advantages that case studies bring to the field are significant. Unlike published literature that is somewhat static and often with a significant time lag, active projects are conducted by widely distributed teams of international collaborators who constitute a living repository of fresh ideas, knowledge and insight. Furthermore, as these projects are time-limited, these same collaborators are likely to be working in a number of newer projects that could also prove useful.

Despite the impetus due to concerns primarily related to the contribution made by fossil fuel burning power plants and the input these have to global climate change, the challenges faced in the conversion to a low-carbon energy supply system are formidable. Most notable is the need to overturn more than a century of energy supply from established large-scale mega-grids. This supply is governed by large and frequently, state-owned enterprises and have associated and sometimes monopolistic commercial conditions. The shift from fossil fuel to low carbon energy is a monumental task as requires the reworking and reinvention of the energy supply chain. The most likely adoption path would likely be from ground-up, small-scale movements. This requires engagement with the local communities who may have isolated self-serving systems in place and a more interactive and democratised management (Sibilla and Kurul, 2018).

In order to facilitate and encourage this shift, a new suite of knowledge is required to design, deploy and maintain the new infrastructure required by DRIES. Understanding the complexities of this form of energy infrastructure is complicated as knowledge is spread across several disciplines, such as urban planners, architects, economics and engineers. With such a dispersed set of knowledge and skills, considerable effort needs to be expended in categorising and indexing these so that they are accessible to those who need them. The piecemeal nature of the knowledge base creates problems when it comes to adopting and transferring new technology, and the approach taken here is to select a range of case studies that serve as a contextual framework. This task, in turn, will contribute directly towards the key outputs of other tasks within this project, such as the Cognitive Tool Kit for Knowledge Integration Envisioning Buildings-as-Energy-Service (Sibilla & Kurul, 2020). The natural place to start building the knowledge base in by employing case studies to derive useful information from projects that are ongoing or recently

completed. This fresh body of knowledge comes along with a corps of well-informed researchers and technicians who are in a good position to provide information and support for future projects.

The methods used in this task centre around approaches to research and organisation that are complementary and mutually supporting. This paper is focused on the gathering information phase from case studies, which, drawn from, on the one hand, the rich array under the auspice of the International Energy Agency's Energy in Buildings and Communities Programme (EBC).

The EBC refers to their funded projects as annexes. These comprise multi-component projects conducted by a confederation of international scientists and technologists collaborating to resolve a set of objectives. As the annexes are complex and extensive, they are useful for circumscribing sets of topics that useful for this research project. In this manner, the annexes and the case studies that they contain, serve as a framework for the knowledge base of the project.

The selection of case studies is based on the requirement to cover a broad range of material and projects as many technical and social topics are required for the creation of DRIES.

Up to six case studies were selected as the appropriate number to allow a reasonable survey of the topics and enable comparison between cases. Each case study is evaluated with respect to a set of topics, which were elaborated and organised in a prior phase. These topics are essential for establishing a comprehensive knowledge base required for this project and the implementation of DRIES. They were organised in 15 topics, which are listed below:

- i. Distributed renewable and interactive energy system trajectory
- ii. Smart grid for net-zero energy buildings
- iii. Buildings as energy services
- iv. Multi-level perspectives
- v. Strategic niche management
- vi. Sustainability-oriented innovation intermediaries
- vii. Organisation of sustainability transitions for the construction industry
  
- viii. Innovative business models
- ix. Ecosystems of applications

- x. Reference buildings and statistical approach to building performance analysis
- xi. Physical-statistical modelling of buildings
- xii. Flexibility of energy services
- xiii. Energy prosumers
- xiv. Self-organized energy communities
- xv. Shifting the construction industry

Therefore, the cases were selected to allow an exploration of a full range of topics and issues that are required to cover the full breadth of DRIES. The case studies are approximately arranged with issues that span from a focus on the individual (Case study 1), to single buildings (Case study 2), then to networked clusters of buildings (Case study 3), through to communities (Case study 4), large estates and conurbations (Case study 5). This range of scale is designed to allow the application of the full extent of project experience to our specific requirements. A further case study expands the technical coverage. Case study 6 considers the impact and role of novel energy-saving and sustainable materials for use in buildings and other built assets.

- Case study 1: Occupant Behaviour-Centric Building Design and Operation, (EBC Annex 79, 2018)
- Case study 2: Energy Flexible Buildings (EBC Annex 82, 2020)
- Case study 3: Data-Driven Smart Buildings (EBC Annex 81, 2019)
- Case study 4: Towards Net Zero Energy Public Resilient Communities (EBC Annex 73, 2017)
- Case study 5: Energy efficient communities (EBC Annex 22, 1991)
- Case study 6: Long-term performance of super-insulating materials in building components and systems (EBC Annex 65, 2013)

The relationships mapped between the 15 topics and the case studies are presented in the table 21.1.

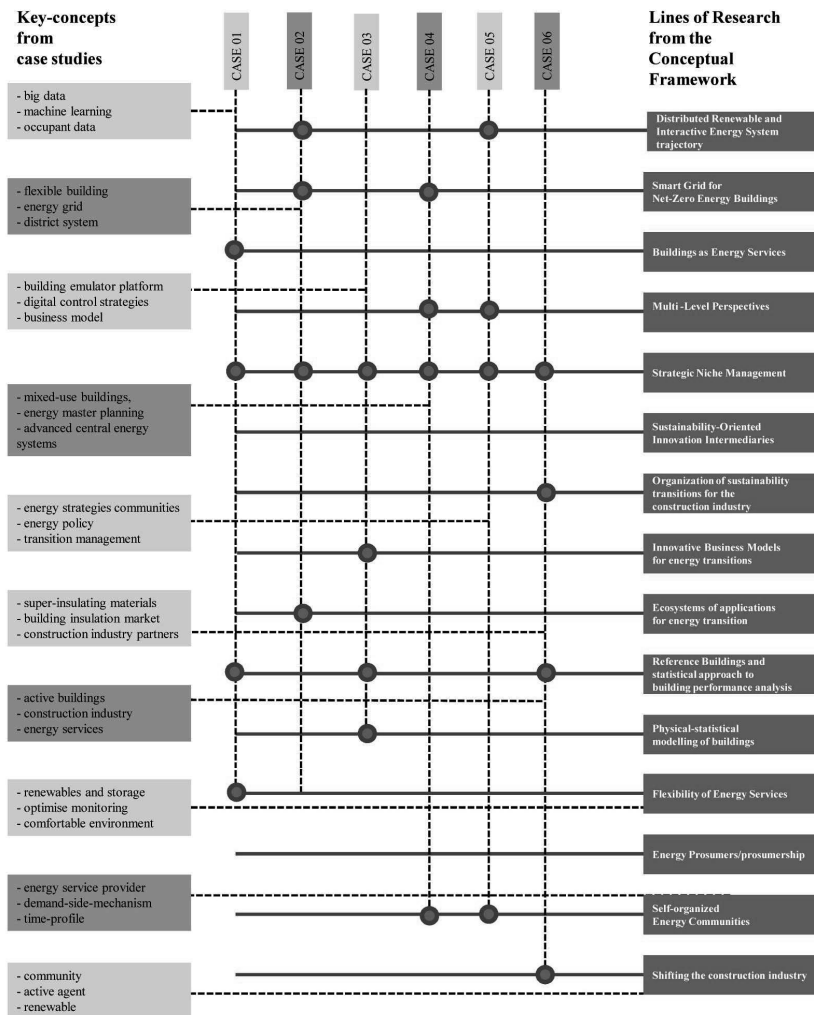


Table 21.1: Relationships mapped between the 15 topics and the case studies

These associations have formed the basis to improve the knowledge framework on the concept of Buildings-as-Energy-Service, providing a contribution towards for the research objective to identify the key concepts and relationships connecting Active Buildings and DRIES properties. The case studies have been elaborated in the form of Data-Sheets and integrated into the Cognitive Tool as additional information. The outcome will feed into other



aspects of the project, all in the context of the Buildings-as-Energy-Service. For instance, Active Buildings are designed to be energy efficient, with novel ways of creating, controlling and releasing energy. Active buildings have the potential to be energy self-sufficient. When connected with other Active Buildings in a network, they could have the ability to trade energy. Active buildings will require new form of participatory processes in urban planning activities, as well as, in the implementation of the concept of smart buildings.

In conclusion, this piece of research highlighted several components involved in promoting Active Buildings as components of DRIES. However, how to put this vision into practice remains a challenge due to the high level of competence and issues, which require an in-depth integration. This study is working towards that direction, pointing out exciting perspectives. The move towards a low carbon society, partly driven by political and popular pressure, can be at least partially resolved by actions such as self-organised communities and local energy storage solutions. One the same map are issues surrounding the role and importance of local planning authorities in matching popular drive towards inexpensive, yet environmentally friendly energy systems. With this regards, building design and service may play a significant role in the evolution towards an efficient co-evolution between energy systems and settlements.

## **Acknowledgements**

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## **References**

- Abdelkafi, N., & Täuscher, K. (2016). Business Models for Sustainability From a System Dynamics Perspective. *Organisation and Environment*, 29(1), 74-96.
- Adil, A. M., & Ko, Y. (2016). Socio-technical evolution of Decentralized Energy Systems: A critical review and implications for urban planning and policy. *Renewable and Sustainable Energy Reviews*, 57, 1025-1037.

Bulut, M. B., Odlare, M., Stigson, P., Wallin, F., & Vassileva, I. (2016). Active buildings in smart grids - Exploring the views of the Swedish energy and buildings sectors. *Energy and Buildings*, 17, 185-198.

Clarke J., Jones P., Littlewood J., & Worsley D. (2020) Active Buildings in Practice. In: Littlewood J., Howlett R., Capozzoli A., Jain L. (eds) *Sustainability in Energy and Buildings. Smart Innovation, Systems and Technologies*, vol 163. Springer, Singapore.

EBC Annex 22. (1991). <https://www.iea-ebc.org/projects/project?AnnexID=22>

EBC Annex 65. (2013). [www.chalmers.se/en/projects/Pages/IEA-EBC-Annex-65.aspx](http://www.chalmers.se/en/projects/Pages/IEA-EBC-Annex-65.aspx)

EBC Annex 73. (2017). [annex73.iea-ebc.org](http://annex73.iea-ebc.org)

EBC Annex 79. (2018). <https://annex79.iea-ebc.org/>

EBC Annex 81. (2019). <https://www.iea-ebc.org/projects/project?AnnexID=81>

EBC Annex 82. (2020). <https://annex82.iea-ebc.org/>

Kurul, E., & Sibilla, M. (2020). Rethinking Buildings. Should buildings simply be enclosures that house different functions? *Emerald Open Res*, 2.

Sibilla, M., & Kurul, E. (2018). Distributed Renewable and Interactive Energy Systems in Urban Environments. *TECHNE Journal of Technology for Architecture and Environment*, I special, 33–39.

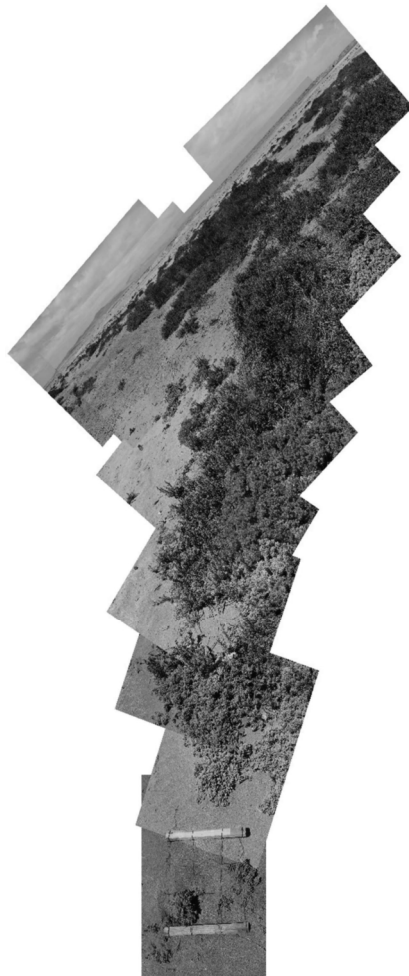
Sibilla, M. (2020). *Buildings-as-Energy-Service: a Tool Kit for re-thinking about a new generation of buildings as components of a future energy infrastructure*, Firenze : Altralinea, 2020.

## 22. Ti.hum: Tierra Húmeda | Species Coexistence Urban Model for Vulnerable Basins, The case of Tierra Amarilla, Agro-Mining Town in Copiapó River Basin, Atacama Region, Chile

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Climate change and water overexploitation by agribusiness and mining made the Copiapó river basin subject to growing water scarcity. The yet evident effect on the ecosystems and cultivated fields calls for the regeneration of the aquifer mesh, here named mallacuífera. The term indicates the water network in surface and underground liquid form, moving from the plateau to the coast in the riverbed, in the irrigation channels and in streams, and vice versa moved upward as desalinated water in the aqueducts.

Despite the semi-desert condition and the aforementioned drought, water continues to be a pervasive element of Copiapó river valley. Thus, it generates situations of humidity where plant, animal and human life are integrated into a balanced ecosystem. As the ecological equilibrium is heavily threatened, this



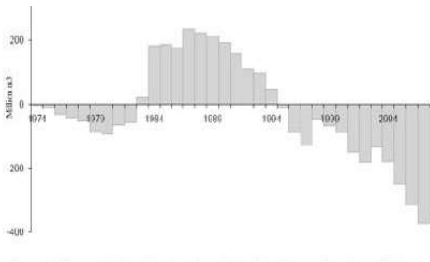
*Figure 22.1: Xerophytic vegetation  
Caldera, Atacama region. Source: Elaboratd by  
the author*

research proposes strategies to recover contaminated water flow, regenerating the agro-productive surface now in crisis and contributing to the sustenance of the wetland located in the basin.

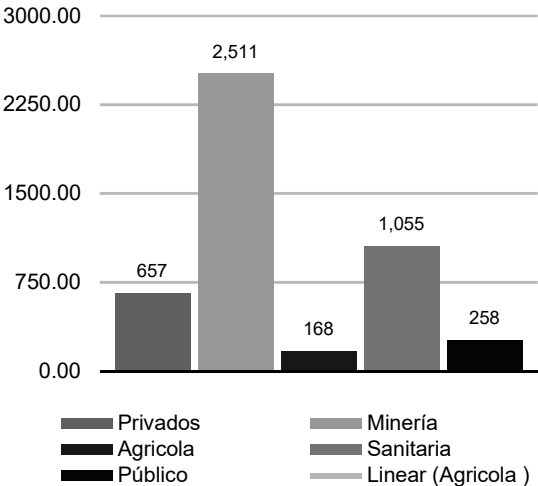
An alternative scenario of anthropic occupation for this semi desert territory shows how liquid waste from productive activities can feed human and other species presence in the valley. In this sense, it is assumed that the reactivation with recovered water of the cultivation surfaces via an artificial aquifer mesh and according to sustainable principles can guarantee a stable water supply to the basin.

The study focuses on Tierra Amarilla, an agro-mining town in the river valley, where it is possible to contribute to the recharge of the aquifer through the recovery of water contaminated by mining processes. The Ti-hum agro-park is supplied and infiltrates the Copiapó with phyto-purified water from the El Buitre tailings dam.

**Copiapó river  
between drought and water privatization**



Graphic 22.1: Change in the total volume stored in the Copiapó aquifer between 1974 and 2007. Source: AA. VV. Limited CEF Hydromas. (2013), Update of the integrated and underground modeling of the Copiapó river basin aquifer, Report S.I.T. No 332) General Water Directorate, Ministry of Public Works. Santiago, Chile.



Graphic 22.2: Water rights distribution graph, Tierra Amarilla locality, own elaboration. Data source: AA.VV., Technical report: RIGHTS TO USE UNDERGROUND WATER GRANTED IN THE RÍO COPIAPÓ BASIN, S.D.T. N ° 327, Department of water resources administration, MOP, DGA, Government of Chile, Santiago, 2016.

The water crisis in the basin is mainly due to the massive extraction of groundwater by industrial agriculture from the 80's, when the transition to a neoliberal economic model promoted the privatization of water use rights, favoring the free market and the development of the export industry (Wada et al., 2010). Due to legislative, technical-informative and economic-social problems, the SAL (Sustainable Abstraction Limit) of the aquifer has not been respected, worsening water scarcity above and below ground. (Rinaudo et al., 2018) The continuous decrease in the piezometric level (Custodio, 1993) of the area has caused the crisis of the agricultural sector of the valley, in addition to the fragmentation of the wet corridor of the river.

It is considered that in the coming decades, mining activity will be progressively supplied by desalinated water. As currently under discussion in Chile National Congress. Although this measure may mitigate the effect of extractive mining, the decrease in the flows extracted from the water tables would not be enough to restore the water balance of the basin. This is due to the fact that the main water user in the valley is agriculture (Rinaudo et al., 2018), of extensive industrial type, for export. Furthermore, liquid waste not recovered in the mining process will continue to be stored in tailings dams with a high risk of contamination of streams in the event of alluvial events.

The environmental conflict of the basin, therefore, calls for an integral consideration of the water mesh that sustains the valley. It is chosen to nominate this territorial system *mallacuífera*, with the aim to expand the consideration of water in the basin beyond the limits of the riverbed. The *mallacuífera* is made up of both the surface and underground networks and the water carried by pumping and deposited in the ponds. Where the meeting between the river system and the productive system generates a potential use of recovered water, an artificial water network can sustain the human presence and restore the humidity condition to the valley, as occurs in oases.

Among the human settlements in the valley, the situation of Tierra Amarilla, central to the superficial course of Copiapó River is particularly critical. Here the effects of mining and agro-industrial presence are simultaneously manifested. The first has modified the topography with the tailings deposits generating changes in the atmospheric conditions of the place, while the second, developed around the town, has contributed to the over-exploitation of the water tables.

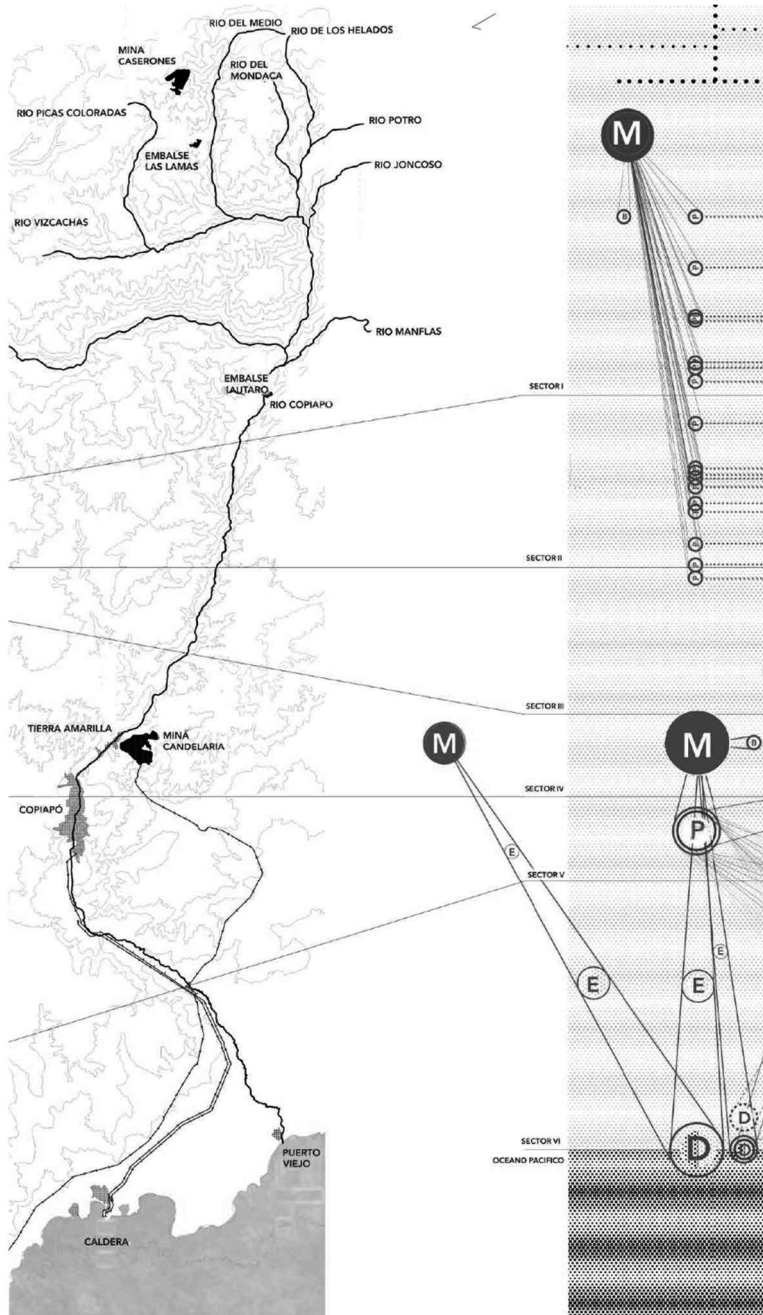
The crisis calls for the urgency of including these negative variables in a territorial strategy aiming to regenerate the life of the place in its different forms. As suggested by Morton (2012), active thinking or praxis, considers the wastes of human activity as resources for the construction of an alternative way of inhabiting the ecosystem, improving its ecological, economic and socio-cultural conditions. The hydro-productive scenario of the Copiapó basin sees Minera Caserones exploit the wells in the upper sectors of the basin, Minera Candelaria occupies desalinated water but generating polluting water waste, the agro-industry contribute to the exploitation of water.

*Next pages*

*Figures 22.2 and 22.3: Actors map.*

*The hydro-productive scenario of the Copiapó basin sees Minera Caserones exploit the wells in the upper sectors of the basin, Minera Candelaria occupies desalinated water but generating polluting water waste, the agro-industry contribute to the exploitation of water. The latter, found mainly in its liquid form in the river's own channel, to say in an alluvial valley, as a surface flow or as a productive resource in mining, urban and agricultural infrastructures, is subject to competition by four macro actors: mining companies, sanitary water companies, agriculture and river ecosystem.*

*Source: Elaborated by the author*



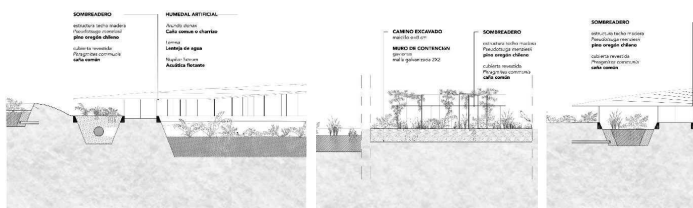




humidity condition which had historically allowed agriculture in the semi-desert valley.

It is then proposed to link two obsolete elements of the landscape, a disused tailings dam and a dry agricultural fabric, through a hybrid artificial watershed made of existing and proposed canalization. In this way, a future scenario emerges where the water technical system can be declined through design in a place of coexistence between different species. Five main project operations lead to the generation of a hybrid agro-park between public and private surfaces, supported by phyto-purified water. The TiHum agro-park takes the appearance of a new agricultural urbanization, structured from the existing subdivision but different in housing density and cultivation system, above all suitable for local ecosystem regeneration.

The human-scale design of the new urban-life model for Tierra Amarilla allows reflecting on how architecture can generate humid situations fit to species coexistence. In this sense, the design proposes solutions capable of integrating technical elements necessary to purify, transport, monitor and use water with a wooden double roof structure, suitable for plant colonization. The latter has been considered as a generator of biodiversity spaces due to shade and humidity generated in the soil.



*Figure 22.4: Type section. The section shows the topographic impact of the water mesh and its relationship with the shading areas. The transport of phytodepurated water occurs in an underground aqueduct, through which it is inserted into the circular filtration pool. Humid areas between agricultural plots allow the phytodepuration of the domestic waters of the agro-park. Finally, the arroyo water in surplus is transported to the aerobic phytodepuration.*

## Project strategies

As humidity is understood as an essential character for species coexistence, the main project operation consists in the generation of an aquifer mesh (mallacuífera) in the dry agricultural soil with phyto-purified water from mining

process. This water system would be at the same time responsible for charging the basin with recuperated domestic and industrial grey water.

Through the reactivation of abandoned crops, an attempt is then made to prove that it is possible to recharge the basin, without eliminating, or rather through human productive activities in the valley. The construction of an artificial aquifer mesh to support the productive surface could guarantee at the same time human sustenance and fixed water supply to the river. It is possible to transform the area currently considered under development by the Communal Regulatory Plan equal to 110 Ha according to a density of 20 p / ha. This factor of territory occupation would make the new agro-productive surface work as a hybrid system between current factor of residential blocks (40 p / ha) and agricultural areas (1 p / ha). (VV. AA., CIPRES Ingeniería Ltda, 2018)

### **Management of recovered water flow**

Area's water supply could rely solely on the water recovered from the San José mining plant. The extension of the surface involved by the transformation and the existence of studies (Ginocchio, 2012) on the treatment of mining wastewater through passive phytodepurative filters suggest solving the purification of the water with a continuous infrastructure of artificial wetlands supported by a mesh of channels and aqueducts. According to the same study, anaerobic type filters with submerged flow have a treatment capacity of around 4000l / day on a surface of 273 m<sup>2</sup>, while macrophyte filters work at a flow rate of 4000 l / day on a surface of 933 m<sup>2</sup> (Quevedo, 2018). Considering a flow of water contaminated by mining processes much greater than the flow to be treated of gray water, it is proposed to use anaerobic technology in post-extraction mineral treatment and aerobic technology for the treatment of domestic waters.

Taking into consideration an individual water footprint that includes household expenses and food supply with local products estimated to be around 0.0375 l / s and the available volume to be recovered equal to 50 l / s, the phytodepurative surfaces useful to the agro-park can be defined as:

- 29.5 Ha of anaerobic filters
- 8.8 Ha of aerobic filters

In fact, with the first phase of treatment of the 50 l/s inlet flow, water flows could be granted as:

- 30 l/s to the human supply of which:
- 26 l/s to crop irrigation
- 4 l/s to domestic use
- 15 l/s to artificial wetlands
- 2.5 l/s to phytodepurative macrophyte nurseries
- 2.5 l/s to monitoring centers and Visitors

In the second phase, with aerobic filters, the following would be treated instead:

- 2.0 l/s of domestic gray water
- l/s of gray water for agro-park buildings, added to the 15 l/s of water stored in the constructed wetlands, would provide a total aquifer recharge of 18.0 l / s. Possibly irrigated agricultural area (40 Ha) could accommodate housing units (8 people) with an area of 0.4 Ha, for a total of around 800 people living in 40 Ha.

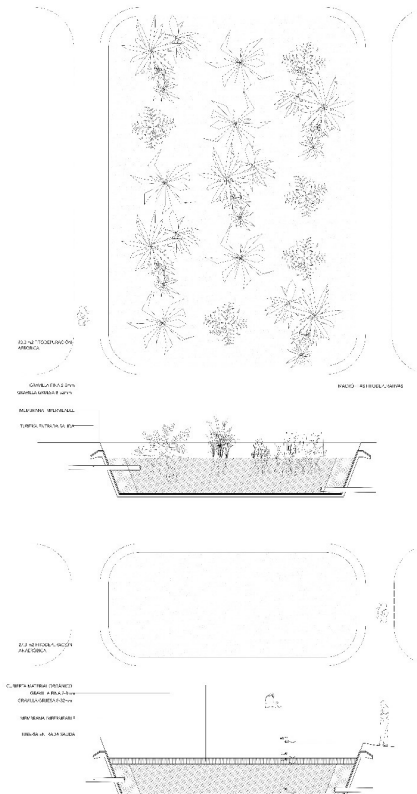


Figure 22.5: Type Section.

06.I Passive aerobic filter;  
flow treatment capacity 400 l / day

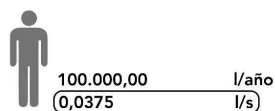
06.II Passive anaerobic filter;  
flow treatment capacity 400 l / day

Source: Elaborated by the author

**TiHUM**  
agro-parque húmedo



**HUELLA HÍDRICA eco-sustentable**  
Propuesta de proyecto



agua de recupero para TiHUM

50,0 l/s

**TiHUM**  
unidad habitable



0,4 Ha

0,1920 l/s

N. unidades habitables

110

nuevos habitantes

880

consumo agro-sanitario  
30,0 l/s

consumo agrícola  
26,0 l/s

consumo sanitario  
4 l/s

centro visitantes /viveros  
2,5 l/s

piscinas parque húmedo  
2,5 l/s  
15 l/s

recupero aguas grises  
3,0 l/s

l/s recarga hídrica fija

18,0 l/s

Figure 22.6: Water flow management data.  
Source: Elaborated by the author

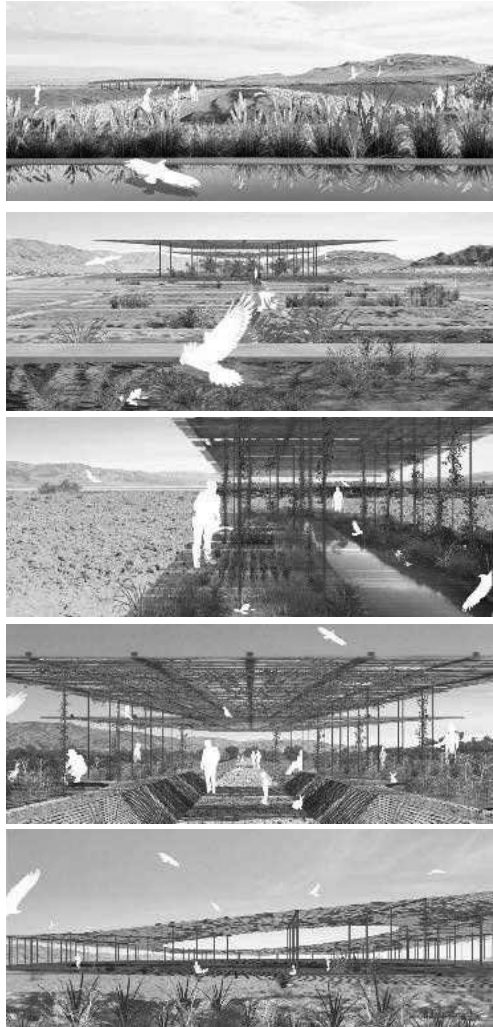
## Actors and management model

A public investment is supposed by MOP/DGA (Public Infrastructure Ministry / Water General Directory) for the construction of the decontamination infrastructure that supply the new urbanization and the associated public park. This financing could be contributed by the profits from the non-use patent water right, which would involve around 50% of the rights granted so far in the sector for mining activity. The CASUB (Underground Water Community) would take charge of the rights distribution of treated water with priority to the owners of regenerated dry fields and to these agricultural companies most affected by the water crisis.

## Operations

Project operations are presented as following, according to the order of the proposed aggregate water cycle.

A. Transportation of the water stored in the El Buitre dam to the edge of the city in a canal-aqueduct, which follows the route of the C397 road, now a



*Figure 22.7: Project views represent the spaces generated through the five project operations.  
Source: Elaborated by the author*

connection between the main route of the C35 valley and the western mining establishments through the national route.

B. Treatment of contaminated water in a strip of aerobic phytodepurative surfaces, to be located in the dry lands that border the city limit to the West in the form of the existing asphalt road.

C. Channeling of the phytodepurated water in an artificial mesh to support the agricultural parceling, hybrid between existing and designed fragmentation, for its use in irrigation for crops and in houses. As previously mentioned, part of the purified flow would converge in artificial infiltration ponds, with the aim of regenerating the humid landscape of the river on its now abandoned edges.

D. Implementation of the recharge to the aquifer with the treatment of domestic wastewater in a strip of anaerobic phytodepurative surfaces. The fabric of constructed wetlands with semi-aquatic plants could also act as an ecological hotspot for local species of fauna and flora.

E. Recharge of the aquifer: the water would be transported in a channel to the infiltration pools of the public strips of the TiHum agro-park or through the well located in the main monitoring center.



*Figure 22.8: Project masterplan. Source: Elaborated by the author*

## **Open conclusions**

The focus on Copiapó river basin has shown that the widespread drought of the extraction wells that supply the basin with drinking, sanitary and process water is mainly due to the agro-industrial exploitation that began in the '80s. However, the obsolescence of the surfaces of contaminated water residues from mining extraction is another relevant concause for the collapsing of the river ecosystem. The effects of over-extraction and residual water storage are particularly evident in sector III of the basin, where the anti-oasis Tierra Amarilla is located. Understanding the basin as an interconnected ecological system, it is than possible to imagine an adjustment of the hybrid water cycle involving industrial contaminated water for the recovery of the river wetland, at the same time allowing the livelihood of human community in the valley.

The application of the strategy to agro-mining town Tierra Amarilla has shown the deployment of the mesh at the urban scale. In this central plateau settlement, where the combined effects of mining and agricultural activities took the place of local cultivations, it has been shown that five project operations can reactivate the water system, enabling agricultural practice as well as biodiversity presence.

The project proposal has finally shown how a hybrid water system linking two obsolescent landscape elements (a disused tailings dam and dry agricultural parceling) can contribute to the recharge of the aquifer and make the territory humid. The design strategy, applicable throughout the basin due to the widespread presence of contaminated liquid water surfaces and crop fields, has led to a more open conceptualization of the water presence in semi desert exploited ecosystems. Under a regenerated humid condition, possible spatial solutions can be applied to convert the technical water management system into a place of coexistence between species.

## **References**

Acreman M. (1999), Water and Ecology Linking the Earth's Ecosystems to its Hydrological Cycle, Internacionales, No. 45/46, AGUA Y DESARROLLO.

Aronson Schlomo (2008), Entender los paisajes áridos in Aridscapes, Proyectar en tierras ásperas y frágiles, Barcelona.

Carrasco P. (2009), Crecimiento Urbano de Copiapó. Causales, Patrones y Perspectivas, Nodo Tecnológico.

Custodio E., Management and Protection of Aquifers. Argentine Hispanic Seminar on current issues of Underground Hydrogeology. Mar de Plata, 1993)

Mathur, da Cunha (2014), Design in the Terrain of Water, Applied Research + Design Publishing, University of Pennsylvania, School of Design.

Morton Timothy, Introduction en The Ecological Thought (Harvard University Press; 2012)

Ginocchio, (CEZA – Universidad de Chile) Estudio de la tratabilidad de las aguas claras del tranque de relaves Pampa Austral para la diversificación productiva de la comuna de Diego de Almagro. Centro de investigación minera y metalúrgica, Universidad de Chile: Santiago de Chile, 2012

Quevedo Egaña G., OASIS FITODEPURADOR: Infraestructura hídrica para la consolidación socio-ecológica del tranque de relaves Pampa Austral, Tesis para optar a título de Arquitecto y grado de magister. Pontificia Universidad Católica, Escuela de Arquitectura, Diseño y Estudios Urbanos. Santiago, Chile, 2018

Rinaudo G, Donoso G., (2018), State, market or community failure? Untangling the determinants of groundwater depletion in Copiapó (Chile), International Journal of Water Resources Development

Ruano Miguel (1999), ECOURBANISMO: ENTORNOS HUMANOS SOSTENIBLES: 60 PROYECTOS, Editorial Gustavo Gili, Barcelona.

Tushaar Shah, David Molden, R. Sakthivadivel and David Seckler (2001), Global Groundwater Situation: Opportunities and Challenges, Economic and Political Weekly, Vol. 36, No. 43 (Oct. 27 - Nov. 2, 2001).

VV. AA., Análisis Brechas de Infraestructura Urbana MOP en ciudades, Etapa I, 2018, CIPRES Ingeniería Ltda, MOP



Wada, Y., van Beek, L.P.H., van Kempen, C.M., Reckman, J.W.T.M., Vasak S, Bierkens M.F.P. (2010). Global depletion of groundwater resources. *Geophys. Res. Lett.*, 37, L20402, doi:10.1029/2010GL044571

World Conference on Environment and Development (1987), *Our Common Future*, Oxford University Press, Oxford UK.

### 23. At Home in the Earth, Made without Hands

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Today there is a worldwide fear of disasters related to climate change, which has been growing since the year 2012 hit people's imaginations as a wake-up call. Long-term endemic disasters surround us today from the environment to our health, from the economy to wars, but what can architecture do about disasters?

The media greatly profits from showing us the disasters around the world, with experts speculating on their causes: "It was a glass bottle that caused the forest fire, it is the fossil fuels making a hole in the ozone layer; it was climate refugees who moved into the cities that destabilised the politics; it's the melting ice caps that is causing the drought; coronavirus lockdown has crippled the economy; the interest rate is to blame, or the banks, or the people, or the government" and so on. Everyone is busy chatting about these causes, but these are all relative causes, like links of a chain, one thing related to the next. If we follow the links of this deterministic thinking back far enough we may ask, like a curious child, "but what is the cause of ALL of this?" Then we cannot find one physical thing that is the cause of 'all of this'. We have to go 'beyond all' to position a single, unitary cause and that is what leads us to ontology, philosophy, and theology. The early Christian theologian Dionysios the Areopagite wrote in the 5th century AD,

"That the pre-eminent Cause of every object of sensible perception is none of the objects of sensible perception" (Dionysios, 1897, p. 94).

We do not perceive it, but this intangible Cause is within every one of these disasters, in the reasons, and also in the tangible solutions. The sheer scale of urbanisation in today's world makes an architectural method necessary for remembering the intangible cause within the tangible world. We have a deep need in the modern city to consciously integrate the unknown into daily life, for human beings to maintain an open mind in conditions beyond our comfort zone, and for individuals to reach out to fulfil their potential.

A rhetorical question concisely posed by the Sufi Master Taner Vargonen Ansari to his audiences (Ansari, 2000, p. xii), could be rephrased for architects, "Ask yourself, am I in charge? If not, then Who is in charge? Another power must be

in charge, that we call El or God or Allah”, or simply the Name, the One, the Beingness or other forms of address. This leads again to theology, ontology, and *philosophia* (love of wisdom). When one looks at the rapidly expanding modern cities of the world today, one feels as if there is nobody and nothing in charge. They are growing as agglomerations of more and more of cities within cities, and accretions of different communities. Among them, each community has a collective persona, which is written into traditions and laws. These have diversified into legally constructed corporate personas, some of which have become more important than national personas. Even the landscape in-between has been consumed by these mega-cities. For example, Los Angeles is twice the size of Switzerland filled with an endless sprawl of freeways, houses, backyards, parking lots, and shopping centres. Yet it only has twice the population of Switzerland, which is full of beautiful mountains and forests and a few cities and towns. It is as if the earth itself is being devoured by these agglomerations of deterministic, relative thinking.

Modern cities have been growing without an inbuilt consciousness of the ‘Cause of All of this’. For those millions who scarcely see daylight much less natural landscape, even the healthy analogies that the natural world provides is missing. To bring the Intangible into the human life-space, as the natural ordering principle, must be the first priority of architects and developers, because the world is struggling with environmental degradation which, like a cancer, spreads internal structural chaos in the physical world. As a civilisation, we have become used to fighting against the natural world, and against our neighbour. Somehow our attitude is always about resisting in order to survive and grow, and unfortunately we have been choosing the direction of what we think makes us happy; more jewellery, more cars, more houses, more wives, more wealth, more power, more leisure, more holidays, more excitement. We associate all of these with survival but these are not humanity’s survival in the era of climate change.

Today we can see via satellite the earth as one precious, blue pearl. On the internet via social media we talk in real time to another person in a different civilisation on the other side of this planet. Humanity is coming to a realisation that our physical entity is all connected. To sustain and survive we also have to be connected. For the billions of us within today’s urban sprawl there must be a way to return to a life where natural phenomena are part of a coherent, unitary, organising principle.

This is where architecture in a very humble way can help because architecture is built from the same elements that compose our universe. Let us for a moment see the natural landscape, that we are consuming in these cities of relative thinking and the pursuit of pleasure, as really the timeless elements of this universe, the earth, water, air, and fire. In the ancient world of the east and west, these four elements (or perhaps five or more) were the foundation of cosmology and science, as part of *philosophia* and theology. By the 20th century, in western Europe (eastern Europe has a different history) we have only one philosopher who fused the poetics of these universal elements with modern scientific philosophy, the Sorbonne professor Gaston Bachelard. About the art of 'making' he wrote, "...we must understand that the hand, as well as the eye, has its reveries and its poetry" (Bachelard, 2011, 70-80) which he connected to the material world.

"Yet besides the images of form, so often evoked by psychologists of the imagination, there are - as I will show - images of matter, images that stem directly from matter. The eye assigns them names, but only the hand truly knows them. A dynamic joy touches, moulds, and refines them. When forms, mere perishable forms and vain images - perpetual changes of surfaces - are put aside, these images of matter are dreamt substantially and intimately. They have weight; they constitute a heart." (Bachelard, 1999, p.1)

"Meditated upon from the perspective of its depth, matter is the very principle that can dissociate itself from forms. ....meditation on matter cultivates an open imagination." (Ibid. p.2)

When the hand of the maker humbly touches the material, it transmits its message to him directly. In this we can find the very ancient practices connected with masonry architecture, based on the concept of the work 'made without hands'. This was known to the early eastern Christians as *acheiropoeiton*, but originating far back in the ten thousand years of masonry history in the Near East and Middle East. With the same principle Jesus healed others on the sabbath, where he himself was not 'working at healing'; the divinely ordered energy was coming through him without interference, as it has been for all prophets and enlightened persons. For example, the words and actions of the Prophet Mohammed make it clear that God was speaking through him, because the Quran is in the first person. Jesus promised his disciples, "I will make you a temple not made by human hand" (Mark 14:58, New International Version) which was a necessity since the "God that made

the world and all things therein, seeing that he is Lord of heaven and earth, dwelleth not in temples made with hands” (Acts 17:24, King James Version). To find out how a hands-on work like masonry building could be a work ‘made without hands’ we must enter the mason’s experience.

From the first time that humans picked up some rocks and put them in a circle around themselves, then tried to balance them on top of each other, spiralling around to build a room, ‘earth architecture’ has played its part entraining the person step by step towards an enlightened, mature consciousness. Architecture is a mute medium whose earliest masonry examples predate writing, such as Gobekli Tepe (10,000–8,000 BC) in eastern Turkey, and Kheirokitia in Cyprus (7,000 - 4,000 BC). Yet architecture has the ability to continuously transmit a message to the whole human body through all the senses. For this reason it is called the mother of all arts, because it is the only art which contains human presence. We live in rooms, houses, offices, streets, without stopping to think that we are constantly absorbing their subliminal messages. The 20C philosopher Rene Guenon wrote about masonry and it’s symbols,

“The centre is, above all, the origin, the point of departure of all things. It is the principal point, without form and without dimensions, therefore indivisible, and thus the only image that can be given to the primordial Unity.” (Guenon, 1995, p. 46)

To the mason the centre must become an experienced principle, not just a visual image. Starting with a centre and a circular perimeter, the right philosophical relationship is set up with the earth and with the human being as a collective body. When the mason, or earth builder picks up the bricks or stones to build, or even earth-filled fabric tubes, he places them around a perimeter, but always with this unitary centre in mind, in heart, and in practice. Through that action, he builds a space, a dome, and that domed space becomes the space of the mason’s life, containing an instructive message that is absorbed with all the senses.

The entire training of the apprentice to become a master builder is to acquire the qualities of earth, to learn humility and love towards his or her material. No other way will advance his skill because that earthen material must be in repose within gravity in order to stand firm in the forms of arches, domes, vaults, apses and all of their possible combinations and variations; the hemispherical and parabolic domes, the rounded apse, the segmental and

catenary vaults, the tall arch and the flat arch. (This reminds me of the business card of our Californian project mason, "Dick, the brick", which read, "The thin ones and the fat ones, we lay them all"! ). If the mason is not attuned to his material, and he thinks, "Oh I'd like to build it like that and I want this part further out, and we need to change this", it is going to fall down. It might happen immediately, or next week, or at the first earthquake, but disaster happens sooner or later. The mason has to focus totally, to attune himself completely to this natural 'earth' material. He is not resisting any more, he is not imposing his will, and he is not in charge. He is attuning himself as a mystagogic practice to his material and asking it, "where do you want to go?" When he learns to listen he finds that it seems to fly into place. I have seen this happen in many workshops of building domes and vaults with students that at a certain point the resistance has gone. A student told me once, "It's as if the dome wants to build itself!"

For the mason, after a long apprenticeship of heavy lifting, where his muscles feel the pain of resisting, there comes a point when his body harmonises with gravity and the unitary centre, and he reaches repose. Like a babe in the womb, the builder feels the lightness of being, and all his materials seem to move effortlessly in place, while his mind is still from the turbulence of thoughts. As St. Hesychios the priest wrote in the 6th or 7th century AD,

"To human beings it seems hard and difficult to still the mind so that it rests from all thought. Indeed, to enclose what is bodiless within the limits of the body does demand toil and struggle, not only from the uninitiated but also from those experienced in inner immaterial warfare." (St. Hesychios the Priest, 1983, Philokalia Vol.1, p. 188 # 148.)

The mason encloses what is bodiless within the limits of the body because with only tangible materials he makes a place for the intangible to dwell. The mason's mind cannot be moving this way and that, when his total focus is required, and as long as he is building his arches, vaults and domes, he has the chance to practice and perfect this art. Imagine you were one of the builders of the 33 metre diameter dome of Hagia Sophia in Constantinople, now Istanbul; there is no scaffolding beneath it, and you have only a simple measuring device attached in the centre. The rest is about you, gravity and the material. It is not only poetic imagination that caused Hagia Sophia's eulogists to describe the 'dome of heaven' seeming to hang over nothing. The cosmology

is also as ancient as masonry buildings. The weightlessness felt by the mason can be compared to Dionysius' words in his *Mystagogia*,

“For by the resistless and absolute ecstasy in all purity, from thyself and all, thou wilt be carried on high, to the super-essential ray of the Divine darkness, when thou hast cast away all, and become free from all.” (Dionysios, 1897, p. 88)

The sense of perfect balance is felt not only by the builder but also by those who inhabit the dome. When the last keystone is in place, the people who use the space experience how it rings true, like a bell, when they hear the echo of their voice. We can say then, that it is a work ‘made without hands’, an *acheiropoeiton*. It teaches by analogy through the senses and guides the development of good character. It supports a person in spiritual disciplines in other areas of life, and certainly it teaches the building of cities. For example, a building composed of arches, domes, and vaults, is built by a mason listening to the earth, but the result is always in harmony with the wind and sun, with the principles of air movement and energy movement, through the unity of the elements.

This brief paper is not proposing to build all cities with domes, but simply to introduce one of the essential concepts of masonry architecture. Based on the archetypal designs of the Chahar-Taq shrines which flourished in the Sassanian Empire of Mesopotamia and the dome-in-cross Byzantine Churches which proliferated among the Christian Romans, an architectural theory was derived for East and West, which has a clear connection to symbolic theology, cosmology and the ‘Cause of all’. From this simple figure a vocabulary of masonry architecture has developed which made traditional cities and perhaps will make futuristic cities. The architect Nader Khalili, who was awarded the Aga Khan award for architecture in 2004, hoped for this when he taught his students to build a prototype called Eco-Dome home on the same principles, because as the Sufi poet Rumi wrote in the Persian language,

“Earth, water, air, and fire and obedient creatures. They are dead to you and me, but alive at God’s presence.” (Khalili, 1999, p. 6)

This essential concept of masonry architecture and its archetypal figure cannot revolutionise our current paradigm but it can integrate with our present economy through housing, and assist a gentle and joyous transformation. It is just one example of the ways in which architecture can work to build our

collective body to avoid disasters. Thus, like Job himself, we may endure our suffering in the spirit of humility and love, and learn how to live in harmony with earth, with ourselves, and with each other so that perhaps, as an entire humanity within our cities and urban areas, we may find that sustainability and ease which is given to a 'friend of God', and we may live at home in this earth.

## References

Ansari T. (2000) *The Sun Will Rise in the West: The Holy Trail*, Napa: Ansari Publications

Bachelard G. (1999) *Water and Dreams: An Essay on the Imagination of Matter* (Trans. Farrell, E.) Dallas: The Pegasus Foundation

Bachelard, G. (2011) *Earth and Reveries of Repose: An Essay on Images of Interiority* (Ed./Trans. McAllester, M. ) Dallas Institute Publications

Dionysius the Areopagite (1897) *The Works of Dionysius the Areopagite* (Trans. Parker, J.) London: James Parker and Co.

Guenon R. (1995) *Fundamental Symbols: The Universal Language of Sacred Science* (Trans. Moore, A.) Cambridge: Quinta Essentia

Khalili, N. (1996) *Ceramic Houses and Earth Architecture: How to build your own* Hesperia: Cal-Earth Press

Nikodemos of the Holy Mountain, Makarios of Corinth, Saints (1983) *The Philokalia: The Complete Text, Vol. 1* (Trans. Palmer G., Sherrard P. and Ware K.) London: Faber Paperbacks



## **24. Redrawing Reconstruction: Defining a Mapping System for the Comprehension of Urban Metamorphosis Following Extreme Events**

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### **Introduction: Urbicides**

In recent years the term Urbicide, the voluntary and deliberate destruction of an urban environment for violent purposes (Berman, 1996), has re-emerged in architectural and urban planning debate in light of the growing number of cities that have been involved in major conflicts and thus require innovative reconstruction strategies (Aleppo, Damascus, Sanaa, Mosul, Benghazi, etc.). Numerous studies have been devoted to the subject with a focus shifting from the construction of a historical perspective (Hippler, 2014), to the issue of cultural identity and heritage preservation (Bevan, 2006. Bold et al, 2017. Allais, 2018); from geopolitical and economic reverberations (Coward, 2004. Ikle, 2005) to the use of ICT instruments for investigative purposes (Weizman, 2011, 2018) or to military tactics adapted to urban planning (Porteous&Smith, 2001. Franke, 2003. Graham, 2010). In the field of urban studies, numerous researches, mainly devoted to post-ww2 Europe, have attempted to construct an organised history of reconstruction processes (Diefendorf, 1990. Cogato-Lanza&Bonifazio, 2009. Johnson-Marshall, 2010. Cohen, 2011. Moravánszky, 2016) exploring the different design approaches in terms of urban and architectural strategies.

However, a huge knowledge gap exists in the analysis and systematisation of processes of urban metamorphosis following conflicts, large-scale social problems or natural disasters: a comparative study of past cases highlighting similarities and differences, allowing for their critical assessment, has never been fully developed. The aim of this paper is to define a drawing based analytical system able to generate a better understanding and a clear categorisation of the reconstruction processes. We intend this drawing method as a knowledge system for the comprehension of historical metamorphosis in urban morphologies and as an operative tool to increase the learning experience necessary for the upcoming reconstruction processes.

Already in 1917 Patrick Geddes wrote with Victor Branford the book *The coming polity, a study in reconstruction* (1917) advocating for the need of a research, scientific in method and prospective in the outlook, capable of linking the past with the future and seeing post WWI reconstruction as a unique chance to test this method. For Geddes the regional survey, intended as a organised scientific knowledge system based on statistical evidences applied on the territory through maps, is the key tool for the construction of urban and regional designs conscious of the complex entanglement of context variables (Hewitt, 2012) and showing the unwavering faith in science as a remedy to social problems. In Geddes' words:

“The future we can see but dimly. The more sharply we can outline the past in the present the more clearly we may discern the image of the future. For the future is not disconnected from the past but it is continuous with it. By selection and recombination of past tendencies surviving into the present we shape the future. Hence the first requisite of foresight is a true and clear ideas about the past (1917, 18-19)”.

Despite the call to architects and urban planners launched after WWI by Geddes in order to develop an organised knowledge on the theme of reconstruction, a scientific approach to past experiences and current conditions is yet to be fully explored. Only the development of tools specifically intended for designers will allow to equip experts with the technical knowledge

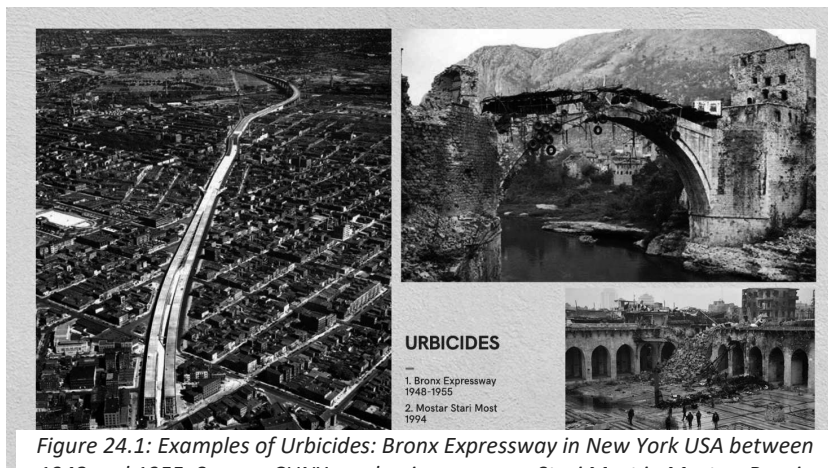


Figure 24.1: Examples of Urbicides: Bronx Expressway in New York USA between 1948 and 1955. Source: CUNY academic commons. Stari Most in Mostar, Bosnia Herzegovina in 1994. Source: SENSE - Transitional Justice Center. Umayya Mosque in Aleppo, Syria in 2013. Source: Al Monitor.

needed for the assessment of short and long period results of reconstruction interventions and the design of valuable future strategies based on a solid conceptual framework. The survey approach gives a key value to permanence and continuities in the urban fabric, despite all the necessary changes and metamorphosis related to economic, social or functional necessities. In this vision the trial and errors mechanisms that allowed historical settlements to reach the highest possible level of habitability (Benevolo, 1971) can be reproduced in a substantially shorter timeframe, and avoiding major social distresses, only by a society that through the use of scientific analyses comprehend and accepts the value of permanence and continuity. The use of statistical evidences applied on the territory is a basic element in the reconstruction of, first and foremost, a state of equilibrium with resources and social instances, which loss is often the most common among the multiple interconnected causes of contemporary conflicts (Harrison, 2019).

The comprehension of past dynamics as an engine for future strategies becomes even more important in contemporary urban conflicts where the two phases of urbicide through erasure of the urban form and reconstruction for financial exploitation are seen by the different ruling powers as interlinked elements with the final goals of maximising economic profit and minimising social dissent. Military techniques are extended to urban planning through a series of strategies defined by Stephen Graham as *New Military Urbanism* where

“techniques of urban militarism and urbicidal violence serve to discipline or displace dissent and resistance. They erase or delegitimise urban claims and spaces that stand in the way of increasing predatory forms of urban planning that clear the way for super-modern infrastructure, production centres or enclaves for urban consumption and tourism (2010)”.

This extreme condition that marks the complete bonding between the military systems and the financial and industrial complexes (in this case represented by the construction industry) is the final result of a slow but steady evolution that has characterised totalitarian and democratic power structures throughout the whole XXth century. From Francisco Franco's *pueblos adoptados* (Centellas Soler, 2006), to the major disembowelling of city centres in Italy promoted by Marcello Piacentini (Nicoloso, 2018) in the fascist era, from erasure of the old Bronx district promoted by Robert Moses in the 60's (Ballon&Jackson, 2007) to the selective targeting of the central district conducted by belligerent parties

in Beirut during the Lebanese civil war and concluded by *Solidere* (Mango, 2004. Sawalha, 2010. Ghandour&Fawaz, 2010) different ruling powers have used destruction and reconstruction as two interconnected and continuous instruments denying any value to urban permanence and constructing urban landscapes solely devoted to financial speculations or purely propagandistic values.

### **Leonardo Benevolo and the *sceneggiatura* drawing method**

The systematisation process of reconstruction case studies and the establishment of an analytical drawing method should start from a clear definition of the final goal of this overwhelming task. The objective of this method is to construct a knowledge system that allows to understand the past, with its processes of decision making and morphological metamorphosis leading to the current urban settings. Retracing the transformations allows not simply to witness past experiences but constructs an operative tool for the comprehension of urban dynamics, with the final goal of steering future intervention strategies in light of an increased knowledge of the reconstruction processes.

In order to achieve this goal the tools to be used are not those of the architectural historians, that tend to operate as archivists or advertisers (De Giorgi, 1987), focusing mainly on the artistic and poetic value of the spatial solutions without trying to retrace the operative steps that have lead to the final object; but rather those, analytical and operative, specific to designers. This tools have been defined by Leonardo Benevolo in numerous texts (Benevolo, 1959, 1968, 1991) that see history of architecture as a discipline equal and complementary to design: on one side the definition of spaces based on the understanding of the surrounding context (design) on the other the search for an understanding of the design choices of the past through the analysis of the current built environment and its formation mechanisms (history) (Albrecht, 2015). In this vision the two discipline differ only in the order of the operations, they can be overlapped and interchanged through a commutative property and are conducted through the same tools. Drawing, being obviously a key tool in the design process, becomes a key element in the historical analyses as well as the only element that allows to fully comprehend past design choices in analytical terms. In this way

“architecture should again belong to everyday life, architecture is a technique to solve spatial and time limitations, it is a technique like all

others, but its sense of responsibility is greater than average: the long duration of its products, the multiple relationships it generates. This passage requires a lowering of tone and an analytical scruple, which instead are increasingly lacking (Benevolo, 1988, 53)".

This careful type of analytical approach is defined by Benevolo as *sceneggiatura* (scriptwriting) of the physical transformations, where architectural projects or urban environments are described and defined through all the specific features of the object and its context as it would happen in a screenplay for a cinema or theatre production. One of the most important *sceneggiature* written by Benevolo is the clear demonstration of the inextricable link between historical analysis, critical assessment and design processes developed for the San Pietro complex in Rome (Benevolo, 1990) and presented in Casabella n.572 in 1990. Benevolo immediately marks the difference between his type of analysis and contemporary architectural history:

"this brief retrospective analysis helps to understand why a pertinent critique, which is lacking for contemporary architecture, is also missing to some extent for architecture from the past. Archeology with its technical apparatus connected to the excavation and restoration operations is equipped to offer exhaustive analyses of the oldest buildings. The history of art, which grew up on the trunk of the opposing intellectual tradition, does not suppose a professional competence in the field of architecture or a technical precision homogeneous to the design work, but instead a precision of a documentary and literary nature, curiously disarmed when it descends on the concrete physical ground (1990, 55)".

Benevolo's *sceneggiatura* sums archival precision with critical re-drawing by individuating three key moments in the history of the urban complex: the arrangement of the piazza before Bernini's project, the completion of the colonnade with the parallel arms and the definition of the ovoidal square operated by Bernini between 1662 and 1670 and the current conditions following the demolition of the *Spina dei borghi* and the construction of *Via della conciliazione* based on the design by Marcello Piacentini and Attilio Spaccarelli completed between 1937 and 1950. The three phases are not only described and documented with significant archive materials (historical maps and engravings) but are also drawn at the same scale and with the same type of visual representation in order to eliminate the discrepancies given by the

different drawing styles. The current condition is measured and defined in plan and section with the aim of comprehending not only the relationship between the different parts of the complex constructed in different timeframes but also the reasoning behind the design decisions due to constrictions given by previous steps of construction. This type of analysis allows to understand the reasoning behind each design decisions that cannot be explained through the simple observation of the current state of the urban environment. As an example the dimension and orientation of Bernini's colonnade is given by the willingness to create a visual and physical continuity between the *Scala Regia* constructed by Antonio da Sangallo anche the urban axis of the *Via Alessandrina* that connected it to Ponte Sant'Angelo at a distance of around 1.400 meters. This relationship is today completely denied by the new shaping of the urban environment following Piacentini's interventions but can quite easily be observed through the evolution of Benevolo's drawings.

The final drawing proposed by Benevolo in the Casabella article is the key element of his analysis: he overlaps the condition before Piacentini's intervention with the current one showing with only three layers the complex entanglements of urban continuities and breaks. The drawing is presented with three simple colours: the red buildings are unchanged in the two timeframes, the yellow are the demolished and the blue the reconstructed, while the hatched yellow and blue shows the buildings that were reconstructed on areas previously occupied by other buildings. The sum of these layers allows to define a powerful tool for the comprehension of the urban metamorphosis allowing a

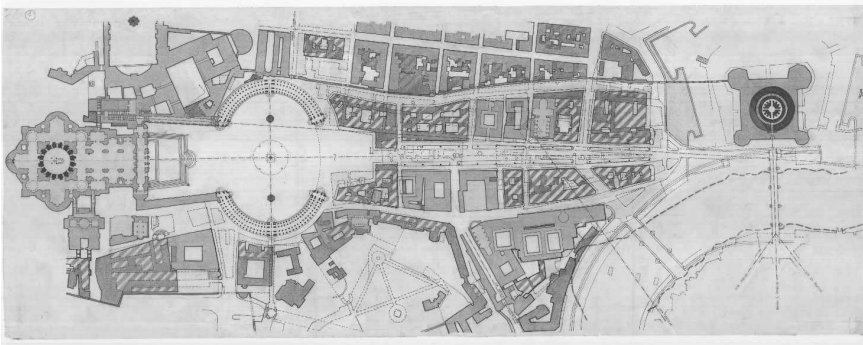


Figure 24.2: Transformation Map of the San Pietro complex with overlap of Gianlorenzo Bernini's project (1662-1670) and current settings with Via della Conciliazione by Marcello Piacentini and Attilio Spaccarelli (1936-1950). Source: Leonardo Benevolo Archive Università Iuav di Venezia.

trained eye to understand in a single glimpse a complex design history.

Benevolo does not see this drawing as the conclusion of the analysis but rather as the foundational element that allows to construct a design proposal made strong by the full comprehension of the complexity of the historical stratifications. In the book *San Pietro e La Città di Roma* (Benevolo, 2004), the *sceneggiatura* will be further expanded and clarified leading to a design proposal for the reconstruction of the *Spina dei borghi*, based on the necessity to re-established the original visual axis denied by the current condition. The analytical drawing approach enables the designers to avoid banal errors derived from a bad comprehension of the context and its history. Piacentini (never openly quoted in the text), as well as is rival Gustavo Giovannoni, was lead to the costly involuntary error that erased the equilibrium of Bernini's vision, by the lack of comprehension of the design history that could instead be fully understood through a careful drawing analyses based on a precise selection of the available archival materials. The continuity in terms of operative tools is a necessary mean for the drafting of design proposals fully aware of the historical evolutions and capable of taking responsibility in the morphological metamorphosis of the urban environment. In these terms, the city is seen as a palimpsest that jealously keeps the traces not only of its latest additions but of the whole sum of modifications applied on the natural and human support throughout its long history. Benevolo summarises his ideas in the conclusion of his article by tracing the possible future uses of his analytical drawing method:

“Design coherence remains a practical and personal skill, which becomes increasingly difficult to convey and is forgotten over time. The reading of the documents on the construction of the square gives continuous evidence of the contrast between Bernini's reticence and the amateurism of his interlocutors, and this is only the beginning of a misunderstanding that continues to this day. Critics today have the task of resolving this disagreement in the light of the historical account, and the attempt is just as important to understand the architecture of the past as it is to properly discuss and better design contemporary architecture (1990, 60)”.

The analytical drawing approach defined by Benevolo is still valuable today and can represent a mechanism that allows to comprehend and define the urban modifications of destroyed and reconstructed urban patterns. Only through this patient process it is possible to depurate architectural history from a vision

based on personal sensibility or on stereotypical archival documentation that too often employs tools that are radically different from those of the design experts. The analytical drawing approach is applicable to all urban areas that have undergone major metamorphosis linked to conflictual events, social distresses or natural disasters. The key element is the definition of the appropriate *sceneggiatura* for each area since most case studies will not have the crystal clear definition of phases that characterises the San Pietro case. With this regard, the choice of the key dates for the selection of the analysis timeframe becomes a pivotal element that steers all future operations. The decision is heavily linked to the availability of data that becomes the first and most important factor but the definition of the timeframe layers must be taken with the greatest care, particularly in fast-growing and fast-modifying urban environments.

## Critical Redrawing

The sceneggiatura method identified by Benevolo was applied by the research group Urbicide Task Force at Università Iuav di Venezia to a series of

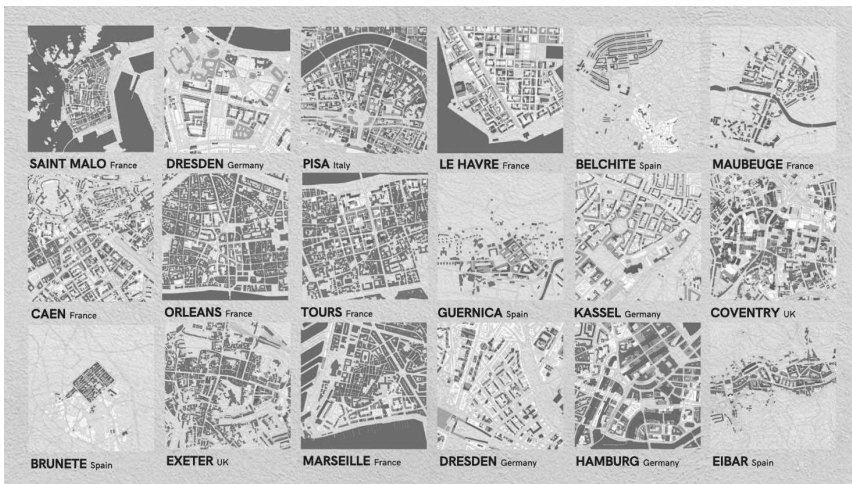


Figure 24.3: Transformation maps for the cities of Saint Malo, France (1944-1961); Dresden, Germany (1945-1989); Pisa, Italy (1943-1960); Le Havre, France (1944-1964); Belchite, Spain (1937-1964); Maubeuge, France (1940-1963); Caen, France (1944-1957); Orleans, France (1940-1960); Tours, France (1940-1962); Guernica, Spain (1937-1956); Kassel, Germany (1943-1970); Coventry, UK (1943-1962); Brunete, Spain (1937-1946); Exeter, UK (1942-1950); Hamburg, Germany (1943-1960); Eibar, Spain (1936-1960).

Source: Urbicide Task Force, Università Iuav di Venezia.



reconstruction case studies following WW2. An operation, never carried out in a comparative way, which makes it possible to reassess the numerous monographic studies on post-war reconstruction processes (Mamoli & Trebbi, 1988. Düwel & Gutschow, 2013) in light of a common evaluation system and therefore to define interpretative categories not limited to critical observation of archive materials but based on different tools such as drawing and its analyses. The operation requires a massive archival effort to recover the maps or historical photographs that document the conditions before the destruction, the level of destruction and the reconstruction processes. The archival data were standardised in the forms of representation to allow the full overlap of the different timeframes. The redrawing makes it possible to illustrate the three different urban structures and ends, as in Benevolo's example, through the creation of a transformation map that overlaps the three moments and clearly shows the process of urban metamorphosis. The analysed case studies were all framed in a 1kmx1km square: a common basis that allows you to compare the numerical data that emerge from the analysis of the transformation maps. The different size of the urban centres, which in some cases today have become megalopolises, sometimes required the selection of the most significant area but in most cases the pre-war dimension of the urban centres allows the framing of the entire historical core, the area often most affected by destruction, within the framework of 1kmx1km.

The case studies examined were around 30 in a period that includes the Spanish Civil War (1936-1939) and the various war theatres of WW2 (1939-1945). From a geographical point of view, the cases are distributed among Austria, Czech Republic, France, Germany, Great Britain, Greece, Holland, Italy, Japan, Poland, Spain and Russia. Geographical distribution does not fully reflect the amount of conflict-induced urban destruction but rather shows the greater amount of archival information available in some contexts than in others. The period identified for the choice of the timeframe at the end of the reconstruction process, which makes it possible to draw up the transformation map, varies significantly: in some cases, characterised by extensive but localised destruction, the reconstruction processes were completed in the 1950s (Marseille, Caen, Florence, etc.); most of the planned large-scale reconstructions were completed in the 1960s (Le Havre, Rotterdam, etc.) while in some examples for economic or political reasons the processes lasted until the 1970s (Kassel, etc.) or even to the '80s (Dresden, London, etc.). A formal date of conclusion of the reconstruction exists only in some cases of top-down planning of the urban form such as in Le Havre where in 1964 Auguste Perret's plan is declared completed (Britton, 1997) or in Rotterdam where Cornelius Van Tra's Basis Plan remains in operation until 1968 (Baaij, 1990). In many cases

the completion of a symbolic building is used as the beginning or end of the reconstruction: in Milan the rapid reconstruction of the La Scala theatre with the inaugural concert directed by Arturo Toscanini on 11 May 1946 and the completion of the Velasca tower designed by BBPR (Pertot&Ramella, 2016) in 1957; in Marseille, the inauguration in 1954 of the new *Vieux Port* district that was deliberately blown up during the Nazi occupation and rebuilt following a design by Fernand Pouillon (Crane, 2004); or again in London where the Cripplegate area sees a radical upheaval of urban forms which culminates with the inauguration by Queen Elizabeth of the Barbican Center in 1982 (Orazi, 2018).

The comparative analysis of the transformation maps allows, through critical observation, to build families of intervention strategies and their consequences at the spatial level. The initial decision on maintaining or abandoning the pre-destruction urban form marks a clear watershed between areas where the urban structure is substantially mended with minimal changes (Milan, Pisa, Caen, Saint Malo etc.) and areas where reconstruction is completely different from the pre-destruction setting (Le Havre, Exeter, Brunete, Kassel, etc.). It is also possible to define mixed systems in which the maintenance of some elements considered to be of greater architectural value is accompanied by a radical rethinking of the minute fabric as in Dresden or Hamburg. In other cases, the pre-destruction settlement principle is reinterpreted as the trigger for reconstruction processes by re-proposing the urban form but substantially modifying some key parameters (distances, dimensions of the buildings) as in Orleans or Münster. On other occasions, the inclusion of new functions, wrongly or rightly imagined as more in line with contemporary needs, is the driving force behind the profound modification of the urban layout, such as in Coventry or London. The operation as a whole shows how any attempt at a clear vertical categorisation starting from common characters, in some cases becoming real slogans such as *com'era dov'era* or *tabula rasa*, must give way to a more fluid division in which the economic, social and political conditions dictate the timing and forms of the intervention strategies. The strong resilience of urban forms emerges with great clarity, dictated above all by the ownership structures and the consequent systems of financial revenues (Bernoulli, 1946), which in spite of total destruction remains capable of directing future design choices. A vision of the city as a unitary body is confirmed (Albrecht & Magrin, 2015), in which the modification of the individual parts is always possible but never indiscriminate with respect to the overall value of the whole ensemble.

The quantitative analysis of the transformation maps can allow a further step

forward in the understanding of the phenomena and in their cataloging, so the next step of research was to define and calculate a series of key parameters: percentage of destruction, area occupied and its variation, number of elements and its variation, average size of the elements and its variation, average of the distances between elements and its variation, percentage of reconstruction on same area and percentage of maintenance of the road edge. The percentage of destruction, which may seem a discriminating element with respect to subsequent variations, is between 95% and 20% and in reality does not substantially alter the subsequent parameters. The most uniform data is undoubtedly the variation between the area occupied before the destruction and the subsequent one which (except for some small towns that undergo a total re-foundation) is in a range between 45% and 85% showing a thin widespread. The data on the variation in the number of elements is also fairly unified and stands between 47% and 95% showing a general simplification of urban complexity in favour of larger and fewer buildings. The figure could be linked to the abandonment of traditional construction methods (which do not allow large dimensions in a widespread manner) in favour of light or heavy prefabrication forms that allow processes of formal uniformity. The two conclusive parameters of the comparison, the percentage of reconstruction on the grounds and the maintenance of the road edge vary substantially between the different cases selected and do not allow a clear distinction between the maintenance of the urban structure completed by the reconstruction of buildings on existing lots and the simple re-proposal of buildings with new forms in high-density contexts and therefore necessarily, but without a clear intention, on previously occupied areas.

Urbicide Task Force intends to further develop the research, also trying to understand if events different in causes but similar in effects, such as natural disasters and socio-economic crises, have radically different impacts on urban metamorphosis. However, it is necessary to reaffirm the use of drawing as a tool for investigation and understanding, not so much of the past with a documentary goal or of the present with an advertising or illustrative function, but as an analytical tool for the understanding of the complexity of urban metamorphosis processes and above all as an operational basis for the creation of strategic urban design tools. Only a full understanding of the reasons and results of past choices can allow today, in a historical context in which catastrophic destructions are continuously increasing and the complexity factors of the reconstruction processes are growing exponentially, to critically insert contemporary choices into an overall trajectory which bases the project of the future on the understanding of the past.

## References

Albrecht B. (2015). *Leonardo Benevolo ed il guardare gli edifici del passato da dentro* in Benevolo L. *Indagine sul Santo Spirito di Brunelleschi*, Rimini: Guaraldi-Engramma.

Albrecht B., Magrin A. (2015). *Esportare il Centro Storico*, Rimini: Guaraldi-Engramma.

Allais L. (2018). *Designs of Destructions the making of monument in the twentieth century*, Chicago: The University of Chicago Press.

Baaij H. (1990). *Rotterdam 650 Years: Fifty Years of Reconstruction* Rotterdam: Veen.

Ballon H., Jackson K. (2007). *Robert Moses and the Modern City The Transformation of New York*, New York: W. W. Norton & Company,.

Benevolo L. (1959). *Corso di Storia dell'Architettura I - a.a. 1958-1959*, Roma: Università di Roma La Sapienza.

Benevolo L. (1968). *Storia dell'Architettura del Rinascimento*, Roma-Bari: Laterza.

Benevolo L. (1971). *The origins of modern town planning*, Cambridge MA: MIT press.

Benevolo L. (1988). Le due tradizioni dell'architettura contemporanea. *Casabella*, n.544.

Benevolo L. (1990). La percezione dell'invisibile. Piazza San Pietro del Bernini. *Casabella*, n.572.

Benevolo L. (1991). *La Cattura dell'Infinito*, Roma-Bari: Laterza.

Benevolo L. (2004). *San Pietro e la città di Roma*, Roma-Bari: Laterza.

Bevan R. (2006). *The Destruction of Memory, Architecture at War*, Chicago: The University of Chicago Press.

Berman M. (1996). *Falling Towers: City Life After Urbicide* in Crow D.(ed.), *Geography and Identity: Living and Exploring Geopolitics of Identity*, Washington, DC: Masionneuve Press.

Bernoulli H. (1946). *Die Stadt und ihr Boden*, Zurich: Verlag für Architektur AG.

Bold J., Larkham P., Pickard R. (ed.) (2017). *Authentic Reconstruction: Authenticity, Architecture and the Built Heritage*, London: Bloomsbury.

Britton K. (1997). *Auguste Perret and the Construction of Exactitude*, Cambridge MA: Harvard University Press.

Centellas Soler M. (2006). *Los pueblos de colonización de José Luís Fernández del Amo. Arte, arquitectura y urbanismo*, Escuela Técnica Superior de Arquitectura de Barcelona. Universidad Politécnica de Cataluña, Phd Thesis.

Cohen J.L. (2011). *Architecture in Uniform: Design and Building for the Second World War*, Montreal: Canadian Centre for Architecture.

Cogato-Lanza E., Bonifazio P. (2009). *Les experts de la reconstruction. Gli Esperti della ricostruzione*, Geneva: MetisPresses.

Crane S. (2004). Digging up the Present in Marseille's Old Port: Toward an Archaeology of Reconstruction. *Journal of the Society of Architectural Historians*, 63 (3).

Martin Coward M. (2004). *Urbicide The politics of urban destruction*, London: Routledge.

De Giorgi M. (1987). Storici come pubblicitari, storici come sceneggiatori. *Casabella*, n. 541.

Diefendorf J. (ed.) (1990). *Rebuilding Europe's Bombed Cities*, New York: Palgrave Macmillan.

Jörn Düwel J., Gutschow n. (2013). *A Blessing in Disguise: War and Town Planning in Europe, 1940-1945*, Berlin: DOM Publishers.

Franke, A. (2003). *Territories: Islands, Camps and Other States of Utopia*, Berlin: KW, Institute for Contemporary Art.

Geddes P., Branford V. (1917). *The coming polity, a study in reconstruction*, London: Williams and Norgate.

Ghandour M., Fawaz M. (2010). Spatial Erasure: Reconstruction Projects in Beirut. *Architecture Publications*, n.48.

Graham S. (2010). *Cities Under Siege: The New Military Urbanism*, London: Verso.

Harrison R. (2019). *The global and regional geopolitics of civil war in the Middle East*, Washington DC: Middle East Institute.

Hippler T. (2014). *Governing from the Skies, A Global History of Aerial Bombing*, London: Verso.

Hewitt L. (2012). The civic survey of Greater London: social mapping, planners and urban space in the early twentieth century. *Journal of Historical Geography*, n.38.

Iklé F. (2005). *Every war must end*, New York: Columbia University Press.

Johnson-Marshall P. (2010). *Rebuilding Cities: From Medieval to Modern Times*, Livingston NJ: Transaction Publishers.

Mamoli M., Trebbi G. (1988). *Storia dell'Urbanistica, L'Europa del Secondo Dopoguerra*, Rome-Bari: Laterza.

Mango T. (2004). *Solidere: The Battle for Beirut's Central District*, Cambridge MA: Massachusetts Institute of Technology, Department of Urban Studies and Planning.

Moravánszky A. (2016), *Re-Humanizing Architecture New Forms of Community, 1950-1970*, Basel: Birkhäuser Verlag.

Nicoloso P. (2018). *Marcello Piacentini. Architettura e potere: una biografia*, Udine: Gaspari.

Orazi S. (2018). *The Barbican Estate*, London: Pavilion Books.

Pertot G., Ramella R. (2016). *Milano 1946: alle origini della ricostruzione: la città bombardata, il censimento urbanistico, gli studi per il nuovo piano, le questioni di tutela*, Cinisello Balsamo: Silvana editoriale.

Porteous D., Smith S. (2001). *Domicide: The Global Destruction of Home*, Montreal: McGill-Queen's Press.

Sawalha A. (2010). *Reconstructing Beirut: Memory and Space in a Postwar Arab City*, Austin TX: University of Texas Press.

Weizman E. (2011). *The Least of All Possible Evils: Humanitarian Violence from Arendt to Gaza*, London: Verso.

Weizman E. (2018). *Forensic Architecture. Violence at the Threshold of Detectability*, New York: Zone Books.

## 25. Transform to Transform Ourselves

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### **Crisis and plastic consumption**

The current sanitary crisis that we are globally facing has accelerated a wide range of issues and problems related to the reproduction of our consumption culture.

One of these problems takes our relation with industrial objects, especially plastic ones. In this sense, from the pandemic mitigation efforts, a large increase in the demand of plastic products has been detected to protect citizens, patients and health workers [1].

As can be seen in Fig.25.1, objects like masks, gloves, medical lab coats, glasses and facial masks faced an exponential growth in their demand and, according to that, the amount of plastic waste has been multiplied. On the other hand, it is also possible to find medical hardware like respirators and ventilators, polycarbonate syringes, etc., that also increased in demand, but they have longer useful life compared to the first group [2].



## **+ POLLUTION**



## **COVID-19**

*Figure 25.1: Hospital plastic waste. Source: Elaborated by the authors from The conversation, journalistic flair.*

Link: <https://theconversation.com/danos-colaterales-de-la-covid-19-el-resurgir-del-plastico-137803>

According to the prevention measures that have been adopted by the governments, like confinements and limit free walking, the use of disposable plastic has increased linked to the demand of delivery services packaging products to avoid personal contact.

*What can we do with this plastic waste?*

Definitely, this leads us to the ecological crisis reported in the last years related to the plastic waste in our planet and to the social, economical and environmental paradigm of single use industrial objects. The new industrial production paradigms based on ecodesign and circular economy methodologies have raised like a viable way between many production politics in the world, however, design and developing products and objects from recycling materials continues to be an urgent challenge.

### **From waste to the transformation**

In this context, the plastic products post-use destiny (from health systems and general use), remains a feeble domain for institutions and citizens. In Chile, the regulatory framework for waste in health system buildings contemplate that 2,687,040 medical plastic waste are eliminated daily [3], an critical figure covered by a regulatory framework, which, although it contemplates the

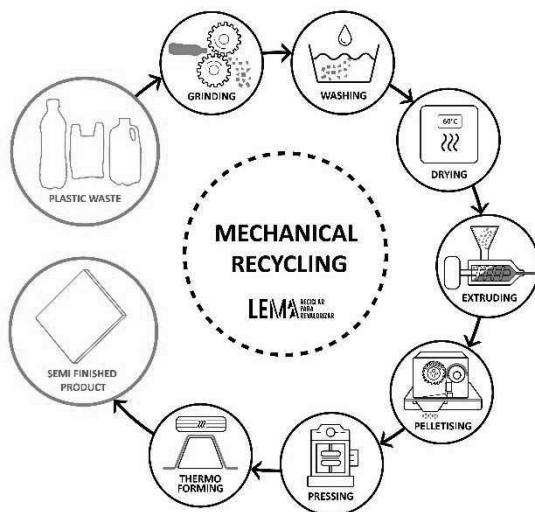
differentiated use of waste containers and operating recommendations aimed at its recycling and reuse, does not specify any of these operations, promoting actions such as the collection of these or the incineration of waste or garbage dumps, which could generate emissions of carcinogenic compounds such as dioxins and furans [2].

According, recycling to transform, and limiting virgin raw materials as much as possible, is an aim that will allow us to revalue plastic waste as a secondary raw material open to the redesign of our material culture. Based on repair, modification and adaptation.

### Re-thinking the plastic waste

*From mechanical recycling to manufacturing, a technological community*

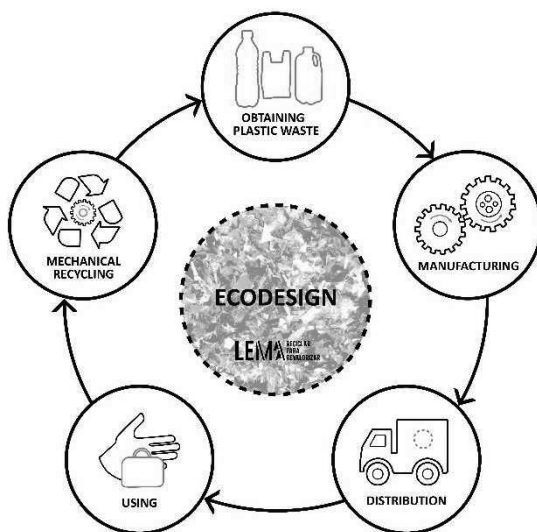
Within the possibilities of exploring and understanding a recovery of plastic waste to the production cycle, our research is part of a design process for new architectural materials, taking as a first parameter the mechanical recycling process of different types of plastics obtained from the post-consumer, and the stabilization of new materials with additives that enhance certain properties of new products.



*Figure 25.2: Mechanical recycling processes. Source: Elaborated by the authors from ISO 15270, 2008.*

As shown in Fig.25.2, the transformation of these mechanical processes are enunciated within an interdisciplinary area, which involves new methodologies and techniques, to follow the line of revaluation of materials and products in search of a comprehensive transformation of the new product.

LEMAA is a Laboratory of Environmental Architectural Materials Exploration; in this laboratory, we give an opportunity to waste materials, incorporating Architecture, Design and Chemical Engineering, to create new forms and functions from the materialization of new products. We use the mechanical recycling process, such as crushing, washing, drying, extrusion, pelletizing, pressing, thermoforming and injecting to obtain a new functional and recycled product. Finally, we incorporated Ecodesign methodologies, to evaluate the environmental impact in the different stages of the product (Fig. 25.3).

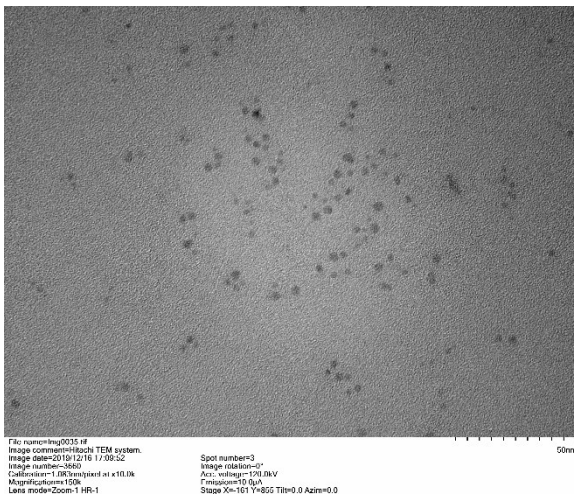


*Figure 25.3: Ecodesign methodologies. Source: Elaborated by the authors, 2020.*

*Nanomaterials as an opportunity*

By exploring and understanding the opportunity that plastic waste has for the production cycle, additives allow the enhancement of additional characteristics or properties to the new material, being able to grant a new environmental functionality to the architectural product as the degradation of polluting gases through Photocatalysis for example.

The iteration in this exploratory process of creating a new material, frames us to the possibility of researching the stabilization of the mixture together with catalytic nanoparticles, as can be seen in image of Fig.25.4. making a new nanomaterial with environmental functions.



*Figure 25.4: Catalytic nanoparticles in recycled plastic. Source: Elaborated by the authors from SEM (Scanning Electron Microscopy) test carried out by the USACH laboratory*

The assessment of the incorporation of these additives in thermoplastics, the stabilization and the dosage percentage are taken into account to ensure a stability and minimum resistance compatible with the mechanical ranges [4]

## Conclusion

Highlights of the critical consumption of plastics used on pandemic, invite us to transform ourselves, from an exploratory and iterative process of trial and error. This path allows us an opportunity for the environment that entails the change of the definition of plastic as a waste.

The incorporation of technologies, such as mechanical process, nanomaterials and ecodesign, allows to revalue plastic waste through the composition and materialization of new innovative products through interdisciplinary areas.

Plastic waste has a potential for toxicity, and added to the slow degradation, has been identified as a risk to human health and ecosystems [5]; according to the cycle of this material, it's a real challenge, transform the design methodology of new materials that will allow us to repair, modify and adapt what exists.

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### **References**

Jirí Jaromír Klemes, Yee Van Fan, Raymond R. Tan, Peng Jiang, 2020. Minimising the present and future plastic waste, energy and environmental footprints related to COVID-19. *Renewable and Sustainable Energy Reviews*, 127:109883.

Ethel Eljarrat, 2020. *Daños Colaterales del COVID-19: El resurgir del plástico*. CIPER The Conversation. From <https://www.ciperchile.cl/2020/05/06/danos-colaterales-de-la-covid-19-el-resurgir-del-plastico/>

Ministerio de Salud, 2020. Reglamento sobre manejo de Residuos de Establecimientos de Atención de Salud (REAS). Gobierno de Chile.

Md Daniyal, Sabih Akhtar, Ameer Azam, 2019. Effect of nano-  $\text{TiO}_2$  on the properties of cementitious composites under different exposure environments. *Journal of Materials Research and Technology*, 8(6): 6158-6172.

European Commission, 2013. LIBRO VERDE. GREEN PAPER On a European Strategy on Plastic Waste in the Environment. Brussels, COM/2013/0123 final.