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Relentless Resilience

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Abstract: The paper observes that one of the most significant changes experienced by global cities in their growth is that (fortunately) they keep a Relentless Resilience of some of their urban components. These are clearly perceived as configuring territorial fragmentations, either in extra- or intra-urban location, caused by the obsolescence of uses non-aligned to contemporary life; and territorial discontinuities interspersed along the conurbation. It is precisely in these fragments that good opportunities for the smart growth of a global city can be detected. They represent a trend towards a curtailment of the undesired sprawl and the creation of new places that will somehow act as "gluing" the fractures. Indeed, one of the most striking features of contemporary cities has been the strong tendency to value their old memories through redeveloping their heritage assets. The newest trend is to reuse them under the generical denomination of "Cultural and Creative Parks", in line with the ideas of the "creative economy" and the revitalization of brownfields.

Key words: Contemporary cities, places, resilience, creative parks, anthropocene.

1. Introduction

Urbanisation is a crucial environmental change carved by human kind upon nature, requiring constant updating insofar as its major outcome—cities—is subject to an ongoing process of mutations expressed not only in the morphological features it displays, but also in the progressive additions to the understanding of the urban phenomenon it represents. This is especially true these days, due to the condition experienced by planet Earth: the planet is mostly populated by urbanites nowadays. What is more, it seems mankind is on the verge of an Anthropocene change. Under the denomination of Anthropocene scholars recognize Earth's most recent geological cycle and customize it as human-influenced (anthropogenic), recognizing an overwhelming global contingence: atmospheric, geological, hydrological, biospherical and other earth-system processes are now altered by humans.

On such a scenario, scientific meetings like this present 4th International Conference on "Changing Cities", offer an ideal setting in which to look for new paths to bring to light urban innovations potentially enclosed in the contemporaneity of cities—as this article ventures to do.

One of the basic stances in the topic of "Changing Cities" is the ability to include in its studies, whenever possible, inferences to alternative reasoning seen as likely to introduce new ways of thinking—even when focusing well-known themes. In this direction, a consensual acceptance seems to have been already attained: cities play a crucial role in environmental equations. Even the most reluctant "green" activist seems to take this into account. Moreover, there is no arguing any longer to recognize that when speaking about environmental sustainability, it will necessarily connote to speak about cities. On the other hand, talking about "environment" does not mean any longer to talk about remote jungles, rites and myths of wild forests, distant woods. Instead, "environment" embodies the concreteness of our daily life; it is where we carry out our daily experiences of life, whether in São Paulo, Brussels, or Rarotonga. With almost 70% of the world population living in cities, it is understandable to pay an increased attention to the

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quality of life in cities. Besides, statistics alert us to the fact that humans continue to migrate towards urbanised environments—confirming that their locational preferences in the biosphere are unquestionably urban, with waves and waves of human beings constantly flocking to urbanised settings.

However, urbanized settings are not limitless, and some of them have already reached a saturation.

Also, this saturation seems to have already arrived at the doorsteps of our cities.

Earth's temperature is continuously increasing; use of fossil fuels keeps closely linked to this increase; and rapid urbanisation continues to be growingly accepted as a major causal factor. Humanity, which has already launched a substantial volume of well-intentioned measures aimed at "saving" endangered species, seems to have finally awakened to the urgency of saving one of its most precious species—the human species itself. In fact, there has been a disparity in the unstable equilibrium between humans and the ecosystems of the biosphere: it is now unquestionable that people-environment relations demand a radical shift, and that changing cities play a decisive role in this shift.

Our research work has been working in this direction, favouring investigations on man-biosphere relationships such as the ones performed in the scope of the MAB (Man And the Biosphere) Programme of UNESCO; and in the agenda of specialized International associations such as ISOCARP (International Association of City and Regional Planners) and IAPS (International Association for People-environment Studies), whose objectives seek opportunities to harmonize, promote and preserve the relationships between biosphere resources and anthropocentric components. In such condition, it seems only logical to turn again to our old and reliable area of Architecture-Urbanism in search of help: this is the area of knowledge zealously concerned with the quest for quality of life for city dwellers, i.e., urbanites; whereas at the same time, engaged with the improvement of the environmental quality of the built environment, i.e., cities. More importantly, it is the area that assembles diverse currents of thoughts that recognize that urbanisation, though posing threats to the erosion of natural and cultural resources, is also responsible for providing a fruitful source in terms of intelligence, scientific advances and technological innovation. Or, in the words of one of these institutions:

Cities represent positive values and are not simply the source of problems to be solved. It is noted that while consuming "tangible" resources (food, energy, building materials), cities also produce precious "intangibles", such as wisdom, innovation, and art. The cultural identity and diversity of a city also provide, in addition to its buildings and open spaces, the originality of its history and the traditions of its inhabitants.

1.1 Resilience

Urban resilience is "the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience". An institution named Resilient Cities network helps 100 selected cities to become more resilient to the physical, social, and economic issues that are a growing part of the 21st century (In Greece, Athens and Thessaloniki are two city-members).

Resilience is a foundational determinant in place theory, the wider area of research interests of the author of this text.

In this view, the major concerns of the text will necessarily involve both, urban development and environmental sustainability, whereas also highlighting, as a precondition for development, the influence of an imperative psychological bias, a perception quite often absent in these contexts. This is the sort of perception that will allow including within

the overall reasoning the contributions of the resilience factor, one of the most fertile phenomena to ponder in the procedures of changing cities. The involvement of the resilience factor is rather simple: it will facilitate the access for communal decision-makers to practical methodological solutions (for example, to alert them for options of redevelopment of depleted intra-urban territories, rather than allowing for further urban sprawl); and for local planners (for example, to encourage them to identify collective urban public spaces - new and/or recycled). It is worth noting that embedded within this reasoning come the two basic guidelines adopted by the text:

- That cities have quality public spaces (which we call *places* in our researches), that is, spaces that offer opportunities to experience urban life gratifications (urbanity);
- That this quality of life is carried out within a paradigm of sustainability of the urbanized environment.

In other words, guarantee environmental sustainability standards, while caring that they are accompanied by increases in a balanced supply of liveable public spaces.

Nonetheless, one differential tone of the text deserves to be emphasized: operations originated from simple initiatives should gain preference. The preferred ones should be those starting with what can be done without involving major complexities—preferably, without going into specificities such as quantifying carbon credit worries, amounts of gas reduction proportions, global warming caloric measurements, and biomass quantum. Ultimately, resilience is not just compromised with an embellishing cosmetic refurbishment. Resilience is related to a vital rebirth. It ultimately fulfils the gaps inflicted by obsolescence in the urbanisation progression and the built environment evolution.

One strategy vigorously contemplated in the text aims at curtailing sprawl. The curtailment is intended to prevent the extension of the urbanization overcoming the edge of the city. As such, this is seen as a recommendable tactic to forward a more realistic sustainability strategy, more akin with feasible practicalities, avoiding unnecessary sophistications.

One of the most prominent names in the area of urban sustainability is undoubtedly that of the Italian-born British architect Richard Rogers, author of a small-world-renowned book called *Cities for a Small Planet* [1]. In it, the authors recognize that cities can cause damage to Earth's environment, and that the growing growth of cities is effectually causing damages to the environment. But at the same time, say that a new mentality in urbanism can be the catapult that will reconcile the human being with the environment. For this, the book teaches that one can and one must create cities for a planet that is getting smaller and smaller, as read in the back cover of the book: cities that are sustainable within their own environment, that can make a positive impact on their surroundings, that encourage communication among their citizens, that are compact and focused around neighbourhoods, and that are beautiful.

Today, in 2020, in the threshold of the third 21st century decade, it seems things are somehow failing to progress satisfactorily. Successive natural disasters are frightening the world population, with an increase in the number of cataclysms, floods, droughts, violent hurricanes, and the like.

Indeed, there is all likelihood that now is the right time to get really serious about the future of cities. Even the leaflet for this Conference advances a listing of concerns:

... In the last decades, we have all witnessed a series of dramatic, universal changes and developments affecting cities—their morphology, environment, economies, and societies. Global new conditions such as economic globalisation ...; post-industrial economies of culture and new technologies ...; ... increasing migrations and cultural

diversity of individuals, and coexistence in multi-ethnic and multi-cultural urban societies .... In this new milieu, cities change themselves to ad hoc adapt into new conditions ...

Note that these concerns are mainly attentive on ecological agendas—that is, agendas associated with physical-environmental manifestations. But it is in the understanding of this text that it is more than time for these agendas to include in their scope—in the scope of the so-called "environmental problems"—concerns about the psychological-environmental changes, changes placed in the subjective sphere, changes that entail an unusual psychological bias in environmental agendas, changes with implications equally responsible for altering the quality of life of citizens, changes that cause loss of identity references of people in relation to the environments with which they are familiar. That is why to maintain certain elements responsible for assigning meanings to an urban space—in areas where urban identity is already consolidated, in areas where one can perceive the existence of a place—becomes an essential strategy within the pursuit of Sustainability itself: this will surely play additional deeds to engender a sustainability tonus on the subjectivity realm [2].

Thus, in the pursuit of sustainable urbanism, it is not enough to guarantee the permanence of the natural and constructed elements: it seems essential to also keep the psychological environment developed between human beings and the urban elements in which they exercise their everyday existential practices—this psychological atmosphere finds its best morphing in the pattern of urban places where urbanity relationships develop among people and the built environment.

And it is precisely resilience what may lend a drastic helping hand towards accomplishing these developments.

2. Methods

Methodological insights come from diverse approaches. A basic one—the morphological approach—derives from a visit to an expo about The Composite City at the Exhibition Museum London (July 2017). There, visitors become familiar with notions that a contemporary city is a patchwork of gentrified city centres, housing estates, shanty-towns, central business districts, gated communities, shopping areas, industrial zones, residential suburbs, and new places. Sociological and psychological insights also bring majoritarian methodological contributions, since the topic of "place" is deeply rooted all through the rationale of the research (at this point, it is worth to remember that all designing and planning considerations have been developed within a "place-friendly" mode); finally, like most research work in our area, the ultimate methodological procedure relies on learning from empirical grounds.

It is the view of this paper that one of the most significant changes experienced by global cities in their growth is that they keep a relentless resilience of some of their urban components, which runs in total coherence with the assumption that urban growth is a relentless process. The resilience of some urban components may be clearly perceived as configuring territorial fragmentations, either in intra- or extra-urban discontinued locations, brought about by the obsolescence of uses no longer aligned to contemporary life. They can be serious candidates to become new places of urbanity to encompass the city's repertoire of places.

2.1 Reuse, Regeneration, Reconstruction, Recovery, Resilience

"According to the World Bank, cities that find themselves at the beginning of a rebuilding process first need to acknowledge that culture—whether it is tangible (monuments, religious spaces, and protected sites) or intangible (like art, traditional craft practices, or other types of local knowledge)—is crucial to their social fabric and self-image. The usual initiatives are clearly linked to the reuse, regeneration,

reconstruction, recovery, resilience of former urban-architectural monuments now experiencing smart technological innovations that induce their recycling into performing more contemporary roles. Moreover, one of the most striking features of contemporary cities has been the strong tendency to value their old memories through redeveloping their heritage assets. The newest trend is to reuse them under the newly denomination "Cultural and Creative Parks", seeking to "… integrating culture into people-centric and place-centric policies …" as observed in a recent World Bank report [3]. In line with the ideas of the "creative economy" and the revitalization of brownfields, these parks are rapidly gaining the status of modern urban attractions, and many of them can boost the creation of new places.

Therein seems to reside two specific urban-architectural challenges for Anthropocene cities this paper wants to highlight: we stand at the threshold of a positive curtailment of urban sprawl; and experience the creation of new inventive places of collective social interaction. Obviously, this double condition entails two urban-architectural challenges for today's cities: to incentivize a positive curtailment of urban sprawl; as well as to instigate the creation of new inventive places of social interaction, created as a by-product of resilience.

3. Discussion

Place is a concept of Urbanistic Theory that highlights the sites built where interpersonal relationships are developed among urbanites. Place (and all the modernization through which the concept passes) is expressed through the spatial perception that people feel in the environments they know through their life experiences [4]. In brief, place implies the creation of an environmental form that acquires symbolic meaning for its users.

Respecting certain criteria, especially those relating to the stability conditions of buildings, their safety, the non-toxicity of their facilities, in short, the opportunities for their beneficial reuse, the re-entry of these areas emptied in the repertoire of the active elements of a city is extremely welcome, and not only welcome in relation to the city itself, but also to the surrounding environment. All in all, it implies great opportunities for environmental sustainability since it can induce sustainable urban development. An urban development is full of projective strategies that will bring new places to society through innovative projects, and will reuse stretches of territories emptied and/or stalled by recycling buildings, building groups, or complete urban sectors.

In the sequence, some photos of the reuse of buildings and urban sites are chosen at random in various parts of the world. They will be grouped in three variations: creation of invented places in old buildings; creation of (re) invented places in the earliest routes of circulation; creation of invented places in urban sites and/or monuments.

3.1 Invented Places in Old Buildings

One of the most symbolic places of Porto Alegre (this Author's native city), is the Gasometer Plant, located in the old city centre peninsula on the edge of the Guaíba river. Originally, it was a building housing a thermoelectric power plant, with its energy base supplied by coal, which explains the high chimney, also doubling as a solid urban landmark (Fig. 1). One of the most visited and cherished places in London is the Tate Modern Gallery, situated in the old central area of the city, on the edge of the Thames. Like the above one, it was originally a power generation plant and today is a dynamic "re-energizing" factor in the Bankside area. The original building is the design of Sir Giles Gilbert Scott (creator of the famous British red telephone booths). The re-architecture Project is from the Swiss Jacques Herzog and Pierre de Meuron, who added two new glass floors on the top. The success is so great that an entirely new building, by the same architects, has been recently added forming an ensemble (Fig. 2).

Fig. 1 The Gasometer Plant in Porto Alegre, Brazil.

Fig. 2 Tate Modern in London, UK.

The Oberhausen Gasometer in the region of Ruhrgebiet, Germany, (Fig. 3) is the great emblematic symbol to sustain a past of over 150 years of industrialization. Beaten by the drastic changes in energy sources, from the black gold from coal to oil, the region experienced a great revitalization project, the IBA Emscher Park, at the turn of the century. Also, in Porto Alegre, Brazil, an old manor originally built in the eclectic style of early 20th century managed to keep its Venetian and Tuscan features preserved (Fig. 4), while a modern new hotel was built in the back portion of the lot. This experience attracted the attention of academic research, originating a Master dissertation entitled "Heterochrony in Architecture" presented by architect Simone Back Prochnow to our postgraduate Programme in Architecture, with the author of this paper as supervisor.

Positive accretions to the list of invented places keep coming from various parts of the world. From Australia, a successful experience is presented by the place named Tramsheds, in Sydney (Fig. 5), a beautifully restored food-focussed precinct housed in the former historic Rozelle Tram Depot.

Fig. 3 The Oberhausen Gasometer, Ruhrgebiet.

Fig. 4 Hotel in Porto Alegre, Brazil.

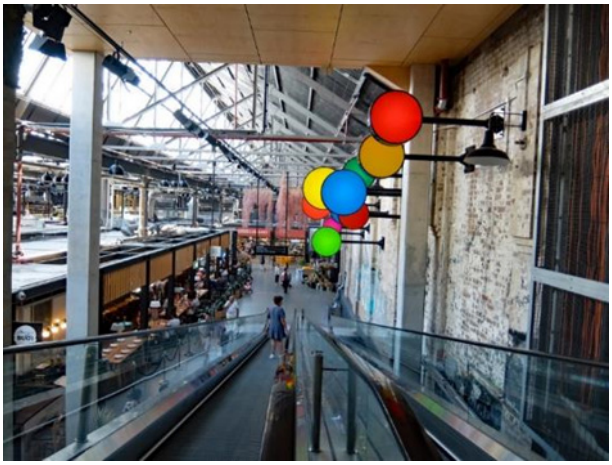

Fig. 5 Tramsheds, Sydney, Australia.

Fig. 6 The Gasometer in Vienna, Austria.

In the affection of the Viennese, the four buildings that make up the Gasometer in Vienna (Fig. 6) were worked by four teams of famous architects, including Jean Nouvel. The works encouraged their sustainability as symbol elements of the historic-cultural heritage of the region.

3.2 Creation of (re) Invented Places in Earliest Routes of Circulation

One of the greatest successes at the beginning of the 21st century "Friends of the High Line" managed to write an innovative paradigm in sustainable urban development, recycling the old railroad where New

Fig. 7 High Line, New York City, USA.

Fig. 8 Cheong Gye Cheon, Seoul, Korea.

York Industrial inputs were circulated (Fig. 7). Architects Diller Scofidio + Renfro reinterpreted in landscaping the melancholic inheritance of the post-industrial ruins. Another important paradigmatic rupture is found in Seoul, South Korea. Cheong Gye Cheon (Fig. 8) is a creek running through the city centre experiencing a variety of situations throughout History: initially lodging a "favela", received a cover of concrete to cover up the chaos, the construction of an elevated highway, which made the water disappear and covered the landscape. In 2005, a strong community engagement convinced the Government to create a "green" urban sector that managed to demolish the elevated road and sustain the environmental qualities linked to the creek.

3.3 Creation of Invented Places in Urban Sites

Railway stations have undergone substantial

Fig. 9 Sala São Paulo, Júlio Prestes Station, São Paulo, Brasil.

modifications, from creations of new high-tech infrastructures, as in the case of the new HauptBanhof of Berlin. Also reuses bring surprising resilience such as the case of Julio Prestes Station, in São Paulo (Fig. 9), which resulted in qualifications for the city's cultural life, with part of the station transformed into a renowned concert hall, the Sala São Paulo, by architect Nelson Dupré. It is interesting to register that the station continues to function in the space adjacent to the concert hall, attesting to the high quality of the acoustic treatment employed in the work.

Recovery of industrial brownfields is well represented in Porto Alegre where the reuse of old installations belonging to the Renner factory, implanted in 1916, with activities of spinning, weaving and painting, generated the "Commercial District Navegantes" (Fig. 10), a shopping area which maintained the predominant imagistic perception of the site. Not coincidentally, but, perhaps as a result of the perception of the symbolic richness of the place, the district was implanted precisely in a site that agglutinates expressive topological and psychological landmarks of the industrial surroundings region. The example brought by DC-Navegantes encouraged the reuse of another industrial brownfield (from the former FIATECI textile plant). The Project stimulated the recycling of the use of existing buildings and the construction of a commercial building and four residential towers of 17 floors (Fig. 11), besides a memorial describing the history of the old industry.

A wonderful example of recovering industrial brownfields is furthered by LX Factory, Lisbon, Portugal (Fig. 12). Selected as a fieldwork experience in an International Seminar on City, Retail and Consumption are held by the University of Lisbon in September 2017. The leaflet referring the case read: "… the LX Factory gathers some essential elements of this new model of urban regeneration. Dubbed 'the creative island' … it contributes to the cultural promotion of the city through events in fashion,

Fig. 10 Commercial district Navegantes, Porto Alegre, Brazil.

Fig. 11 The project for FIATECI textile plant, Porto Alegre, Brazil.

Fig. 12 LX Factory, Lisbon, Portugal.

Fig. 13 Hudson Yards, New York, USA.

advertising, communication, multimedia, art, architecture and music". The case has also been examined in a master dissertation in our Postgrad Programme by Architect Gustavo Sbardelotto, supervised by this author.

Opening now in 2019, Hudson Yards in New York levitates above several working rail tracks on the Far West Side of the city (Fig. 13). The resilience of the area spurred more developers to build their own mega-towers near the yards. A new place is emerging. But, as argued by *The New York Times*, the question is, what sort of place? It is, at heart, a supersized suburban-style office park, with a shopping mall and a quasi-gated condo community targeted at the 0.1 percent. The new place offers to a "changing city" like New York a sort of "Dorian Gray" provocation, attracting a selected group of "starchitects", led by Kohn Pedersen Fox, the global firm, to contribute to the site design (placemaking). Accompany the inaugural show at https://www.hudsonyardsnewyork.com/.

4. Conclusions

The paper observes that one of the most significant changes experienced by global cities in their growth is that (fortunately) they keep a Relentless Resilience of some of their urban components. These are clearly perceived as configuring territorial fragmentations, either in extra- or intra-urban location, caused by the obsolescence of uses non-aligned to contemporary life; and territorial discontinuities interspersed along the conurbation. It is precisely in these fragments that good opportunities for the smart growth of a global city can be detected. They represent a trend towards a curtailment of the undesired sprawl and the creation of new places that will somehow act as "gluing" the fractures.

The most successful initiatives seem to be invariably linked to the reuse, regeneration, reconstruction, recovery, resilience of former urban-architectural monuments, now experiencing smart technological innovations that induce their recycling into performing contemporary roles. Indeed, one of the most striking features of contemporary cities has been the strong tendency to value their old memories through redeveloping their heritage assets. The newest trend is to reuse them under the newly denomination "Cultural and Creative Parks". In line

with the ideas of the "creative economy" and the revitalization of brownfields, these parks are rapidly gaining the status of modern urban attractions. In this way, they epitomize many of the concerns of contemporary urban societies.

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